

March 5, 1940.

C. D. STEVENS

2,192,335

TOILET DEVICE

Filed Jan. 14, 1938

6 Sheets-Sheet 1

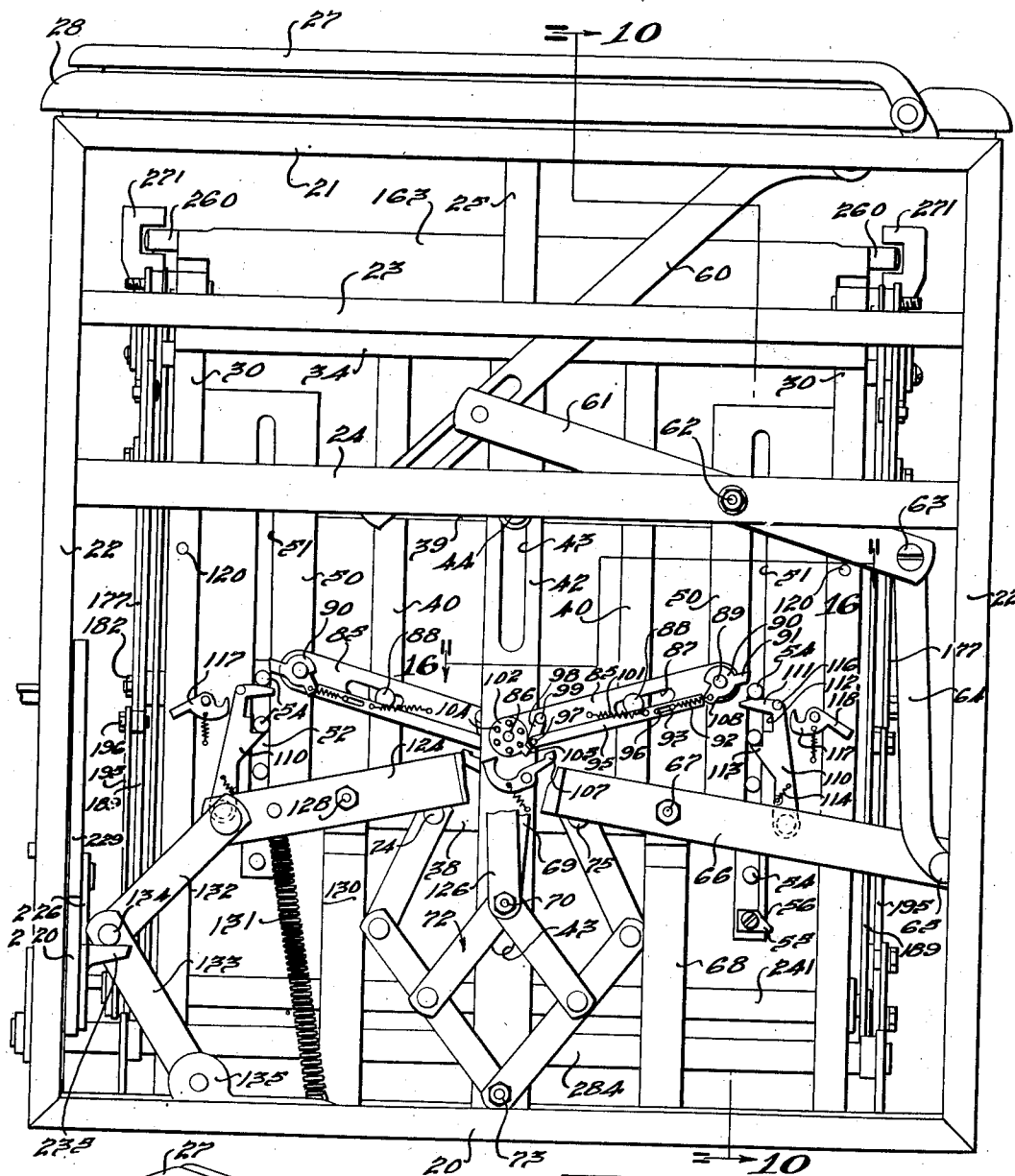


FIG. 1.

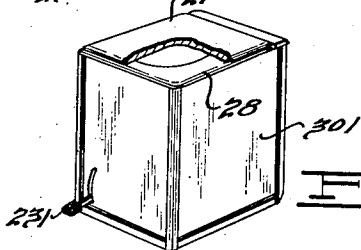


FIG. 1A.

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6 Sheets-Sheet 2

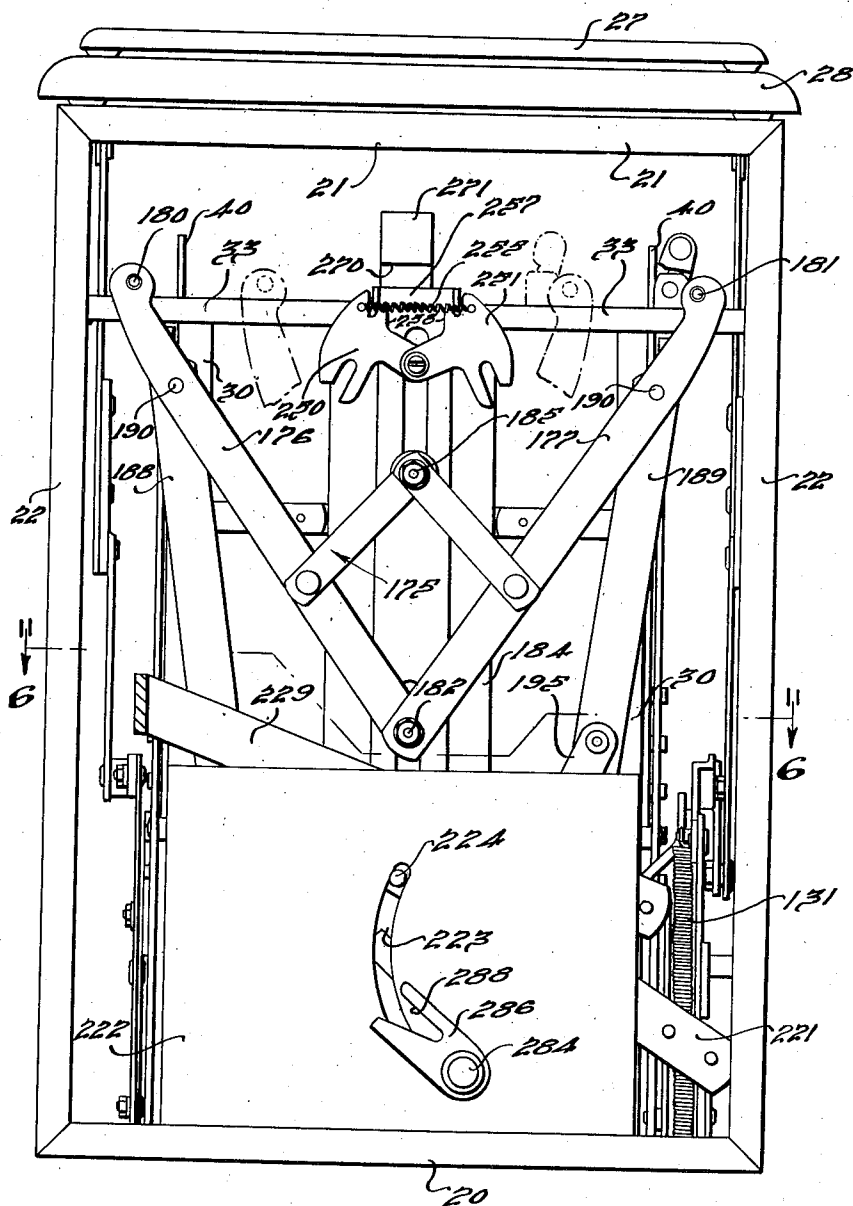


FIG. 2.

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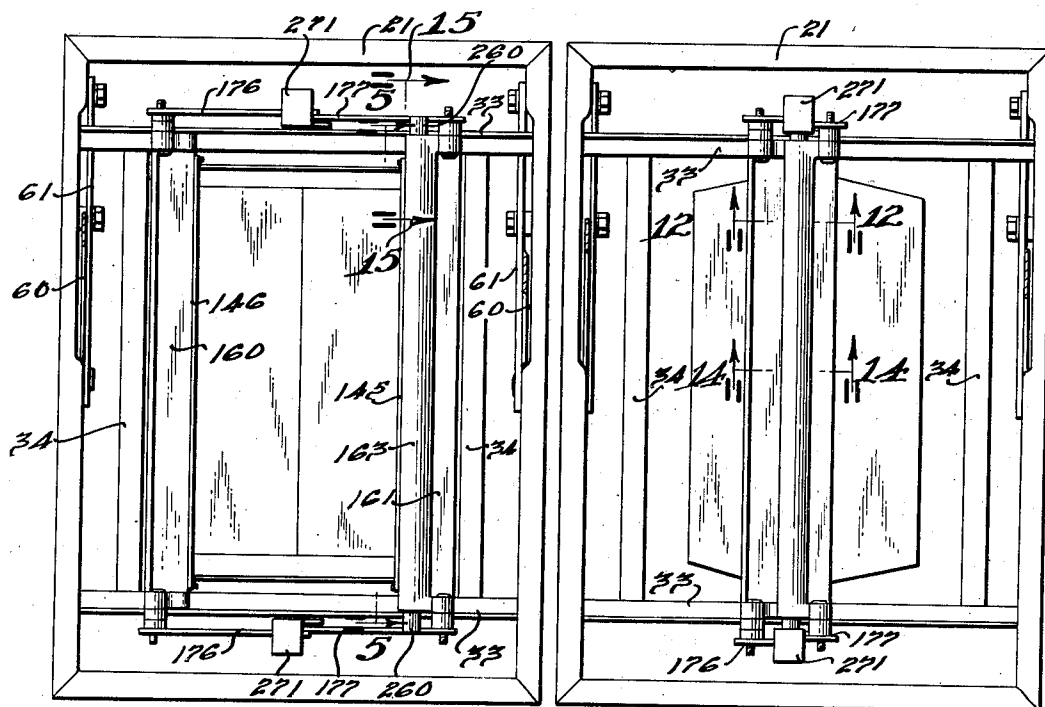


FIG. 3.

FIG. 4.

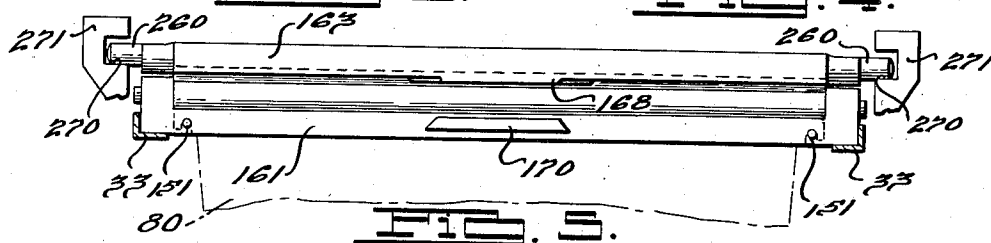


FIG. 5.

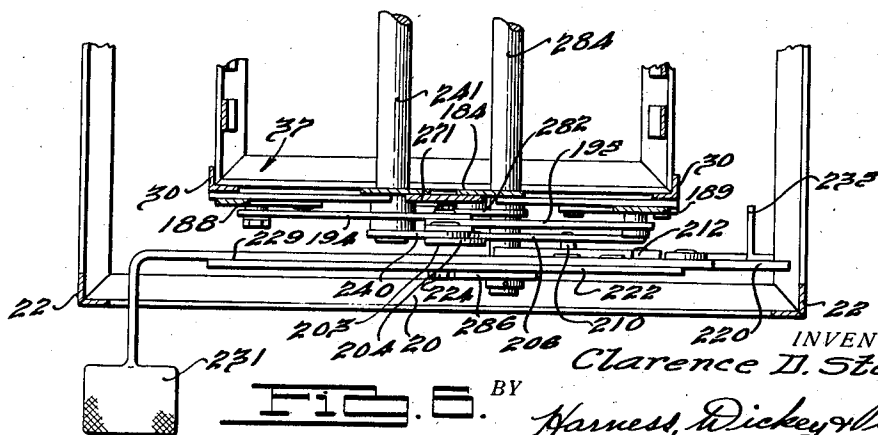


FIG. 6.

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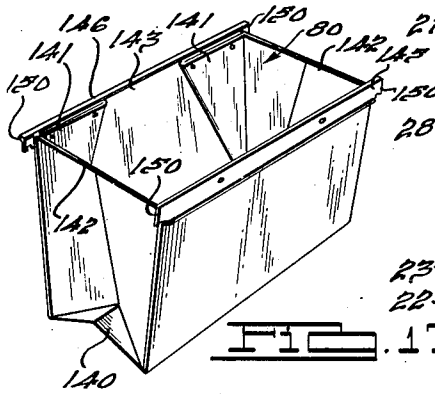


FIG. 17.

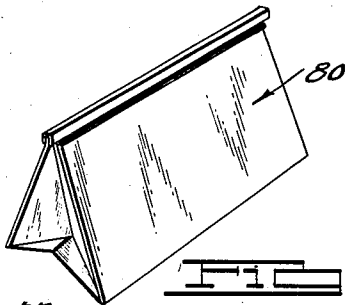


FIG. 18.

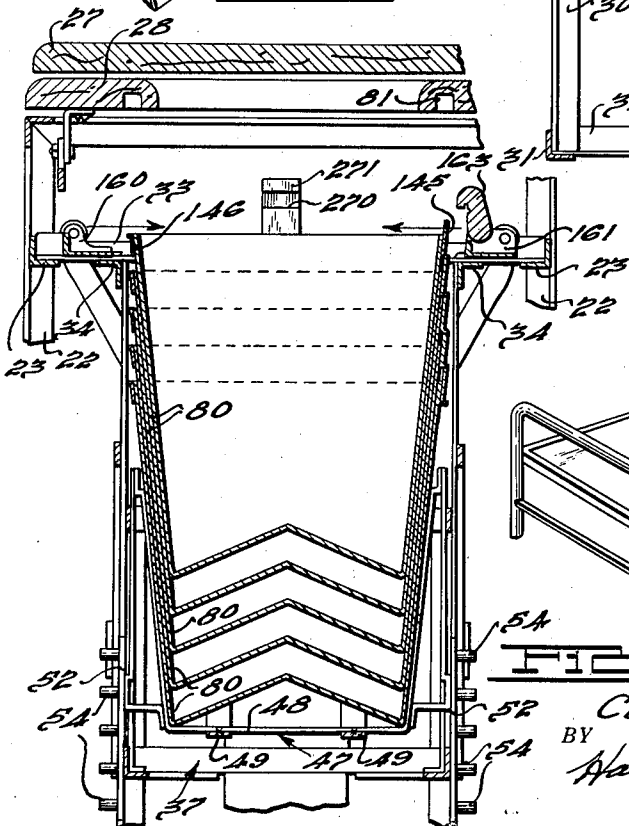
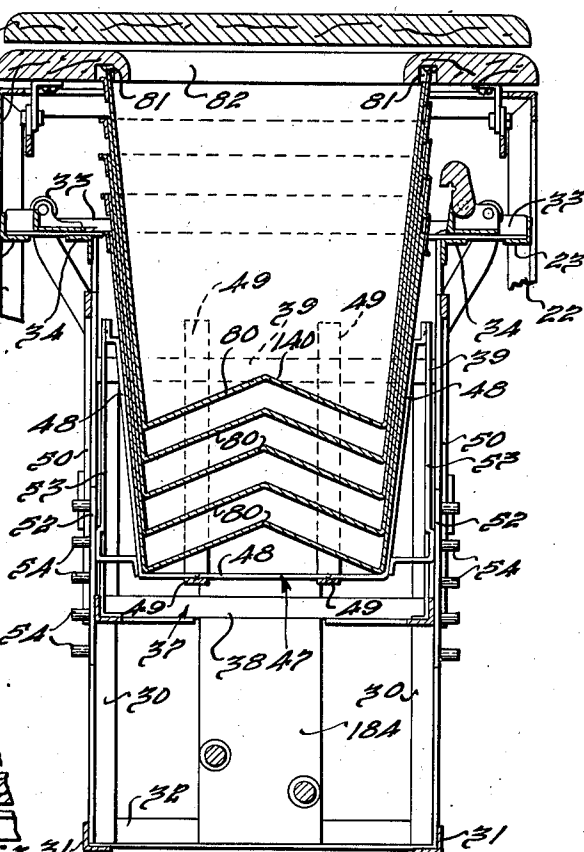


FIG. 11.

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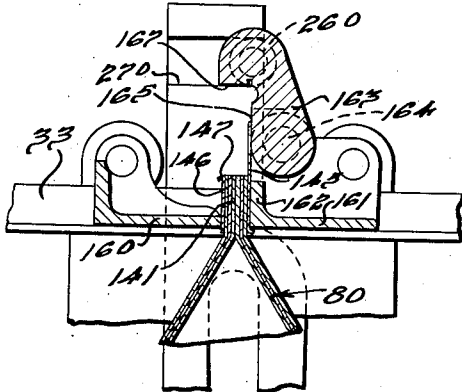
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TOILET DEVICE

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FIG. 13.



Fi 12.

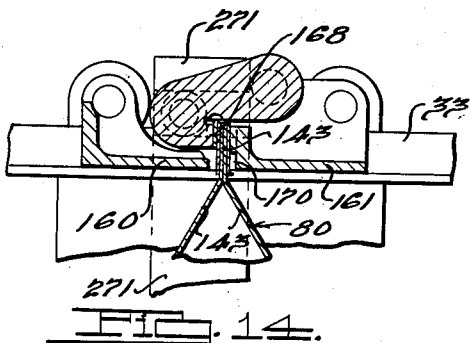
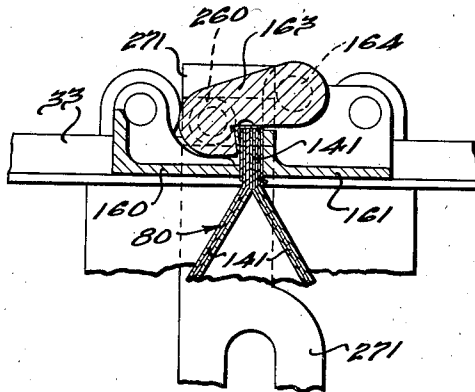
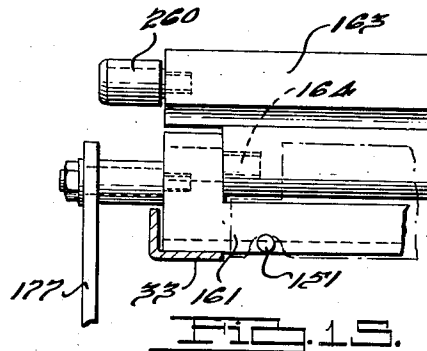
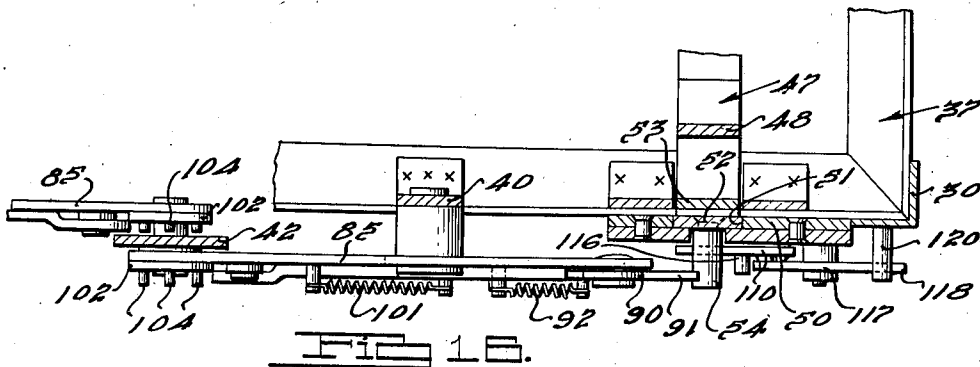


FIG. 15.

[illegible]

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UNITED STATES PATENT OFFICE

2,192,335

TOILET DEVICE

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Application January 14, 1938, Serial No. 185,029

12 Claims. (Cl. 4-142)

The present invention relates to receptacle handling and closing mechanism, and particularly relates to such mechanism in association with a toilet.

One of the primary objects of the present invention is to provide a toilet, which is preferably portable, which requires no flushing or other water facilities in its operation, and which further requires no chemical or disinfectant in its operation. The present invention is adapted for use for the sanitary disposal of body waste in a number of different places, such as private homes in case of illness, house cars, busses, airplanes, camps, hospitals, and many other places which will become more apparent from the following description. Another use to which the present invention may be put is garbage, or other refuse, collection and disposal.

One of the primary objects of the present invention is to provide a novel mechanism adapted for use particularly with a toilet by which body waste is sealed in a novel container for sanitary disposal.

A further object of the present invention is to provide a novel container which may be effectively sealed for sanitary disposal of body waste.

A further object of the present invention is the provision of a novel container carriage, which may contain a number of containers and which is so constructed and arranged that the containers are raised in succession to a position immediately under a toilet seat.

A further object of the present invention is to provide a novel indexing mechanism in association with a carton carriage whereby individual cartons are properly positioned in the carriage in succession.

Another object of the present invention is the provision of novel closure and sealing mechanism which acts to close and seal a container by mechanical means.

Another object of the present invention is the provision of novel mechanism in combination with a toilet seat which functions to raise a container to position immediately below a toilet seat, thereafter lower the container a safe distance below the toilet seat and thereafter close and seal the container for sanitary disposal.

Other objects of the invention will become apparent from the following specification, the drawings relating thereto, and from the claims hereinafter set forth.

In the drawings in which like numerals are used to designate like parts in the several views throughout:

Figure 1 is a side elevational view of the mechanism of the present invention with the elevator in its raised position;

Fig. 2 is a front elevational view of the mechanism illustrated in Fig. 1 with the elevator in its raised position;

Fig. 3 is a top plan view, with parts removed, on a reduced scale of the mechanism illustrated in Fig. 1 with the elevator in its raised position, and the carton open;

Fig. 4 is a view similar to Fig. 3 with certain of the parts in a different position, and with the carton closed;

Fig. 5 is a fragmentary view taken substantially along the line 5-5 of Fig. 3;

Fig. 6 is a fragmentary cross-sectional view taken substantially along the line 6-6 of Fig. 2;

Fig. 7 is a view similar to Fig. 1, on a reduced scale, illustrating the parts in different positions;

Fig. 8 is a view similar to Fig. 2, on a reduced scale, illustrating the parts in different positions;

Fig. 9 is a fragmentary enlarged view similar to Fig. 8 with certain of the parts removed and illustrating certain of the parts in different positions;

Fig. 10 is a cross-sectional view on a reduced scale taken substantially along the line 10-10 of Fig. 1 with the elevator in its raised position and the carton ready for use;

Fig. 11 is a fragmentary view similar to Fig. 10 with the elevator in its lowered position and the carton in position for sealing, and with the sealing jaws apart and ready to move inwardly and clinch the top edges of the carton;

Fig. 12 is a fragmentary cross-sectional view taken substantially along the line 12-12 of Fig. 4;

Fig. 13 is a view similar to Fig. 12 just before the top edges of the carton are clinched;

Fig. 14 is a fragmentary cross-sectional view taken substantially along the line 14-14 of Fig. 4;

Fig. 15 is a fragmentary view taken substantially along the line 15-15 of Fig. 3;

Fig. 16 is a cross-sectional view, on a slightly enlarged scale, taken substantially along the line 16-16 of Fig. 1;

Fig. 17 is a perspective view of a container or carton of the present invention with the carton open;

Fig. 18 is a perspective view of the carton illustrated in Fig. 17 with the carton closed;

Fig. 19 is a perspective view with parts broken away on a reduced scale illustrating the mechanism.

anism of the present invention enclosed in a portable casing; and

Fig. 20 is a perspective view of a bed illustrating another adaptation of the present invention.

The structure of the present invention includes, in general, an outer frame which supports certain of the general operating parts and an inner frame which supports and guides a storage unit. The storage unit includes an outer elevator movable relative to the inner frame and an inner auxiliary elevator movable relative to the outer elevator. A plurality of nested receptacles, or cartons, are adapted to be positioned within the auxiliary elevator; and indexing means are operatively associated with both elevators and act to properly position the containers in succession and retain the containers in position so that the clinching and sealing mechanism may operate thereon. The clinching and sealing mechanism is mounted on the inner frame with the clinching element slidably mounted on trackways adjacent the top of the inner frame.

Operating levers are provided, one of such levers operating the elevating unit and another of such levers operating the clinching and sealing mechanism. The elements are so constructed and arranged that the storage unit is first raised so that the top edge of the uppermost container is positioned within grooves on the undersurface of a toilet seat. The carton remains in this position until the lever for operating the clinching and sealing means is actuated. During the first part of the downward movement of the latter mentioned lever the storage unit is released so that the elevators drop downwardly to position the top edge of the uppermost carton at the level of the closing and clinching mechanism. Upon further downward movement of the lever the clinching elements are moved inwardly and engage the top of the uppermost carton, folding the top edges together and effectively sealing the carton.

Referring to the drawings for a more detailed description of the present invention, the structure includes an outer frame which is substantially rectangular in plan and elevation and which includes a bottom rectangular frame member 20 preferably formed of angle members and a top rectangular frame member 21 also preferably of angle members. The frame members 20 and 21 are connected together at their corners by upright angle members 22; and longitudinally extending frame members 23 are disposed between the end members 22 at each side of the frame in downwardly spaced relation from the top frame member 21. Other longitudinally extending frame members 24 are also connected to upright end members 22 at each side of the outer frame in downwardly spaced relation from the members 23. Vertical braces 25 may be connected to the horizontal frame members 23 and to the top frame member 21 substantially centrally of the members 23 for the purpose of additionally supporting the members 23.

A closure top 27 and a service seat 28, having the usual opening therethrough, are disposed above the frame member 21 and are pivotally mounted thereto adjacent the rear thereof in the usual way.

The inner frame is formed of four vertical angle members 30 which are arranged to provide the corners for the inner frame and which are also arranged with the open angles directed inwardly so that the angle members form guideways for the movable storage unit, as will become

more apparent from the description hereinafter. The members 30 are supported adjacent their bottoms by longitudinally extending angle members 31 (Fig. 10) which are connected to the front and rear members of the bottom frame member 20 in inwardly spaced relation from the sides of the member 20. Transversely extending angle members 32 are disposed between the longitudinally extending members 31 adjacent the bottoms of the upright members 30 and adjacent the front and rear of the inner frame. Transversely extending frame members 33 are disposed adjacent the tops of the vertical members 30 and are fixed to the members 23 of the outer frame. These angle members 33 have one flange directed upwardly and one flange directed inwardly to serve as facing trackways for the clinching mechanism to be described hereinafter. Longitudinally extending angle members 34 are also disposed adjacent the top of the members 30 and extend between the transverse members 33 to which they are fixed by spot welding or the like.

The carton storage unit which is mounted for vertical movement within the inner frame, includes an outer elevator generally indicated at 37 (Figs. 10 and 11). The elevator 37 is in the form of an open-work basket member open at its top and is formed of a lower rectangular frame member 38 and an upper rectangular frame member 39 connected together by vertical members 40. The members 40 are of such length that they extend above the members 33 when the elevator 37 is above its lowest position so that the closing and clinching mechanism may not move inwardly unless the elevator 37 is lowered to its lowermost position which prevents premature operation of the closing and clinching means. The corners of the rectangular members 38 and 39 are received within the angles formed by the corner members 30 of the inner frame so that the elevator 38 is guided by the corner angle members 30. Vertical frame members 42 are also provided at each side of the inner frame and are connected to the frame members 31 and 34. The members 42 are positioned substantially centrally of the sides of the inner frame and are each provided with upper and lower elongated slots 43 for supporting and guiding the elevator 38 through roller pins 44. The pins 44 are connected to the rectangular members 38 and 39, respectively, and extend within the slots 43. The rollers 44 and the slots 43 are best illustrated in Fig. 1, while in this figure only that pin 44 connected to the member 39 appears. The other pin 44 is hidden from view by other of the mechanism but it is to be understood that it is connected to the member 38 and extends through the lower slot 43.

An inner auxiliary elevator generally indicated at 47 (Figs. 10 and 11) is slidably received within the outer elevator 37 and is movable relative thereto. The elevator 47 is illustrated as being formed of a plurality of U-shaped members 48 and 49 of strip metal. The U-shaped members 48 and 49 are arranged at right angles to each other so that they form a basket-like receptacle open at its top.

For moving the elevator 47 relative to the outer elevator 37, a guide plate 50 having a vertically extending slot 51 extending therethrough is mounted at each corner of the outer elevator 37 on the sides thereof, and fixed thereto. Each guide plate 50 serves to slidably guide a plate member 52 which is fixed to the elevator 47

through connecting bracket members 53 which are connected to the U-shaped members 48 adjacent each corner of the inner elevator 47. The members 52 have a plurality of equally spaced pins 54 fixed thereto which extend through the elongated slot 51; and also have projecting lugs 55 with cam surfaces 56 thereon fixed thereto adjacent the bottoms thereof. The purpose of these pins 54 and lugs 55 is to progressively index the elevator 47 relative to the elevator 37 as will be more apparent from a later description.

As stated above, the storage unit, which includes the outer elevator 37 and the inner elevator 47, is raised as a unit within the inner frame. The means for raising the storage unit includes a linkage member 60 pivotally connected at one end to the service seat 28 so that it is raised when the service seat is raised. The other end of the member 60 is pivotally connected to another linkage member 61 through a lost motion pivotal connection. The member 61 is pivoted intermediate its ends by a pivot 62 to the longitudinally extending frame member 24; and is pivoted at 63 to another linkage member 64. The member 64 is in turn pivotally connected at 65 to a linkage member 66, which is pivoted at 67 to an upstanding fixed bracket member 68. The member 68 is fixed to the bottom frame member 31 and also to the bottom frame member 30. The member 66 is pivoted at its other end to a linkage member 69 which in turn is pivotally connected at 70 to a lazy tongs mechanism generally indicated at 72. The lower end of the lazy tongs mechanism 72 is pivotally connected at 73 to the lower end of the members 42 and is also pivotally connected at 74 and 75 to the sides of the rectangular member 38 of the outer elevator 37. It is to be understood that similar mechanism is provided on the opposite side of the structure so that when the service seat 28 is raised, the lazy tongs 72, through the linkage mechanism just described, serve to raise the outer elevator 37 and raise therealong the inner elevator 47.

The inner elevator 47 is adapted to receive therein a plurality of containers or cartons 80 which are in nested relationship to each other. The relationship of these cartons is illustrated in Figs. 10 and 11, and when the storage unit is raised, as shown in Fig. 10, the upper peripheral edge of the uppermost carton is adapted to be received within a complementary groove 81 formed in the under-surface of the service seat 28 adjacent the opening 82. Means other than a groove, such as a metal strip on the under-surface of the seat, may be used which cooperates with the upper edge of the carton to close any space between the seat and the carton around the periphery thereof.

After the uppermost carton has been used and disposed of, it is evident that the upper edge of the next succeeding carton is at a lower level than the upper edge of the preceding carton. In order that the upper edge of each succeeding carton may assume the same position as the upper edge of the preceding carton, means are provided for raising the inner elevator 47 relative to the outer elevator 37. Such means include the elements 50, 51, 52, 54, and 55, previously described, and in addition include elements which engage the pin members 54 and progressively move the element 52 upwardly with each successive raising of the service seat and the storage unit. These additional elements include an arm 75 member 85 which is pivoted at 86 to one side of

the member 42. Each member 85 is provided with an elongated slot 87 therealong intermediate its ends, which slidably receives therein a guide pin member 88. Each pin member 88 is fixed to one of the upstanding portions of the members 40; and the pin 88 and slot 87 cause pivotal movement of the arm 85 about the pivot 86 as the storage unit is raised. The arm 85 has pivotally mounted thereto at 89 a pawl 90 which has an outwardly extending projection 91. The pawl 90 is limited by a stop so that rotation in a clockwise direction is limited (viewing the elements at the right of Fig. 1); and a spring 92 is fixed to the pawl and to a pin 93 on the arm 85 for urging the projection 91 to its outermost position. The pawl 90 is free to rotate against the action of the spring 92 in a counter-clockwise direction.

The arm 85 also has slidably mounted thereon an elongated member 95 which has an elongated slot 96 therethrough. The pin 93 is received within the elongated slot 96 to slidably support one end of the member 95; and the inner end of the member 95 is pivoted at 97 to a linkage member 98 which in turn is pivoted at 99 to the arm 85. A spring 101 is fixed to the member 95 and to the arm 85 and normally urges the arm 95 inwardly, or towards the upstanding member 42.

A disc shaped indexing member 102 is pivotally mounted on the pivot pin 86 and is frictionally disposed on the outer face of the arm 85 so that the disc member is resiliently but releasably held against rotation. The disc member 102 has outwardly projecting pins 104 at equally spaced intervals therearound which correspond to the cartons within the storage unit; and a radial projection 105 is formed on the disc member 102 adjacent one of the pins.

A pivot member 107 having oppositely directed fingers, as shown in Fig. 1, is pivotally mounted to the member 42 below the pivot point 86. One of the fingers is adapted to extend upwardly beneath the lower edge of the arm 85; and upon pivotal movement of the arm 85 the member 107 is engaged and pivoted. The opposite finger engages one of the pins 104 and turns it through a space equal to the distance between adjacent pins. For each complete turn of the indexing member 102 the projection 105 engages the link 98 and forces the member 95 outwardly. The outer end of the member 95 engages a projection 108 on the pawl 90 and turns it counter-clockwise so that the projection 91 is directed upwardly and out of the path of the pin members 54.

It is, of course, to be understood that the elements of the mechanism just described are provided adjacent each corner of the storage unit, that is, two on each side, so that an even lifting force is applied to the inner elevator to prevent its tilting while it is being raised.

As described above, as the service seat 28 is raised the storage unit as a whole is raised through the lazy tongs 72. At the beginning of the raising operation the pawl 90 is in its down position and the projection 91 extends under one of the pins 54. As the storage unit is raised, the arm 85 is caused to pivot about the point 86 by the pin 88 on the member 40, and the projection 91 raises the member 52 through its engagement with one of the pins 54. The inner elevator 47 is thus raised along with the raising of the members 52. In order to prevent return of the inner elevator 47, a stop pawl 110 is pivotally mounted to the plate 50 adjacent one side of the slot 51.

The stop pawl 110 has a projection 111, forming a recess 112, and also has a projection 113. As the carriage member 52 is raised one of the pins 54 strikes the sloping edge under the projection 113 thus moving the pawl 110 out of the way. The stop pawl 110 is urged by a spring 114 to a position such that the projection 111 is placed under one of the pins 54 thus preventing the downward movement of the inner elevator 47.

When the last carton has been used it is desired to automatically drop or return the inner elevator to its lowermost position; and to effect this the stop pawl 110 is provided with a projecting pin 116. The projecting pin 116 is adapted to be engaged by a catch 117 which is pivotally fixed to the member 50. The catch 117 has a finger 118 which is adapted to abut against a pin 120 fixed to the upstanding members 30. As the carriage 52 approaches its uppermost position, the undersurface of the projection 113 is engaged by the surface 56 of the member 55 and urged outwardly. As the storage unit is moved upwardly, the finger 118 abuts against the pin member 120; and when the pawl 110 is urged outwardly as just mentioned, the catch 117 engages the pin 116 and holds the pawl in this outer position so that the inner elevator may drop. The elements are so timed that the projection 105 abuts against the link 98 thus urging the member 95 outwardly and turning the projection 91 upwardly, so that the inner elevator may then drop to its lowermost position.

In order to hold the storage unit in its uppermost position, pivot arm 124 (Fig. 7) is pivotally connected at 125 to a link 126 which in turn is pivotally connected to the lazy tongs 72 at 70. The arm is pivoted intermediate its ends at 128 to an upstanding bracket 130 which is similar to the bracket 68 previously described. A spring 131 is connected to the arm 124 adjacent its forward end and to the frame member 20 so that the lazy tongs 72 are thus held in their extended positions.

To release the spring 131 and to return the carriage to its downward position a linkage member 132 is pivotally connected to the forward end of the arm 124 and is also pivotally connected to a linkage member 133 by means of a projecting pin 134. The lower end of the linkage member 133 is pivotally connected to a bracket 135 fixed to the frame member 20. The actuation of the linkage members 132 and 133 through the pin 134 will be described later.

The mechanism so far described serves to properly position the successive cartons for use; and the illustrated novel carton and the mechanism for closing and sealing the carton will now be described.

For a description of the novel carton which is used with the present mechanism, reference may be had particularly to Figs. 10, 11, 17 and 18. The carton 80 is formed of a highly waterproof, heavy paper which is folded so that the bottom 140 slopes upwardly and inwardly to a peak along its longitudinal center both when the carton is open and closed. When the carton is folded from a single sheet of paper there are three thicknesses of such paper on the sides at the ends, as indicated at 141, and a single thickness of the paper at the ends and at the center of the sides as indicated at 142 and 143, respectively. Metal strips 145 and 146 are fixed to the two sides of the carton 80 adjacent the top thereof and may be fixed thereto by rivets, or the like. The strip 146 is provided with an overhanging lip 147 (Fig. 13) along the top edge thereof which is

substantially flush with the top of the carton. The strip 145 extends a substantial distance above the top of the carton so that it may be folded thereover and then down against the outer surface of the strip 146 to seal the carton. The strips 145 and 146 extend outwardly beyond the ends of the carton as indicated at 150; and these extensions are adapted to be supported by pins 151 on the movable top closing members. As the uppermost carton is closed, the upper edges of the carton are supported by the pins 151 so that the carton is properly held in position while it is being closed.

The closing and clinching mechanism includes longitudinally extending members 160 and 161 which are received between and slide on the trackway formed by the angle members 33. The member 160 has a longitudinally extending edge which engages the strip 146 adjacent the lower edge thereof; and the member 161 has an upstanding wall 162 which engages a substantial portion of the outer face of the strip 145. The member 161 carries a longitudinally extending pivoting clinching die 163. The die 163 is pivoted to the member 161 at its ends by pivot pins 164, and has an inwardly facing portion 165 which first engages the extending portion of the strip 145 as the tops of the container are moved inwardly. When the members 160 and 161 have reached their innermost position, the member 163 is pivoted about the pivot 164 thus folding over the upwardly extending portion of the strip 145. An edge 167 of the die 163 then engages the bent down portion of the strip 145 and clinches it against the outer face of the strip 146 under the ledge 147. The face 167 is provided with a projection 168 centrally thereof which corresponds in shape to the shape of the carton indicated at 143. A corresponding projection 170 is provided on the face of the portion 162 so that when the pressure is applied longitudinally on the die 163 against the face 162, an even pressure will be applied along the entire top edge of the container regardless of the difference in thickness due to the difference in the number of layers of paper along the upper edge of the container. An air and watertight seal is thus provided by clinching the strip 145 over the closed top of the container against the strip 146.

To provide for the movement of the members 160 and 161 with the clinching die 163, closing and opening mechanism operatively connected to the members 160 and 161 at both the front and rear ends of the inner frame are provided. This mechanism includes lazy tongs, generally indicated at 175, which includes linkage members 176, 177, 178 and 179. The linkage members 176 and 177 are connected by pivots 180 and 181 to the closing members 160 and 161, respectively. The members 176 and 177 are pivotally connected together at 182 by a vertically movable pivot, which is slidably received within a longitudinally extending slot in an upright frame member 184. The member 184 is fixed to the frame members 33 and 32 and extends vertically therebetween. The members 178 and 179 are pivotally connected to the members 176 and 177, respectively, intermediate the ends thereof; and are also pivotally connected by a fixed pivot 185, which is fixed to the member 184.

For moving the members 176 and 177 toward and away from each other, thereby moving the pivot 182 within the slot 183, linkage members 188 and 189 are pivotally connected to the members 176 and 177, respectively, by pivot pins 190 which

project outwardly beyond the outer faces of the members 176 and 177. The members 188 and 189 are pivotally connected adjacent their lower ends by pivots 192 to transversely extending frame members 193 which are fixed to the member 184 and to the uprights 30. The linkage members 188 and 189 have pivotally connected thereto linkage members 194 and 195, respectively, at 196 intermediate the ends of the members 188 and 189. The members 194 and 195 are pivotally connected together adjacent their lower ends by pivot 197. A short link 201 is pivotally connected to the pivot 197 and extends upwardly and is pivotally connected at 203 to another short link 204. The short link 204 is pivotally connected by a pivot 205 to an operating pivot arm 206 which is pivoted at 207 by a fixed pivot to the frame member 193.

The arm 206 is actuated through a pin 210 which is fixed to the arm 206 and extends through a cam slot in a cam plate 212. The slot has portions 213, 214, and 216, which are arranged relative to each other for providing certain movement which will be described later.

The cam plate 212 is fixed to an arm member 220 which is pivotally mounted by a pivot pin 221 to an upstanding plate member 222. The plate member 222 is fixed to the outer frame and has a curved slot 223 therein which receives therethrough a pin 224 fixed to the member 220 adjacent the inner end thereof. The arm 220 is connected by a short link 226 to an operating lever 229 by a pivot pin 227 and 228. The operating lever 229 is pivotally connected through a pivot pin 230 to the upstanding plate member 222. A forwardly extending pedal 231 is fixed to the operating lever 230 and extends forwardly beyond the plate 222 where it may be engaged to depress the operating lever 229. A stop member 235 (Fig. 1) is fixed to the rear face of the pivot member 220 adjacent the outer end thereof and is adapted to extend under the pin 134 on the linkage members 132 and 133 in order to drop the storage unit by actuating the arm 124 and forcing the pivot point 10 downwardly.

In order to transmit the motion applied to the mechanism just described adjacent the front of the frame to similar mechanism at the rear thereof a short link 240 is pivotally connected to the pivot 203 at one end and is fixedly secured to a rod 241 which is mounted within suitable bearings adjacent the front and rear of the frame and extends to the rear where it is connected to a similar link and to similar operating mechanism.

In the operation of the mechanism just described, when the pedal 231 is first depressed, the storage unit is in its upper position. During the first portion of the downward movement, the pin 210 moves along the portion 213 of the cam slot, and the projection 235 moves upwardly and serves to drop the storage unit as described. Upon movement of the pin 210 into the cam portion 214, the linkage mechanism just described operates to bring the members 160 and 161 together to close the top of the carton as shown in Fig. 13. The parts are then in position so that the clinching operation may be effected by the die 163 in the wall 162; and in order to prevent the members 160 and 161 from separating during this clinching operation, pivot members 250 and 251 are pivotally fixed through a pivot 252 to the frame member 184. The members 250 and 251 have downwardly directed recesses 253 which are adapted to receive therein

the pins 190 fixed to the linkage members 176 and 177. The members 250 and 251 are normally urged away from each other by a spring 255; but as the pins 190 engage in the recesses 253, the members 250 and 251 are pivoted by the movement of the recesses 253 toward each other. As the clinching members 271 are moved downwardly in the clinching operation, transverse bars 257 which are fixed to the bars 271 move downwardly therewith between and in engagement with inclined edges 258 on the members 250 and 251, as shown in Fig. 9. This operation is so timed that while the clinching pressure is applied the members 160 and 161 are urged toward each other by the force applied on the inclined surfaces by the bars 257 and transmitted to the levers 176 and 177 by the members 250 and 251.

In order to effect the clinching steps illustrated in Figs. 12 and 14 by pivoting the clinching die 163, rollers 260 are pivotally mounted to the ends of the die 163 and are adapted to be received within channels 270 in vertically movable members 271. The members 271 are mounted for limited vertical movement on the outer faces of the frame members 184 through spaced elongated slots 274, through which the pivot pins 252, 185 and 182 pass. The pivot pin 252 serves as a down stop for the member 271, and the member 271 is normally urged upwardly by a tension spring 278. Each member 271 is provided with a forwardly directed flange 280 adjacent the lower edge thereof, which is adapted to be engaged by a roller 281 on the upper end of a short linkage member 282. The linkage 282 is fixed to a longitudinally extending shaft 284, which at its forward end extends through the plate member 222. An operating arm 286 is fixed to the forwardly projecting ends of the shaft and is provided with an upwardly inclined open slot 288 therein. As the pin 224 moves downwardly within the slot 223, and at the last of the downward movement of the pedal 231 when it is within the cam slot portion 216, the pin 224 is received within the recess 288 and turns the linkage member 286 counter-clockwise (viewed in Fig. 2). This in turn turns the shaft 284 and through the link 282 and engagement of the roller 281 with the flange 280, the member 271 is urged downwardly. The rollers 260 are caused then to be pulled downwardly as they travel within the recess 270 thus pivoting the die 163 to the position indicated in Figs. 12 and 14 and clinching the strips 145 and 146 together and sealing the carton.

It is to be understood that the mechanism provided at one side of the frame for raising the storage unit is duplicated on the other side of the frame; and that the mechanism for closing and clinching the carton on the front of the frame is also duplicated at the rear of the frame, with the exception that the plate member 222 and actuating levers may be dispensed with at the rear.

To summarize the steps in the operation of the mechanism described, by raising the service seat 28 the elevators of the storage unit are raised to the position indicated in Fig. 10. As this operation is repeated the cartons within the inner elevator are indexed so that the uppermost carton assumes its proper position. Upon depression of the pedal 231 the storage unit is dropped to a position such that the upper edges of the uppermost carton are in the plane of the closing members 260 and 261. Further depression

of the pedal 231 causes the members 160 and 161 to approach each other thus closing the top edges and bringing them together. The further depression of the pedal 231 causes pivoting of the clinching die 153 through the downward movement of the member 271 to clinch the metal strips 145 and 146 together.

In Fig. 19 the mechanism described is shown as being enclosed within a portable cabinet 301.

In Fig. 20 the cabinet 301 having the unit therein is illustrated as adapted for use with a hospital bed 302. The unit 301 may be suitably removably connected to the undersurface of the bed and may either be placed thereunder and removed therefrom for each use, or by providing a lever 303 with suitable linkage associated therewith, the storage unit may be raised and operates as the structure described. This merely means that the service seat 26 with the connecting linkage 60 and 61 is dispensed with and the lever 303 is operatively connected to the lever 61 for operating it and raising the storage unit.

Formal changes may be made in the specific embodiment of the invention described without departing from the spirit and substance of the broad invention, the scope of which is commensurate with the appended claims.

What is claimed is:

1. In a device of the class described, in combination, a toilet seat having an opening therethrough, supporting means adapted to removably contain a carton having its upper edges open, said supporting means being mounted under said seat, means for raising and lowering said supporting means, movable means for engaging the upper edges of said carton to close and seal said upper edges, and means for moving said movable means when said supporting means is in its lowered position.

2. In a device of the class described, in combination, an outer elevator member and an inner elevator member mounted within said outer member and movable relative thereto, said inner elevator being adapted to removably contain a plurality of nested cartons with the upper edges of said cartons open, means for raising and lowering said outer and inner elevator members as a unit, means for raising said inner elevator relative to said outer elevator, movable means for engaging the upper edges of the uppermost carton to close and seal said upper edges, and means for moving said movable means when said outer elevator is in its lowered position.

3. In a device of the class described, in combination, a toilet seat having an opening therethrough, an outer elevator member having an inner elevator member movably mounted therein, said inner elevator member being adapted to removably contain a plurality of nested cartons having the upper edges of said cartons open, means for raising and lowering said outer and inner elevator members as a unit, means for raising said inner elevator relative to said outer elevator, closure and sealing members disposed outwardly of the longitudinal upper edges of said cartons, and means for moving said closure members toward and away from each other to close and seal the upper edges of the uppermost carton.

4. In a device of the class described, in combination, a toilet seat having an opening therethrough, supporting means adapted to removably contain a carton having its upper edges open, said supporting means being mounted under said seat, means for raising said supporting means so that the upper edges of said carton engage the under

surface of said seat in surrounding relation to said seat opening and for lowering said supporting means, movable means for engaging the upper edges of said carton to close and seal said upper edges, and means for moving said movable means when said supporting means is in its lowered position.

5. In a device of the class described, in combination, a toilet seat having an opening therethrough, a continuous groove formed in the under surface of said toilet seat around said opening, supporting means adapted to removably contain a carton having its upper edges open, said groove being complementary in shape to the shape of the upper open edges of said carton, said supporting means being mounted under said seat, means for raising said seat to such a position that the upper edges of said carton are disposed within said continuous groove and for lowering said supporting means, movable means for engaging the upper edges of said carton to close and seal said upper edges, and means for moving said movable means toward and away from each other when said supporting means is in its lowered position.

6. In a device of the class described, in combination, a toilet seat having an opening therethrough, said toilet seat having a continuous groove in the under surface thereof around said opening, an outer elevator member having an inner elevator member movably mounted therein, said inner elevator member being adapted to removably contain a plurality of nested cartons having the upper edges of said cartons open, means for raising said outer and inner elevator members as a unit so that the upper edges of the uppermost carton are disposed within said continuous groove to provide an enclosed space below said opening, means for lowering said outer and inner elevator members, means for raising said inner elevator relative to said outer elevator, closure and sealing members disposed outwardly of said longitudinal edges of said cartons, and means for moving said closure member toward and away from each other to close and seal the upper edges of the uppermost carton.

7. In a device of the class described, in combination, an outer elevator member and an inner elevator member mounted within said outer member and movable relative thereto, said inner elevator being adapted to removably contain a plurality of nested cartons with the upper edges of said cartons open, means for raising and lowering said outer and inner elevator members as a unit, means for raising said inner elevator relative to said outer elevator upon each succeeding raising movement of said elevator members as a unit, movable means for engaging the upper edges of the uppermost carton to close and seal said upper edges, and means for moving said movable means when said outer elevator is in its lowered position.

8. In a device of the class described, in combination, an outer elevator member and an inner elevator member mounted within said outer member and movable relative thereto, said inner elevator being adapted to removably contain a plurality of nested cartons with the upper edges of said cartons open, means for raising said outer and inner elevator members as a unit, means for raising said inner elevator relative to said outer elevator, movable means positioned to engage the upper edges of the uppermost carton to close and seal said upper edges, and means including a downwardly movable operating arm, the con-

struction and arrangement of said last named means being such that upon the downward movement of said operating arm, the outer and inner elevators as a unit are first lowered and then said movable means are moved to close and seal the upper edges of said upper carton.

9. In a device of the class described, in combination, a toilet seat having an opening there-through, supporting means adapted to removably contain a carton having its upper edges open, said supporting means being mounted under said seat, means for raising said supporting means so that the upper edges of said carton engage the under surface of said seat in surrounding relation to said opening, movable means for engaging the upper edges of said carton to close and seal said upper edges, and means including an operating lever, said last named means being so constructed and arranged that upon a single downward movement of said operating arm, said supporting means is first lowered to its lower position and thereafter said movable means are moved to close and seal the upper edges of said carton.

10. In a device of the class described, in combination, a toilet seat having an opening there-through, supporting means adapted to removably contain a carton having its upper edges open, said supporting means being mounted under said seat, means operatively connected to said supporting means and to said toilet seat for raising said supporting means upon raising of said toilet seat, movable means for engaging the upper edges of said carton to close and seal said upper edges, and means for lowering said supporting means and moving said movable means to close and seal said upper edges when said supporting means is in its lowered position.

11. In a device of the class described, in combination, an outer elevator member and an inner elevator member mounted within said member and movable relative thereto, said inner elevator being adapted to removably contain a plurality of nested cartons with the upper edges of said cartons open, means for raising and lowering said outer and inner elevator members as a unit, means for raising said inner elevator relative to said outer elevator, closure and sealing members disposed outwardly of the longitudinal upper edges of said cartons at a level substantially the same as the upper edges of the uppermost carton when said outer elevator is in its lowered position, and means for moving said closure members toward and away from each other to close and seal the upper edges of the uppermost carton when the outer elevator is in its lowered position.

12. In a device of the class described, in combination, a toilet seat having an opening there-through, supporting means adapted to removably contain a carton having its upper edges open, said supporting means being mounted under said seat, means for raising said supporting means so that the upper edges of said carton engage the undersurface of said seat in surrounding relation to said seat opening and for lowering said supporting means, means on the undersurface of said seat cooperating with the upper edges of said carton when the carton is in its raised position to provide an enclosed space beneath said seat, movable means for engaging the upper edges of said carton to close and seal said upper edges, and means for moving said movable means when said supporting means is in its lowered position.

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