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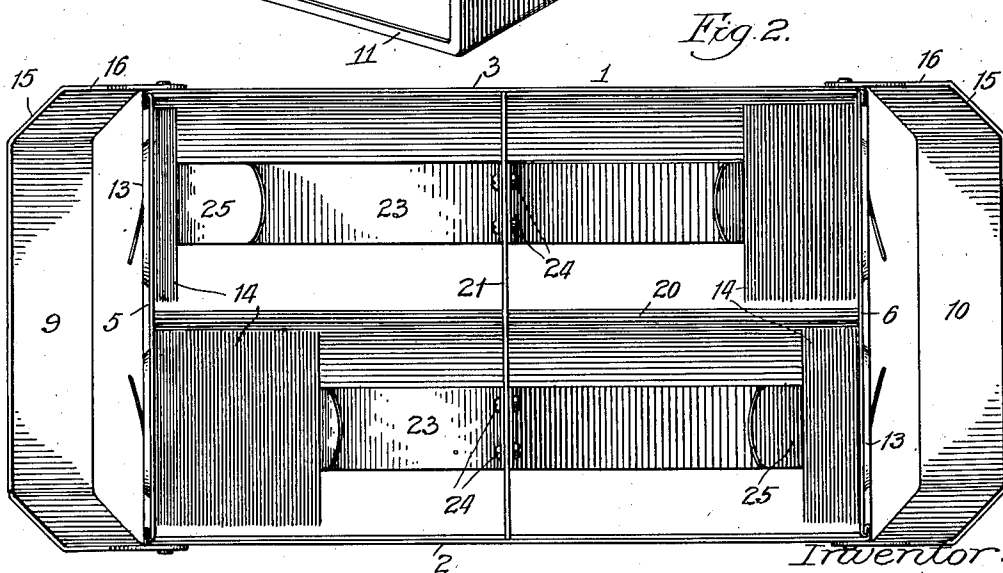
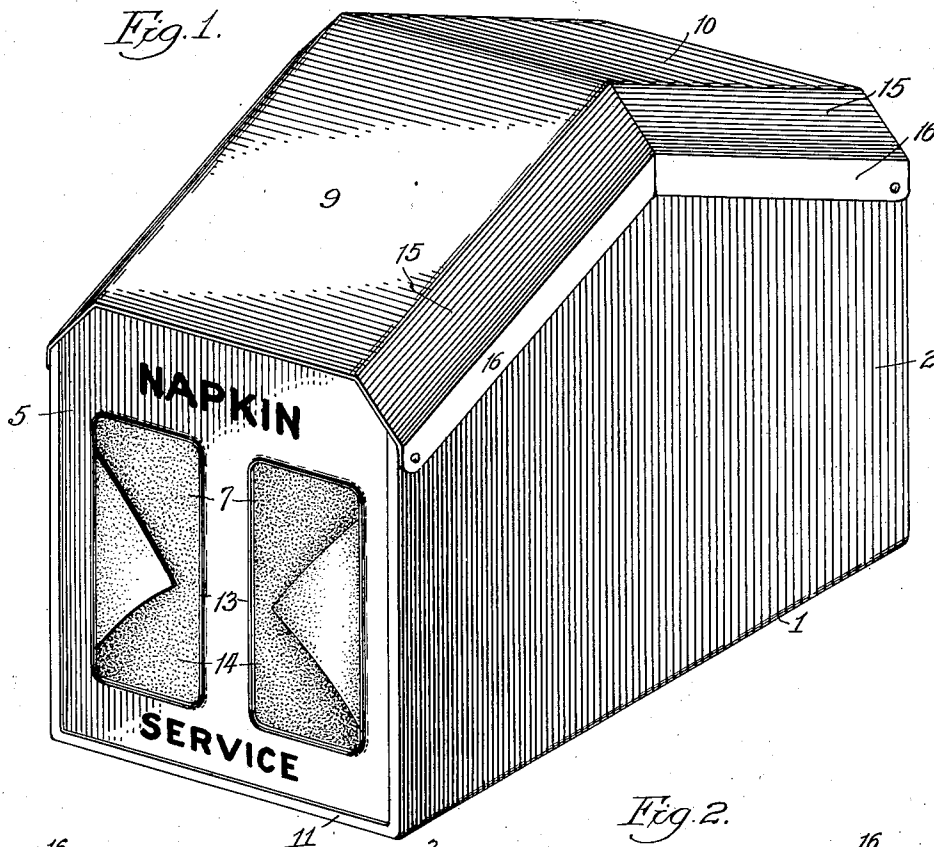
E. C. MORRIS

2,069,264

DISPENSING DEVICE

Original Filed June 7, 1924

5 Sheets-Sheet 1



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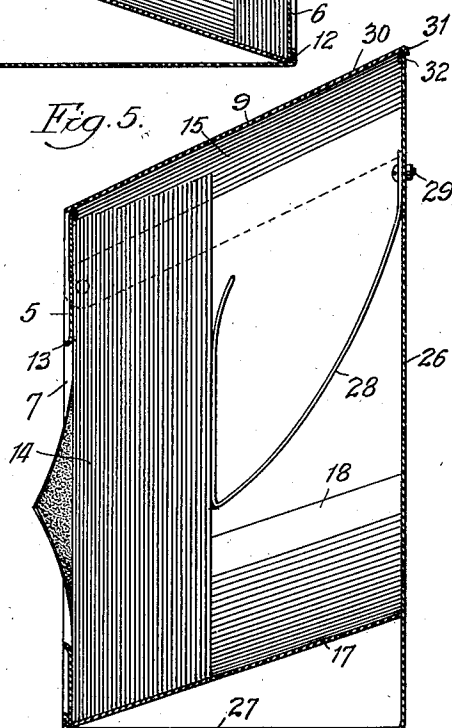
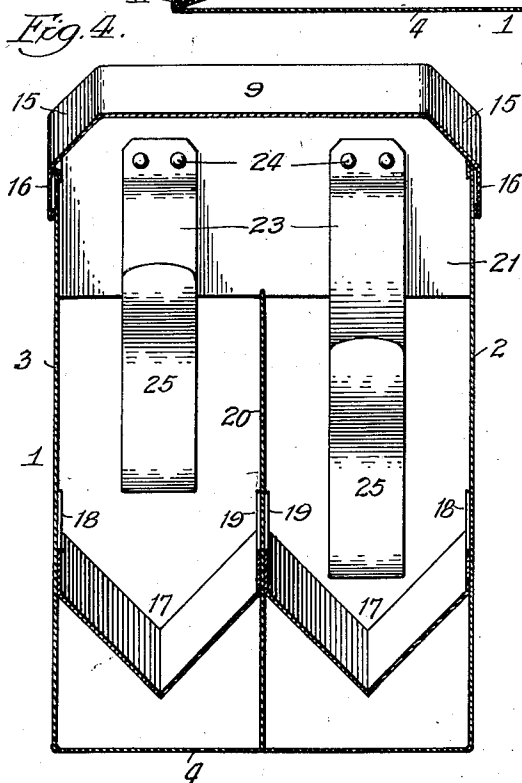
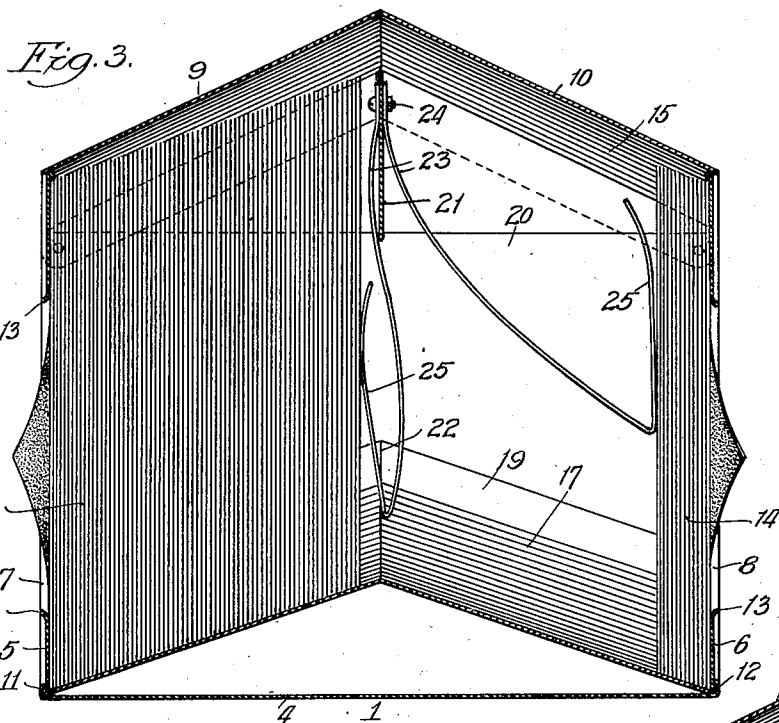
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DISPENSING DEVICE

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DISPENSING DEVICE

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5 Sheets-Sheet 3

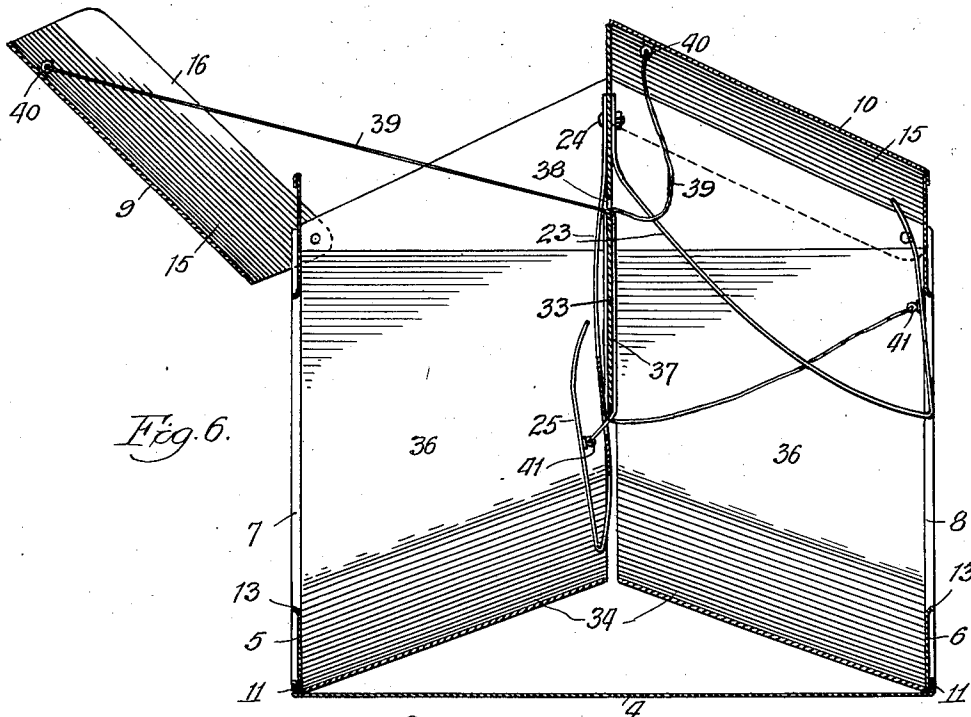


Fig. 6.

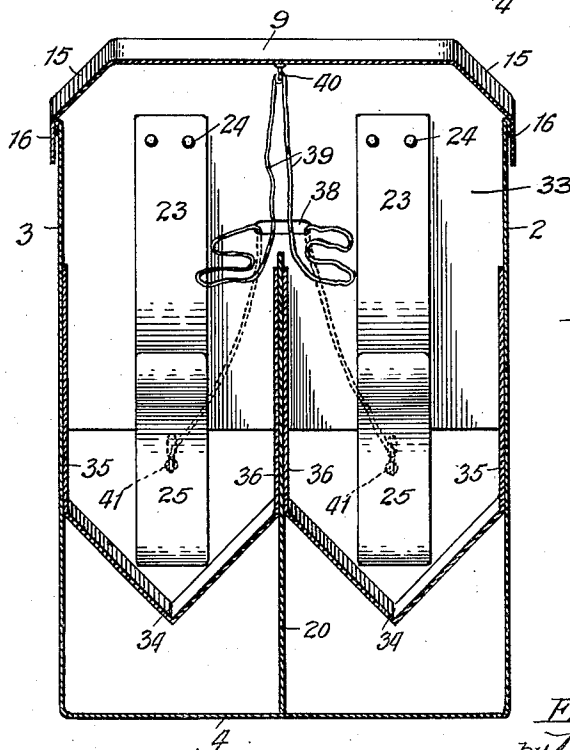


Fig. 7.

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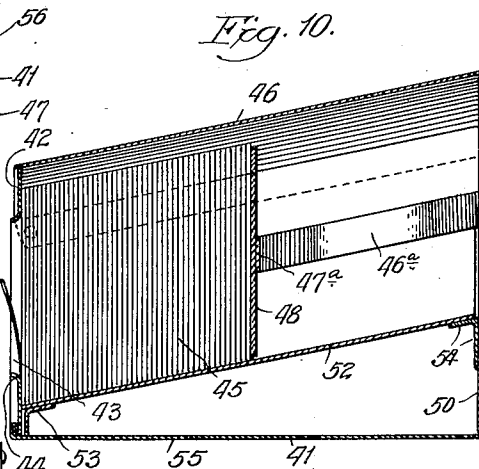
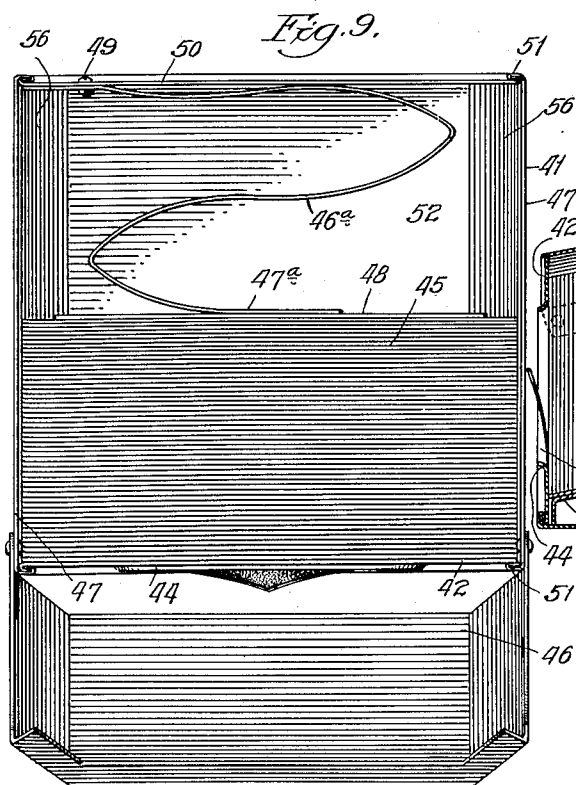
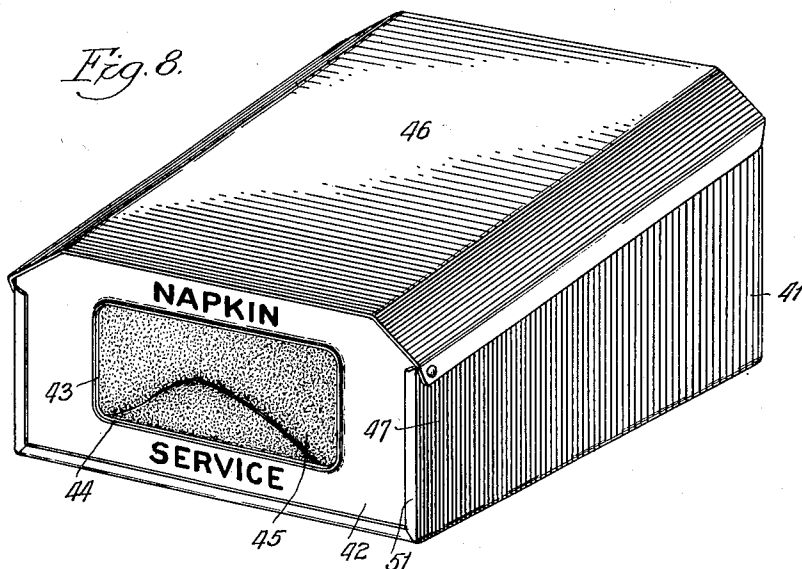
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5 Sheets-Sheet 4



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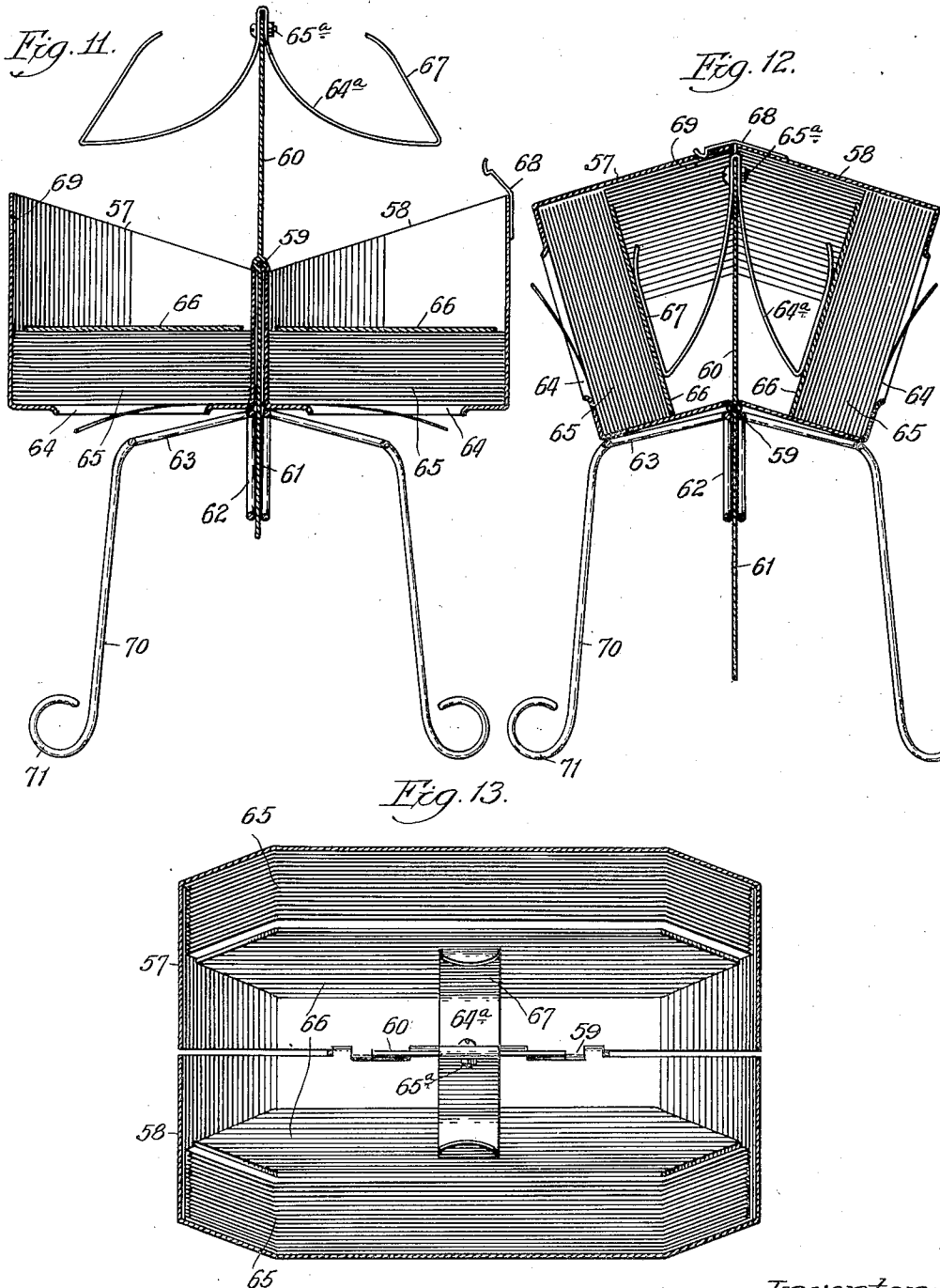
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UNITED STATES PATENT OFFICE

2,069,264

DISPENSING DEVICE

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Application June 7, 1924, Serial No. 718,419
Renewed April 21, 1936

8 Claims. (Cl. 312—61)

The present invention relates to dispensing devices or means for the dispensing of articles, such as folded napkins, towels, and like and similar articles.

Among the objects of the invention are to provide a novel means for dispensing folded napkins, towels, and like and similar articles, in a facile and efficient manner; to provide a dispensing device for holding a number of such articles in stored but dispensable position; to provide means, preferably in the form of a flat spring or springs for constantly pressing and for normally urging and feeding the articles toward the dispensing opening of the device, as well as holding the articles in upright position; to provide such a device with means, such as a partition, wall or brace member for the reaction between it and the articles of the feeding means; to provide a closure or cover cooperating with the feeding means, preferably by a connecting element, such as a flexible connector or cord, or chain, or the like, connected to the feeding means and the cover, whereby the feeding means may be retracted upon the opening of the cover so as to clear the space for the loading or charging of the articles in the container; to provide a container of relatively movable sections or portions, either a body and cover portions or two body portions or sections so related that as they are separated or swung apart, the container is opened for charging of the articles and when closed or swung together, the articles in the container are in feeding and dispensing position; to provide for means, such as flat springs for normally feeding the articles to the dispensing opening in such section or sections when in closed position and movable to clear the space for the articles when loading or replenishing the container section or sections with articles; to provide for the automatic withdrawal or retracting of the feeding means when the container is opened; to provide for such other objects, capabilities and advantages as will later appear and are inherently possessed by the invention.

Referring to the drawings showing a few embodiments of the invention; Fig. 1 is a perspective view of a device constructed in accordance with the invention; Fig. 2 is a top plan view of the same with the covers in open position; Fig. 3 is a longitudinal sectional view through the same; Fig. 4 is a transverse sectional view of the same; Fig. 5 is a longitudinal sectional view of a device similar to those in the foregoing figures with the exception that it is a single ended device instead of being double ended; Fig. 6 is a

longitudinal sectional view through a device similar to that shown in Figs. 1, 2, 3, and 4, but with automatic means for retracting the springs when the covers are open; Fig. 7 is a transverse sectional view of the same; Fig. 8 is a perspective view of another form of the device wherein the articles are disposed horizontally instead of vertically; Fig. 9 is a top plan view of the same with the cover in open position; Fig. 10 is a longitudinal sectional view of the same; Fig. 11 is a vertical sectional view of another form of device shown in open position; Fig. 12 is a similar view showing the device in closed position; Fig. 13 is a sectional view in plan with the top portions removed, of the same.

Referring more particularly to the drawings, the embodiments shown in Figs. 1 to 4 inclusive, includes or comprises a container 1 having side walls 2 and 3, a bottom wall 4, end walls 5 and 6, each provided with dispensing openings 7 and 8, and pivotally connected covers or closures 9 and 10, the latter being preferably in inclined position as clearly shown in the drawings. The side and bottom walls are preferably integral and formed from a single sheet of material and provided at the ends with flanges 11 and 12 against which the end walls 5 and 6 bear or to which these end walls may be secured in any desirable or suitable manner. The dispensing openings 7 and 8 formed in the end walls preferably have outwardly extending flange or lip portions 13 for facilitating the passing and dispensing of the articles 14 as the same are manually drawn through the dispensing openings. One of the important features of the invention is to provide a device from which paper napkins may be readily and quickly dispensed without danger of tearing. Though the dispensing openings are substantially rectangular, the corners of the rectangular openings are well rounded whereby, as the paper napkin is withdrawn these rounded corners guide the edge or edges of the napkin from one edge of the opening to the adjacent edge so that the napkin will not catch and tear.

It will also be observed that the dispensing opening is comparatively large having narrow marginal flanges exposing substantially all of the folded edges of the napkin thereby facilitating the dispensing of the article and that friction on the article is reduced to a minimum due to the small marginal walls adjacent to the dispensing opening.

Applicant's device with its narrow inwardly projecting parts at the sides of its large dispensing opening is adapted to dispense separately

folded articles, the final fold of each of which articles terminates in a tab portion overlying the face of the article in inwardly spaced relation to the outside edge of the article, such tab portion being provided by folding such tab portion so as to overlie the body portion of each article, serving to form a multiplicity of plies near the center of such folded article. When pressure is applied to the rear of a stack of such separately folded articles, whether with a follower plate as shown in Fig. 10 or by the use of the bent back portion of applicant's spring as a follower, as shown in Figs. 1 to 7, to maintain the foremost article of the stack in engagement with the inwardly projecting parts at the sides of the dispensing opening, the tab portion on the outer face of the foremost article tends to bulge outwardly, due to the bulging of the body portion of the foremost article, making such tab free to be grasped between the inwardly projecting parts at the sides of the dispensing openings. The arrangement is such that the body portion of the foremost article, which is held behind the inwardly projecting parts of the dispensing opening, is readily released from such inwardly projecting parts by a forward pull on the bulging tab portion of the foremost article. The covers 9 and 10 are preferably pivotally connected at or near the ends of the side walls and have their free end portions meeting together in the center in a form of a ridge and are provided with laterally inclined portions 15 and flanges 16 which overlie the top marginal portions of the side walls, the side walls being, at the upper ends thereof, substantially V-shaped, as shown in the drawings.

These devices may be designed with one or more compartments, and in the form described here, the device has four compartments, with two compartments lying side by side at one end of the dispenser and two other compartments arranged side to side at the other end of the device, this arrangement being convenient for dispensing of the articles 14 from both sides of the device, as from both sides of a table, counter, and like supporting means in a restaurant or similar place.

Within the container and particularly in each compartment is located a support or trough 17, preferably in inclined position, as clearly shown in Fig. 3, upon which are supported the articles or napkins 14 in standing position and in a group. The ends of the napkins are preferably V-shaped and rest into the groove of the trough. These troughs may have flanged portions 18 which may be, if desired, secured in any suitable manner to the side walls 2 and 3 of the container, and also flanges 19 at the opposite side of the troughs similarly secured to a dividing wall or partition 20 extending longitudinally throughout the middle of the container. Above the partition 20 and transversely thereof in the middle of the container and beneath the ridge portion of the cover is located a cross-partition 21 the lower edge of which rests upon the partition 20 and the ends of which are secured in any suitable manner to the upper portions of the side walls 2 and 3. The troughs 17 preferably meet at their inner ends to form an abutment 22 in aid of holding the troughs in inclined position as shown in Fig. 3 of the drawings.

In the forms of device as shown in Figs. 1 to 7 inclusive, which are provided for use with packs of folded articles each of which terminates in a point at substantially the middle line of the ar-

ticle, the form of supporting means employed provides a support at each side of the point of the folded article, along which oppositely disposed supports or guideways the pack is slidable toward the dispensing opening. With the folded articles bearing downwardly at both sides on the oppositely disposed supports adjacent to the side folds of the articles, the points of the folded articles are protected against dragging or bending backwardly at their lower ends.

For the purpose of urging and pressing the napkins toward the dispensing opening as the outer napkin is withdrawn through the opening, the dispenser comprises suitable means for normally pressing against the trailing napkin of the group and constantly urging or pressing the same toward the end of the container. This means preferably comprises a long flat spring 23 suitably secured, as by a bolt or like securing means 24, to the cross partition 21 and extends downwardly a substantial distance and includes a finger portion or pressing member 25, so bent and shaped to bear efficiently against the rear end of the pack of articles in the container. The pressing member 25 constitutes a flexible presser-foot that is yieldingly mounted on the free end of the elongated flexible arm formed by the bowed inner part of the flat spring 23, the presser-foot being an angular extension of the arm. Owing to the yielding connection between the two parts, the presser-foot is maintained in flat contact with the stack as the arm extends to feed the stack toward the end wall of the container having the dispensing opening. There is a spring for each of these compartments for constantly pressing against each pack and for holding the articles or napkins in upright position. It will be observed that the partition 20 and the arrangement of the troughs 17 are such as to provide the four compartments above mentioned.

When it is desired to charge or load the compartments with the articles, the covers are opened and the spring 23 with the pressing member 25 is retracted in any suitable manner, usually by hand so as to clear the space in the compartments, and the articles are inserted into the compartments so as to stand in a position shown in Fig. 3 of the drawings. Upon releasing the spring it will bear against the rear end of the pack and press it against and toward the end wall so that the forward napkin or article will be in a position for being withdrawn through the dispensing opening. The cover may then be closed. This is a very sanitary device, the flanges of the cover fitting closely with the side walls of the container so as to exclude dust and like foreign matter and to maintain the napkins in neat and clean condition.

With the container loaded to its maximum capacity as to the compartments in end-to-end relation, the stacks positioned in the opposite ends of the compartments in abutting relation to the end walls thereof, are separated by a narrow intervening space at an intermediate part of the container. Into this narrow space extend the bowed flat spring arms 23 respectively attached at one to the opposite sides of the support formed by the partition 21. At their free ends these spring arms carry the presser-feet 25 in angular extension of the arms. These springs are arranged back-to-back and are compressed against each other between the stacks and the presser-feet are compressed against their respective arms. As the individual articles are withdrawn through the dispensing openings the compressed springs

the sections are in closed position, as shown in Fig. 12 of the drawings. The container rests upon the stand and when in open position, as shown in Fig. 11, the partition 60 will be carried upwardly so as to carry the springs 64a secured thereto by a suitable means such as a bolt 65a, so as to clear the space within the sections 57 and 58 as clearly shown in Fig. 11 of the drawings. If desired, follower plates 66 may be placed upon the packs 65 and the springs with their pressing members or fingers 67 may press against these plates so as to feed the articles toward the dispensing opening. When the sections are in open position the napkins may be charged therein as shown in Fig. 11 and then the sections may be swung together into closed position as shown in Fig. 12, at which time the partition 60 will be forced to move downwardly with the lower portion thereof sliding between the frames 62 and depend therefrom as shown in Fig. 12. At the same time the springs 64a and their pressing portion 67 will engage with the follower plates 66 to immediately act to hold the packs of napkins in feeding position. One section, such as section 58, may be provided with a spring catch 68 capable of engaging with an opening 69 provided in the section 57 so as to normally hold the sections in locked closed position. The stand 63 preferably has a plurality of legs 70 formed with curved portions 71 to serve as feet for the stand.

It will be apparent in this form of device that the opening and closing of the two parts of the container, automatically effects the retracting and the engaging of the feeding springs from and with the articles in the container. When thrown into open position the springs are automatically cleared of the container space so that the new packs may be easily inserted and when the sections are swung together to closed position they automatically move the brace member and the springs carried thereby, downwardly so that the springs will engage automatically with the packs.

The construction shown in Figs. 11, 12, and 13 forms the subject matter of a divisional application filed July 19, 1928, and bearing Serial No. 293,964 which has eventuated into Patent No. 1,728,694 of Sept. 17, 1929.

While I have herein described and upon the drawings shown a few embodiments of my invention, it is to be understood that the invention is not limited to these particular details, arrangements of parts, constructions, but that other details, arrangements of parts and constructions are comprehended by the invention without departing from the spirit thereof.

Having thus described my invention, I claim:

1. A dispensing device for stacks of folded articles, comprising a container having opposite end walls provided with dispensing openings, said container being adapted to receive stacks respectively abutting the end walls with an intervening space between the stacks, a support carried by the container at an intermediate part thereof, and oppositely disposed flat springs attached at one end to the support and extending at their free ends into the space between the stacks, said springs being arranged back-to-back with their free ends projecting in opposite directions to bear against the contained stacks, the springs being compressed against each other between the stacks when the opposite end compartments are charged to capacity with stacks of said folded articles, said springs being positioned to impart at their free ends an outward thrust to the backs of the

stacks opposite the dispensing openings in the end walls, said springs normally operating to feed the stacks toward the respective end walls and to maintain the articles in dispensing position.

2. A dispensing device for stacks of folded articles comprising a container having opposite end walls provided with dispensing openings, said container being adapted to receive stacks respectively abutting the end walls, oppositely disposed flat springs mounted in the container and positioned to provide an intervening space between the contained stacks, said springs being arranged back to back with their free ends projecting in opposite directions to bear against the stacks, said springs being compressed against each other between the stacks when the opposite end compartments are substantially filled with folded articles and said springs being positioned to impart at their free ends an outward thrust to the backs of the stacks opposite to the dispensing openings in the end walls, said springs normally operating to feed the stacks toward the respective end walls and to maintain the articles in dispensing position.

3. In a dispensing device for a stack of folded articles, the combination of a container comprising a compartment one of the walls of which comprises parts projecting inwardly from the sides of the compartment at opposite sides of a dispensing opening in said wall, with such inwardly projecting parts engaging only comparatively small marginal portions at the sides of the foremost folded article of the stack, and a spring secured in said compartment, said spring having a bent back portion at its free end serving as a follower adapted to engage the article at the rear of the stack and slidable upwardly along said rearmost article as the articles are removed successively through the dispensing opening, serving to maintain pressure near the center of the rearmost article whereby the frictional contact of such inwardly projecting parts of the dispensing opening on the sides of the foremost folded article of the stack is reduced, permitting said foremost folded article normally to be pulled forward through the dispensing opening with but little resistance.

4. In a dispensing device for stacks of folded articles, the combination of a container having two opposite end compartments, each having a dispensing opening in its front wall, and a spring in each compartment adapted to urge a stack of folded articles therein forward towards the dispensing opening in said front wall, and each adapted to be pressed beyond a vertical position and to extend backwardly into the adjoining compartment when the compartment in which said spring is located is filled to capacity with folded articles, said springs being adapted by engagement with each other when each of the opposite end compartments is charged to capacity with stacks of folded articles to have a compound effect upon the contents of either compartment.

5. In a dispensing device for a stack of folded articles, the combination of a container comprising a compartment, one of the walls of which is provided with an opening for dispensing said articles therethrough, a support in the container in which the ends of the articles rest as they are pressed forward toward the dispensing opening, and a spring secured in said compartment and adapted to exert pressure forwardly and upwardly on the rear of the stack as the articles in front are removed, tending thereby to lift the stack of folded articles and to reduce the

expand and feed the stacks in opposite directions toward the end walls of the compartments. The presser-feet bear against the backs of the stacks opposite to the central part of the dispensing openings of the respective compartments. The pressure exerted by the presser-feet and their combined spring arms normally tends to feed the stacks toward the end walls of the respective compartments and also tends to bulge the folded over tab of the foremost article of each stack through the dispensing opening in the abutting end wall of each compartment.

As above indicated the form just described is designed for dispensing napkins from both ends of the container so that the napkins will be available from the two sides of a table or like support. If, however, it is not desired to dispense napkins from both ends of the container the container may be of the form shown in Fig. 5 where one-half of the device is dispensed with and a rear wall 26 is formed, preferably, integral with the bottom wall 27 and the spring 28 is secured to this wall by any suitable securing elements, such as a bolt 29 as clearly shown in Fig. 5 of the drawings. In other respects this part of the device is identical to that described above. Fig. 5, of course, is intended to illustrate any number of compartments arranged side by side from one to any desired number. The cover portion 30, in this particular construction, may have an end flange or bead 31 to fit over the upper end 32 of the rear wall 26, which also may be, if desired, beaded at its upper end.

Referring to the form shown in Figs. 6 and 7, the construction is substantially the same as that described in Figs. 1 to 5 inclusive and has additional features, particularly automatic means for retracting the pressing or feeding means or springs when the cover or covers are open. This is also a structure having a plurality of compartments, four in number as shown, and it has a deeper cross-partition 33 suitably slotted to receive the upper end portion of the central partition 20. It also has troughs 34 which are preferably removable and provided with wide flanges or side portions 35 and 36 bearing respectively against the side walls 2 or 3 and the central partition 20 as clearly shown in Fig. 7 of the drawings.

The troughs are held in inclined position with the lower ends thereof resting in the corners formed by the bottom wall and the end walls and having their rear ends 37 resting laterally against the cross partition 33 as clearly shown in Fig. 6 of the drawings.

For the purpose of automatically retracting the springs when the covers are opened so as to permit the loading or recharging of the compartments with the articles or napkins, the cross partition 33 is provided with an opening or perforation 38 through which extends a flexible connector 39 having an end thereof suitably connected to an end portion 40 of a cover, the other end thereof passing downwardly along the cross-partition 33 and beneath the lower edge thereof for connection with a suitable portion 41 of the pressing member or finger 25. This arrangement may be duplicated for each of the other compartments for performing the same function in respect to the other springs or pressing members 25.

It will be apparent from Figs. 6 and 7 of the drawings, that when the covers 9 or 10 are opened the connectors 39 will be drawn with it and thus retract the spring together with the pressing member 25 from a position as shown at

the right hand side of Fig. 6 to the position of such a member as shown at the left hand side of Fig. 6 of the drawings. When the closure is returned to closed position the spring will automatically move to pressing position against the rear end of the pack, drawing the connector 39 to the extent sufficient therefor and permitting the remainder of the connector to be slack in the container above the pack. When the cover is opened and automatically retracts the spring, the space in which the packs of napkins are to be placed is cleared and a new pack may be manually and conveniently inserted in the compartment in upright position in replenishment thereof and with the leading napkin in position to be dispensed through the dispensing opening. The cover may then be closed.

Referring to Figs. 8, 9, and 10, the device is constructed to receive the napkins when folded and arranged with their side edges in horizontal position instead of upright position or vertically as shown in the previously described construction. In this device is provided a container 41 having an end wall 42 formed with a dispensing opening 43 having a lip 44 at the edge of the opening for aiding the dispensing of the article 45. A cover 46 is pivotally connected at the forward ends of the side walls 47 as clearly shown in these figures. The napkins 45 are located in the container in substantially horizontal position, that is to say, on their sides rather than resting on their ends and are fed or pressed toward the dispensing opening by a spring 46a having a pressing portion 47a bearing against the rear of the pack 45. If desired, a follower plate 48 may be disposed between the pressing member 47 and the rear end of the pack 45 and be connected thereto. The other end of the spring is secured, in any suitable manner, by a bolt 49 to the rear wall 50 of the device. The rear and front walls are provided with inwardly extending flanges 51 against which the end walls are made to bear or to which they are secured in any suitable manner.

The pack is preferably supported upon an inclined support 52 having its ends resting upon suitable ledges 53 and 54 respectively resting upon the forward end of the bottom wall 55 and secured to the rear wall 50 as clearly shown in Fig. 10 of the drawings.

Inasmuch as the ends of the napkins are usually tapered or V-shaped, it is preferable to provide inclined supports 56 at the sides of the container and at the corners joining the bottom wall with the side walls as clearly shown in Fig. 9 of the drawings. The ends of the napkins will rest upon the support so that they will be held on their sides in an efficient manner.

In the use of this device when it is desired to recharge the container with napkins the spring may be retracted or compressed by hand and a package inserted into place and then the spring permitted to expand so as to press against the package to hold the same and feed it toward the feeding or dispensing opening of the device. The cover 46 may then be closed.

Referring to the construction shown in Figs. 11, 12, and 13, the container comprises two end portions 57 and 58 connected together by a hinge 59 to which is also connected a vertically slidable partition or brace member 60 having a depending portion 61 capable of sliding vertically between depending frames or loops 62 formed rigid with a stand or support 63. Each section is provided with a dispensing opening 64 through which the napkins or articles 65 may be withdrawn when

frictional pressure on the ends of the articles as said articles are moved forward on the support.

6. A dispensing device for stacks of folded articles comprising a container having opposite end walls provided with dispensing openings, said container being adapted to receive stacks respectively abutting the end walls, a support carried by the container at an intermediate part thereof, and oppositely disposed flat springs secured to said support each adapted to be pressed backwardly beyond a verticle position with its free end extending backwardly into the adjoining compartment when the compartment in which said spring is located is charged to capacity with folded articles, said springs being adapted to create compensating pressure and to have a compound effect upon the contents of either compartment when both compartments are filled with folded articles, said springs co-operating to urge stacks of folded articles forward toward the dispensing openings in the opposite end walls and to maintain said articles in dispensing position.

7. In a dispensing device for a stack of folded articles, the combination of a container comprising a compartment, one of the walls of which comprises parts projecting inwardly from the sides of the compartment at opposite sides of a dispensing opening in said wall, with such inwardly projecting parts engaging only comparatively small marginal portions of the sides of the foremost folded article of said stack, and a spring secured in said compartment and extending toward said dispensing opening, said spring hav-

ing a bent back portion at its free end serving as a follower adapted to engage said stack of folded articles and to move said articles forward by pressure on the rearmost folded article, said follower portion owing to its resilient connection with the spring arm being maintained in substantially flat relation with the back of said stack, and being adapted to engage the edge of the dispensing opening near its free end when fully advanced thereby preventing excess bulging of the folded articles through the dispensing opening when the stack is reduced to a small number of articles.

8. In a dispensing device for a stack of folded articles each of which articles has a V-shaped end, the combination of a container comprising a compartment one of the walls of which is provided with an opening for dispensing said articles therethrough, a support in said container comprising supporting parts in angularly spaced relation to each other along the lower part of the compartment extending toward said dispensing opening for supporting said folded articles by engagement with said articles at opposite sides of said V-shaped ends, and a spring secured in said compartment and adapted to exert pressure upwardly and forwardly on the rear of the stack as the articles in front are removed, tending thereby to lift the stack of folded articles and to reduce the frictional pressure on the ends of the articles as said articles are moved forward along the support.

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