

April 3, 1962

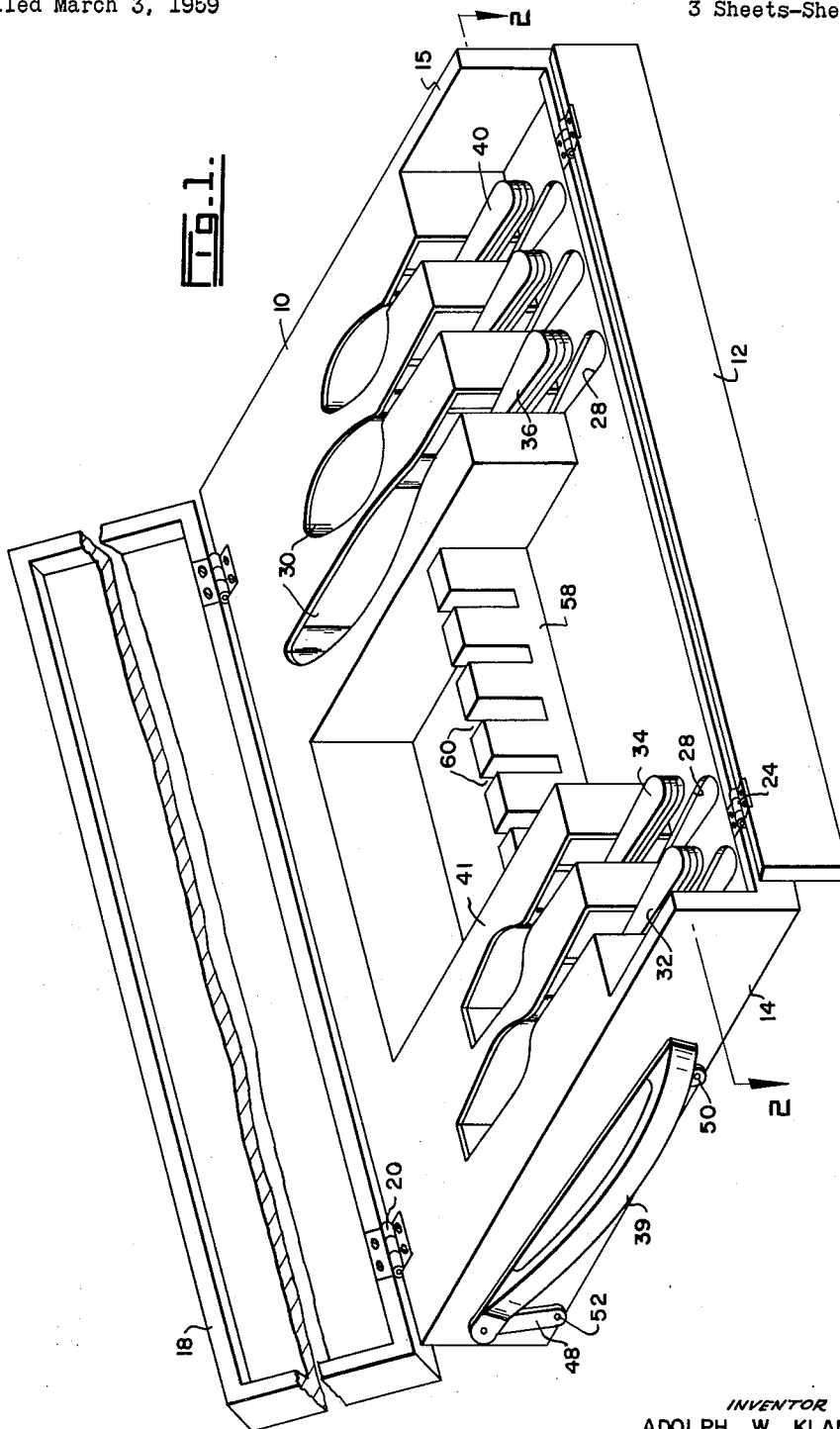
A. W. KLAMMER

3,028,048

COMBINED CUTLERY STORAGE AND DISPENSING DEVICE

Filed March 3, 1959

3 Sheets-Sheet 1



INVENTOR
ADOLPH W. KLAMMER
BY
Fetherstonhaugh & Co.
ATTORNEYS

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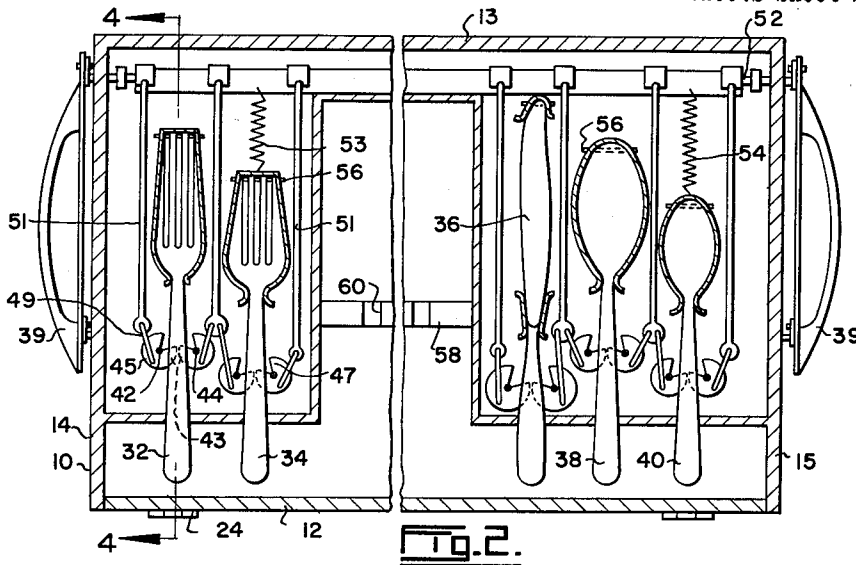
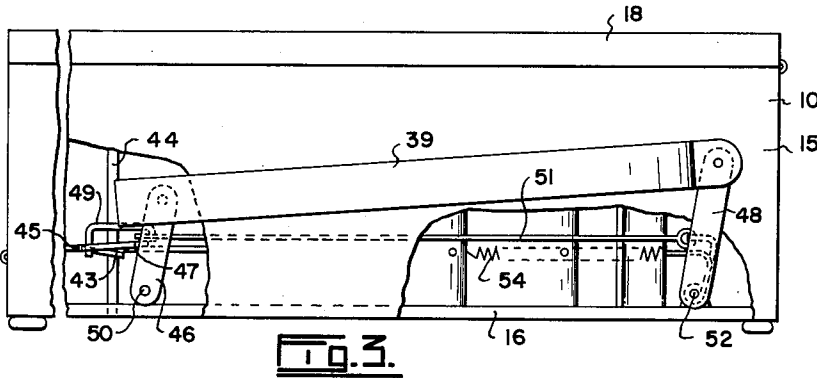
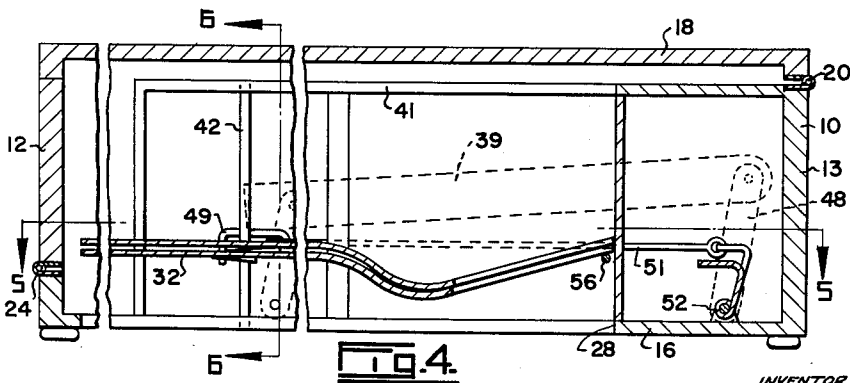
A. W. KLAMMER

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3 Sheets-Sheet 2



INVENTOR
ADOLPH W. KLAMMER
By
Fatherstonhaugh & Co.
ATTORNEYS

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A. W. KLAMMER

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3 Sheets-Sheet 3

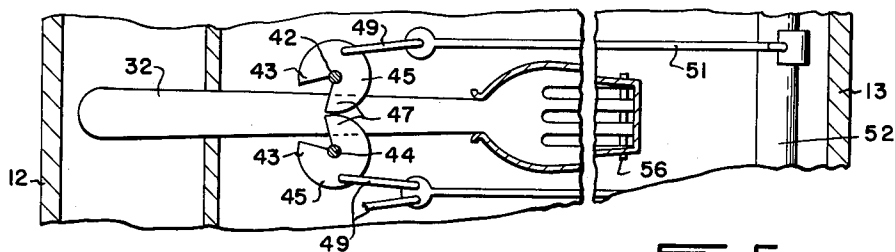


Fig. 5.

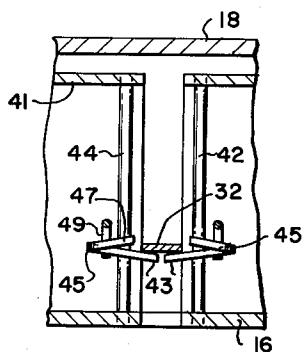


Fig. 6.

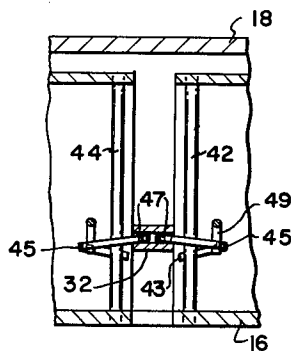


Fig. 7.

INVENTOR
ADOLPH W. KLAMMER

BY
Fetherstonhaugh & Co.
ATTORNEYS

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COMBINED CUTLERY STORAGE AND DISPENSING DEVICE

Adolph W. Klammer, 8580 112th St., R.R. 9, North Surrey, British Columbia, Canada
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4 Claims. (Cl. 221-93)

This invention is a combined cutlery storage and dispensing device.

The device of the present invention is intended for use in homes, restaurants, hotels and the like. In such establishments the problem of setting tables in preparation for a meal is a constantly recurring chore. Perhaps the most tedious task involved in setting the table in preparation for a meal is that of laying out the cutlery for each place setting. In order that the set table should present a neat appearance it is desirable that each place setting be uniformly laid out. It is readily apparent that this task can be extremely time-consuming and it is virtually impossible to make each place setting identical if reliance is placed wholly on the judgment of the person setting the table. It is also an unhygienic operation since the cutlery whilst being laid out and arranged is inevitably subjected to a good deal of handling by the person setting the table with the resulting possibility of contamination of the cutlery.

It is an object of the present invention therefore to provide a device for storing and dispensing cutlery which simplifies the setting of a table and ensures, without taxing the judgment of the person setting the table, that each place setting is identical, thereby providing a neatly laid out table.

It is another object of the invention to provide a device for storing and dispensing cutlery with the aid of which the table may be set without any handling of the cutlery on the part of the person setting the table.

It is a further object of the invention to provide a device for storing and dispensing cutlery which enables the table to be neatly set with identical cutlery place settings in an expeditious and hygienic manner.

These and other objects of the invention are accomplished by the provision of a storage and dispensing device comprising a cabinet, said cabinet having side walls, end walls and a base, said base having a plurality of cut-out portions formed therein, each of said cut-out portions generally defining the outline of an item of cutlery and collectively disposed in two spaced-apart groups, generally to define a table place setting; a like plurality of compartments formed in the interior of said cabinet, said compartments aligned with and extending upwardly from the cut-out portions and accommodating stacks of said items of cutlery; movable support means near the bottom of each of said compartments for supporting said items and for separating the lowermost item in each stack of items from the remaining items in the stack; and means connected with said support means and operable to move said support means out of engagement with said lowermost items, thereby dispensing the lowermost items in each stack through corresponding ones of said cut-out portions.

The invention will be more fully understood from the following detailed description thereof, reference being had to the accompanying drawings. Like reference numerals indicate like parts throughout the several figures of the drawings. In the drawings:

FIGURE 1 is a general perspective view of the combined storage and dispensing device,

FIGURE 2 is a plan view partly in section taken along the line 2-2 of FIGURE 1,

FIGURE 3 is an end view partly in section,

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FIGURE 4 is a sectional view taken along the line 4-4 of FIGURE 2,

FIGURE 5 is a detail sectional view taken along the line 5-5 of FIGURE 4,

FIGURE 6 is a detail sectional view taken along the line 6-6 of FIGURE 4 and shows the movable support means in their normal position and

FIGURE 7 is a detail sectional view taken along the line 6-6 of FIGURE 4 and shows the movable support means in their operated position.

Referring to the drawings, the device includes a cabinet generally designated by the reference 10 having side walls 12 and 13, end walls 14 and 15, a base 16 and a cover 18 hingedly attached by means of hinges 20 to the rear side wall 13. The front side wall 12 is preferably hingedly attached by means of hinges 24 to the base 16. The base 16 is provided with a plurality of cut-out portions 28 therein, each of the cut-out portions generally having the configuration of a different item of cutlery, i.e., either a knife, fork or spoon. The interior of the cabinet is divided by means of partitions into compartments 30, each shaped generally to conform with the outline of one of the items of cutlery. Each of the compartments 30 extends upwardly from one of said cut-out portions 28 and is adapted to accommodate therein a stack of corresponding ones of said items of cutlery. The compartments 30 are formed in two groups, the left-hand group viewed in the drawings including two forks which may be a dinner fork 32 and a dessert fork 34 whilst the right-hand group includes a knife 36, a dessert spoon 38 and a teaspoon 40. It will be appreciated that this particular place setting is only exemplary and that the number and type of items constituting the place setting may be varied by suitable selection of the number and shape of the compartments 30. The two groups are specially disposed so as generally to define a table cutlery place setting, the space between the two groups serving to accommodate a plate. If desired it could be arranged that the spacial separation of the two groups is variable whereby plates of different sizes may be accommodated between the two groups.

A pair of handles 39 for carrying the cabinet is provided on the end walls 14 thereof; these handles, as will be described hereinafter, may also be employed as part of the operating mechanism for the dispenser.

A pair of rods 42 and 44 extend between the top and bottom of each of the compartments 30 intermediate the length thereof, these rods being rotatably mounted at either end in the base 16 and the cover plate 41 respectively. Each of the rods 42 and 44 has a disc 45 fixedly mounted thereon near the lower end thereof for rotation therewith. A small sector is removed from each disc and the radial edges of the disc bounding the sector are bent in opposite directions relative to the plane of the disc to provide a pair of jaws 43 and 47. The maximum spacing of the jaws is set to correspond to the thickness of the intermediate portion of the shank of one item of cutlery whereby when one item of cutlery is caused to rest on the lower jaw 43 other items stacked on top of this item may be separated therefrom by insertion of the upper jaw 47 between the two lowermost items in the stack. The rods 42 and 44 are disposed in such manner that a pair of oppositely disposed discs extends inwardly through the side walls of each compartment 30, each disc having a compartment center line tangential thereto. The discs may, if desired, be formed integrally with the rods.

Each disc is fixedly attached either directly or by means of a link 49 to connecting rods 51 which are in turn rigidly secured to an operating rod 52. The operating rod 52 extends between and through the end walls 14 and is

mounted in the end walls for rotation with respect thereto. The handles 39 are attached at either end to links 46 and 48, the other end of link 46 being pivotally attached at 50 to the end 14 of the cabinet whilst the other end of link 48 is fixedly attached to the end of the operating rod 52. The operating rod is normally biased to its rest position by means of springs 53 and 54, each of which is fixedly attached at one end to the operating rod and at the other end to the walls of a compartment.

In an alternative embodiment (not shown) the discs are replaced by L-shaped members, each of which is formed with its two arms lying in parallel planes spacially separated by a distance corresponding to the thickness of the intermediate portion of one of the items of cutlery. Each of the L-shaped members is pivotally attached at the junction portion of the two arms thereof, to the base adjacent the edge of one of said cutout portions and is also secured to connecting rod 51 for rotation thereby about its pivot. The L-shaped members are disposed so that in their normal position the lowermost arm of each of a pair of members projects inwardly through opposed sides of one of the compartments 30 to provide a support for a stack of items of cutlery placed in the compartment. Operation of rod 52 results in rotation of the L-shaped members about their respective pivot points to cause the upper arm of each member to be inserted between the two lowermost items in the stack and the lower arm to be removed from beneath the lowermost item, thereby releasing the lowermost item, which drops through the corresponding cut-out portion, whilst the remaining items in the stack are supported by the cooperating upper arms. Upon releasing rod 52 the L-shaped members are returned to their normal position whereat the remaining items in each stack are supported by the lower arms of corresponding pairs of L-shaped members.

The tip portion of each stack of items is supported by means of fixed support members 56 extending across each of the compartments 30 at the head end thereof and fixedly attached to the side walls of the compartments. The fixed support members 56 are positioned at the correct height in relation to the discs 45 whereby as the pairs of discs are moved out of engagement with the lowermost item of each stack the item slides clear of the member 56 and is dispensed through the corresponding cut-out portion.

With this arrangement movement of the handles about their respective pivots effects the rotation of the operating rod. Rotation of the operating rod is in turn effective to cause actual movement of the connecting rods and the consequential rotation of discs 45 about these rods. The rotational movement of the discs 45 result in movement of the lower jaws thereof from their item-supporting position whereby any item of cutlery supported thereon is allowed to drop below the discs and through the corresponding cut-out portions therebelow. Each item drops with the one movement of said handles providing a one-shot dispensing action for a complete cutlery place setting. By releasing the pressure from the handles the operating rod is ultimately returned to its normal position by means of the springs 53 and 54 whereupon the next item in the stack drops into position on the lower jaw whilst the remainder of the items in the stack are supported by the upper jaw. If desired, the operating rod may be connected for operation thereby to a separate lever or handle mounted at one or each end of the cabinet instead of being connected to the actual carrying handles of the cabinet.

The interior of the cabinet intermediate the two groups of compartments is in the preferred embodiment utilized as a storage section wherein spare items of cutlery may be stacked. To this end, a castellated partition wall 58 is provided, this wall extending between the walls of the compartments. The intermediate portions of items of cutlery to be stored are received in the slots 60 of the

partition 58 whereby the items may be stored and confined in convenient stacks.

The storage and dispensing device of the present invention may be fabricated from any suitable materials and may if desired be made entirely of plastic.

In use, each of the compartments is loaded with a stack of items of cutlery, preferably immediately the latter are washed and dried after their last use, the same number of items being provided in each stack. The cabinet is then closed and is ready to be carried to the table when desired. To lay the table with the desired number of place settings, it is then only necessary to place the cabinet successively at each position on the table, exert forwardly-directed pressure on the handles at each said position and thereby dispense at each position on the table a complete place setting of cutlery.

It will be appreciated that the foregoing describes only one form of the invention and that many variations in detail may be made within the scope of the invention. In particular, the device of the present invention may be provided in the form of a children's toy table setter in which case the whole device may conveniently be made of plastic and, if desired, toy cutlery made of plastic or the like may be provided for use therewith.

What I claim as my invention is:

1. A combined cutlery storage and dispenser device for automatically depositing simultaneously an entire cutlery place-setting on a table, comprising a portable cabinet having a base which when said cabinet is placed on a table surface is positioned immediately at said surface, said base having a plurality of cut-out portions therein and disposed in two predetermined spaced groups arranged generally to define a single place-setting, each of said cut-out portions being just large enough to permit an item of cutlery to drop substantially horizontally therethrough and being adapted for a different item from the items of the other cut-out portions, a compartment over and in registry with each cut-out portion for accommodating therein a stack of cutlery items for which the latter cut-out portion is adapted, movable supporting means extending into each compartment near the bottom and at each side thereof and being normally positioned so as to extend beneath the lowermost item in said each compartment to support the stack of items therein, releasing means connected to the movable supporting means of all said compartments to move all said supporting means in unison from beneath the lowermost items in the stacks in the respective compartments, and supporting means at each compartment normally clear of the cutlery items therein and movable by said releasing means to support the stack in the latter compartment when the supporting means is moved from beneath the lowermost item, whereby the lowermost items simultaneously drop through the cut-out portions on to the table surface immediately at said base without losing their predetermined positions with respect to each other.

2. A combined cutlery storage and dispenser device for automatically depositing simultaneously an entire cutlery place-setting on a table, comprising a cabinet having side walls, end walls and a base which when said cabinet is placed on a table surface is positioned immediately at said surface, said base having a plurality of cut-out portions therein and disposed in two predetermined spaced groups arranged generally to define a single place-setting, each of said cut-out portions being just large enough to permit an item of cutlery to drop substantially horizontally therethrough and being adapted for a different item from the items of the other cut-out portions, a compartment over and in registry with each cut-out portion for accommodating therein a stack of cutlery items for which the latter cut-out portion is adapted, movable supporting means extending into each compartment near the bottom and at each side thereof and being normally positioned so as to extend beneath the lowermost item in said each compartment to support the stack of items therein, han-

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dles depressibly mounted on the end walls and by means of which the cabinet can be lifted and carried, releasing means connected to and operated by the depression of said handles and connected to the movable supporting means of all said compartments to move on depression of the handles all said supporting means in unison from beneath the lowermost items in the stacks in the respective compartments, and supporting means at each compartment normally clear of the cutlery items therein and movable by said releasing means to support the stack in the latter compartment when the supporting means is moved from beneath the lowermost item, whereby the lowermost items simultaneously drop through the cut-out portions on to the table surface immediately at said base without losing their predetermined positions with respect to each other.

3. A combined cutlery storage and dispenser device for automatically depositing simultaneously an entire cutlery place-setting on a table, comprising a portable cabinet having a base which when said cabinet is placed on a table surface is positioned immediately at said surface, said base having a plurality of cut-out portions therein and disposed in two predetermined spaced groups arranged generally to define a single place-setting, each of said cut-out portions being just large enough to permit an item of cutlery to drop substantially horizontally therethrough and being adapted for a different item from the items of the other cut-out portions, a compartment over and in registry with each cut-out portion for accommodating therein a stack of cutlery items for which the latter cut-out portion is adapted, fixed supporting means at each compartment underlying and supporting one end of the stack in the latter compartment, movable supporting means extending into each compartment near the bottom and at each side thereof and spaced from the fixed supporting means thereof, each of said movable supporting means being normally positioned so as to extend beneath the lowermost item in said each compartment to help support the stack of items therein, operating means connected to the movable supporting means of all said compartments to move all said supporting means in unison from beneath the lowermost items in the stacks in the respective compartments, and supporting means at each compartment normally clear of the cutlery items therein and movable by said releasing means to support the stack in the latter compartment when the supporting means is moved from beneath the lowermost item, whereby the lowermost items simultaneously drop through the cut-out portions on to the table surface immediately at said base without losing their predetermined positions with respect to each other.

4. A combined cutlery storage and dispenser device for automatically depositing simultaneously an entire cutlery place-setting on a table, comprising a cabinet having side walls, end walls and a base which when said cabinet

is placed on a table surface is positioned immediately at said surface, said base having a plurality of cut-out portions therein and disposed in two predetermined spaced groups arranged generally to define a single place-setting, each of said cut-out portions being just large enough to permit an item of cutlery to drop substantially horizontally therethrough and being adapted for a different item from the items of the other cut-out portions, a compartment over and in registry with each cut-out portion for accommodating therein a stack of cutlery items for which the latter cut-out portion is adapted, movable supporting means extending into each compartment near the bottom and at each side thereof and being normally positioned so as to extend beneath the lowermost item in said each compartment to support the stack of items therein; said movable supporting means each comprising a shaft extending upwardly from the bottom of one of said compartments and rotatably mounted therein and a disc-like member fixedly mounted on said shaft adjacent the bottom end thereof, said disc-like member being provided with a notch extending upwardly from the edge thereof, the portions of said disc-like member adjacent said notch being bent in opposite directions with respect to the plane of said member to form a pair of jaws, the lower jaws of each of said disc-like members being normally positioned so as to underlie the lowermost item in each of said stacks from each side thereof, thereby to support the whole of the items in each stack; operating means connected with each of said disc-like members, said operating means comprising a lever rotatably mounted in and extending between the end walls of said cabinet and means connecting each of said disc-like members to said lever, whereby rotation of said lever is effective to rotate all of the disc-like members in unison to move the lower jaws thereof from beneath said lowermost items while simultaneously moving said upper jaws to a position whereat they underlie the next lowermost items, thereby to support the items above the lowermost item in each of said stacks while simultaneously dispensing each of said lowermost items through corresponding ones of said cut-out portions, whereby said lowermost items simultaneously drop through the cut-out portions on to a table surface on which the cabinet is placed in correct spacial relationship to form a cutlery place-setting, and handles depressibly mounted on said end walls and by means of which the cabinet can be lifted and carried, said handles being connected to opposite ends of said lever, whereby depression of the handles is effective to rotate said lever.

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