

March 11, 1941.

L. L. SALFISBERG

2,234,655

MULTIPLE PACKAGE

Filed April 26, 1939

3 Sheets-Sheet 1

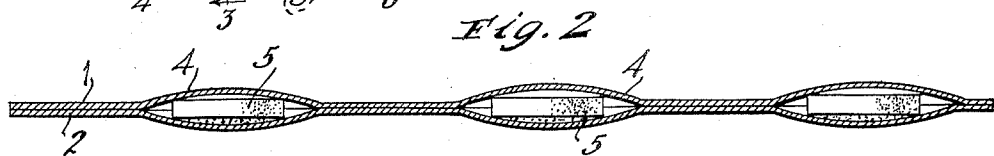
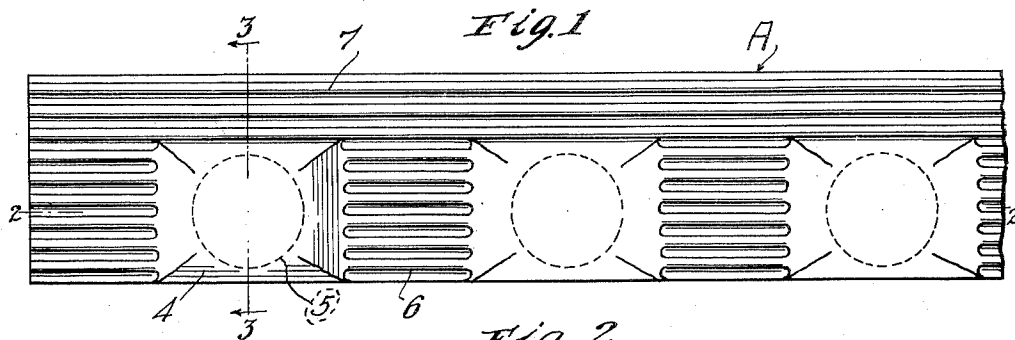


Fig. 3

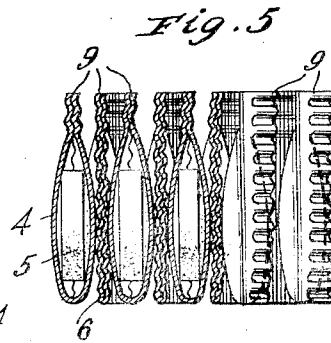
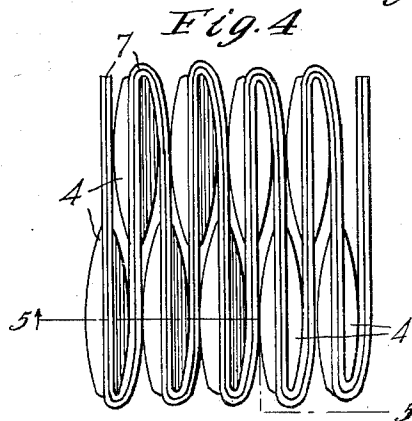
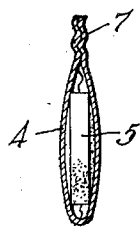


Fig. 6

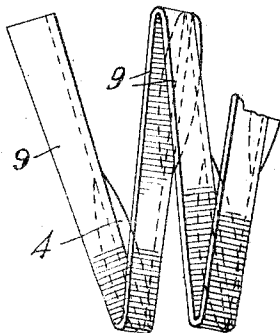
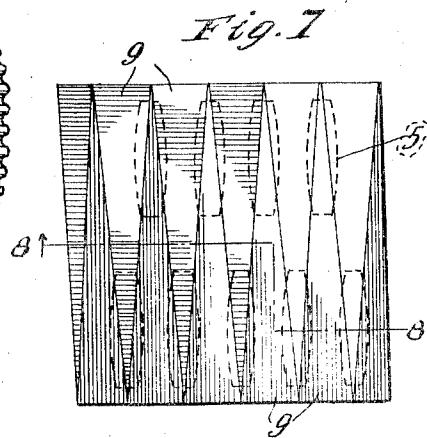
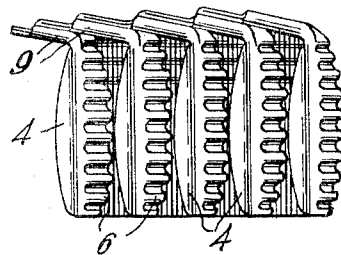


Fig. 7a

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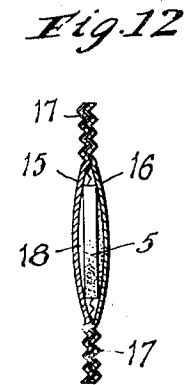
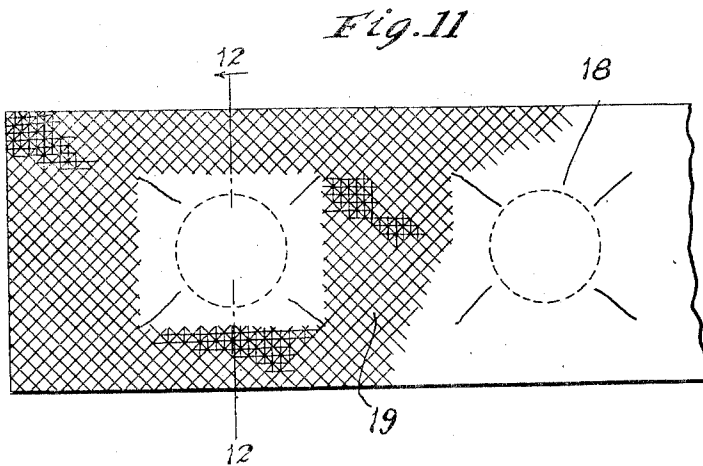
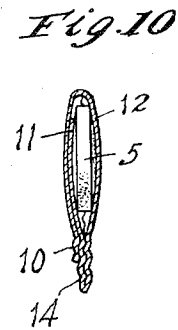
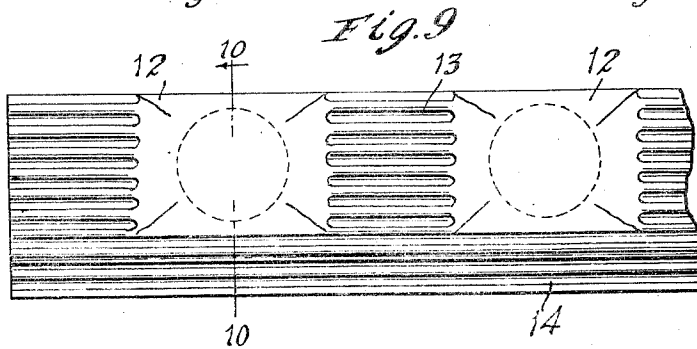
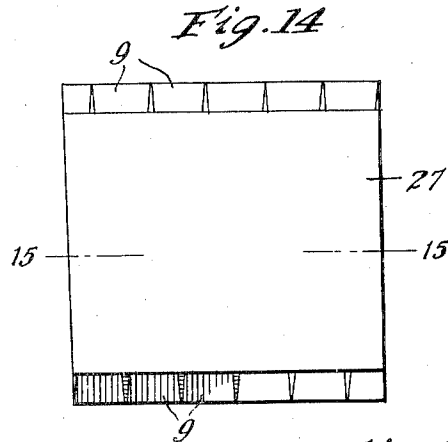
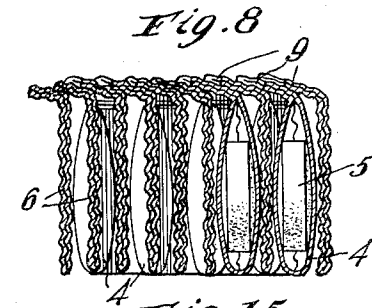
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Fig. 16

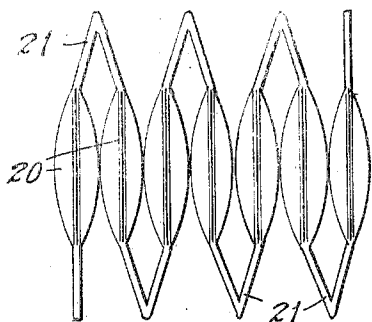


Fig. 17

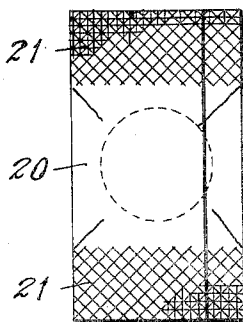


Fig. 18

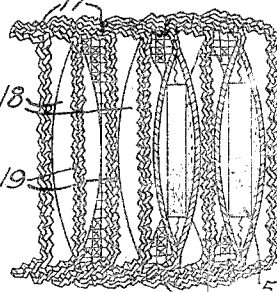
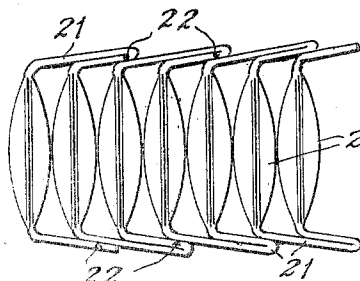


Fig. 19

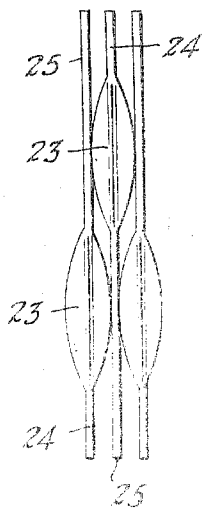


Fig. 20

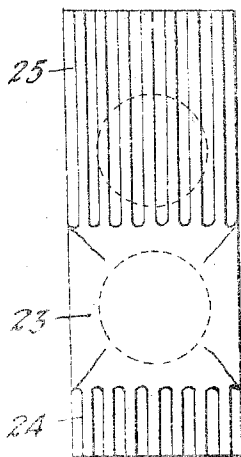
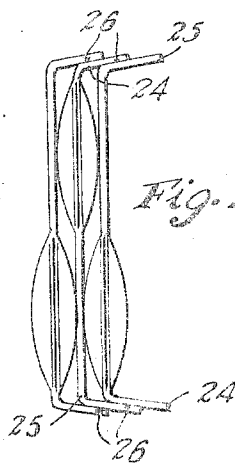


Fig. 21



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Application April 26, 1939, Serial No. 270,079½

6 Claims. (Cl. 206—56)

This invention relates in general to packages for unit products such as medicinal or chemical tablets or pills, buttons or other small articles. More particularly the invention contemplates such a package that comprises a strip or tape of packaging material either thermoplastic or having a thermoplastic or adhesive coating, for example, "Pliofilm," "Kodapak," "Protectoid," "Diacaphane" or thermoplastically or adhesively coated cellulosic sheet material such as "Cellophane," or metal foil, said strip or tape having a plurality of spaced article holding compartments.

The strip may be formed by folding the material into superposed layers or by superposing separate layers; the articles are disposed between the layers and the superposed layers are pressed flatly together and sealed in adhering contact with each other between adjacent articles so as to hold the articles in spaced relation and completely close the compartments. The strip is bent or folded between adjacent compartments into zigzag form or divided, so as to form a plurality of preferably rectangular sections in side-by-side relation with the flat portions interposed between the juxtaposed compartments. The articles can be removed separately by simply tearing the material of the strip between and adjacent the articles.

One object of my invention is to provide a package of this general character which shall include novel and improved means for releasably holding the sections of the strip or tape in side-by-side relation or zig-zag folded condition so that the package can be handled and inserted into and removed from a carton and the articles conveniently individually removed without possibility of unintended folding of the strip.

Another object is to provide a package of the character described wherein the material of the edge strip shall be folded in a novel and improved manner to provide extensions on the sections and the extensions caused to adhere to each other to releasably hold the sections in side-by-side relation or the strip in zigzag folded condition.

Other objects are to provide such a package embodying novel and improved features of construction whereby a label can be applied directly to the package; and to obtain other advantages and results as will be brought out by the following description.

For the purpose of illustrating the invention I have shown it embodied in several different forms in the accompanying drawings, but it should be understood that this is primarily for the pur-

pose of illustrating the principles of the invention and that many modifications and changes in the form and structure of the package embodying the invention may be made without departing from the spirit or scope of the invention.

Referring to said drawings—

Figure 1 is a fragmentary plan view on a greatly enlarged scale of one form of package strip before folding of the strip into sections.

Figure 2 is a vertical longitudinal sectional view on the line 2—2 of Figure 1.

Figure 3 is a transverse vertical sectional view on the line 3—3 of Figure 1.

Figure 4 is a top edge view of the package showing the strip folded into zigzag form.

Figure 5 is a vertical longitudinal sectional view on the line 5—5 of Figure 4.

Figure 6 is a front elevation of the complete package with the extensions of adjacent package sections secured together.

Figure 7 is a top plan view of the package shown in Figure 6.

Figure 7^a is a fragmentary top plan view showing the sections partially unfolded.

Figure 8 is a longitudinal vertical sectional view on the line 8—8 of Figure 7.

Figure 9 is a view similar to Figure 1 showing another form of package strip.

Figure 10 is a transverse sectional view on the line 10—10 of Figure 9.

Figure 11 is a view similar to Figure 1 showing another form of package strip.

Figure 12 is a transverse vertical sectional view on the line 12—12 of Figure 11.

Figure 13 is a view similar to Figure 8 showing the completed package formed of the strip illustrated in Figures 11 and 12.

Figure 14 is a view similar to Figure 7 showing the package with a label.

Figure 15 is a longitudinal vertical sectional view on the line 15—15 of Figure 14.

Figure 16 is a view similar to Figure 4 showing another form of package strip.

Figure 17 is an end elevational view of the structure shown in Figure 16.

Figure 18 is a view similar to Figure 6 showing the structure of Figure 16.

Figure 19 is a front elevational view of another form of package.

Figure 20 is an end elevational view of the package shown in Figure 19, and

Figure 21 is a view similar to Figure 19 showing the extensions of adjacent package sections folded and secured together.

Specifically describing the embodiment of the

invention illustrated in Figures 1 to 8 inclusive, the package includes a strip or tape A formed of suitable thin material either thermoplastic or having a thermoplastic or adhesive coating, for example "Pliofilm," "Protectoid," "Diaphane" or thermoplastically or adhesively coated cellulosic sheet material such as "Cellophane" or metal foil. The strip comprises a plurality of superposed layers 1 and 2 which may be formed by folding a strip of material longitudinally as at 3. Between the layers 1 and 2 are formed a plurality of compartments 4 for containing articles such as medicinal tablets 5, the compartments being in spaced relation longitudinally of the strip. One side of each compartment 4 comprises the fold 3 of the strip, while the other three sides are formed by crimped and sealed areas 6 extending transversely of the strip and a sealed area 7 extending longitudinally of the strip along the free edge portions of the layers.

Where the strip of material is thermoplastic or has a thermoplastic coating on the contacting surfaces of the layers 1 and 2, the sealed areas 6 and 7 may be formed by simultaneous application of heat and pressure to fuse the material. The crimping may be of any suitable form such as the longitudinal corrugations illustrated.

The package strip after having been formed as described with the articles 5 encased therein, is folded or bent transversely between the compartments 4 as indicated at 8 in Figure 4 so as to form a plurality of approximately flat sections disposed side-by-side with their general planes in opposed approximately parallel relation to each other and with two rows of articles 5 and a crimped and sealed portion 6 between each two adjacent articles as clearly shown in Figures 4 and 5.

The longitudinally sealed area 7 constitutes an extension of the packaging material along one edge of each section as shown in Figure 5, and in accordance with the invention the extensions 9 of adjacent sections are folded and separably secured together as shown in Figures 6, 7 and 8. The extensions may be so secured together adhesively and preferably by thermoplastic adhesion, so that the extensions may be separable from each other for removing the articles from the package.

With this construction, it will be observed that the sections of the package are held together as a unit so that the package can be handled and inserted into and removed from a carton, and the articles individually can be conveniently removed from the package without possibility of unintended separation of the sections or unfolding of the strip. To remove the articles from the package, the extension 9 of the end-most section is pulled away or separated from the extension of the adjacent section so that the section can be unfolded. Then the material of the strip may be torn transversely adjacent the article 5 so as to open the compartment 4 and permit removal of the article.

Another form of package strip is shown in Figures 9 and 10 where a strip of material has its edge portions 10 and 11 folded inwardly into overlying relation to each other and secured together, preferably thermoplastically. Article containing compartments 12 are disposed in spaced relation longitudinally of the strip with crimped and sealed areas 13 extending transversely of the strip between the articles. One or both longitudinal edges of the strip may be an extension 14 which may also be flattened

and crimped so as to force the superposed layers into tight contact with each other. The strip so formed is folded in the same zigzag manner hereinbefore described in connection with Figures 1 to 8 inclusive, the extension 14 forming extensions on each of the sections between the folds of the strip, and said extensions of adjacent sections being secured together as hereinbefore described.

In Figures 11 and 12 the package strip is formed of two separate layers 15 and 16 of suitable material which are secured together along each of their longitudinal edge portions as at 17. Article containing compartments 18 are spaced longitudinally of the strip with crimped sealed areas 19 between the compartments. Preferably the distance between each of the compartments 18 is substantially equal to the width of the compartment so that the strip may be folded transversely in zigzag form as described in connection with Figures 1 to 8. The longitudinal edge portions 17 form extensions on the sections between the folds, and the extensions of adjacent sections are folded into overlying relation and separably secured to the extensions of adjacent sections as hereinbefore described.

Figures 16 to 18 inclusive illustrate another form of package wherein the package strip has a plurality of article containing compartments 20 disposed in spaced relation longitudinally of the strip with flattened, crimped and sealed areas 21 between the compartments. The strip is folded into zigzag form transversely at approximately the middle of each flattened area 21 so as to form sections each including a compartment 20 in side-by-side relation to the other compartments as shown in Figure 16. The folded flattened areas 21 constitute extensions of the sections. Each extension is folded into overlying relation and separably secured to the extension of an adjacent section, as shown in Figure 18 at 22. To remove the articles from the package, the end-most section is torn transversely of the flattened area 21, and simultaneously or subsequently the strip may be torn transversely of the flattened area close to the article containing compartment so as to open the latter and permit removal of the article.

Figures 19 to 21 inclusive show a package comprising initially separate sections B each of which includes an article containing compartment 23 at opposite sides of which are flattened sealed areas 24 and 25 one of which is preferably of a size approximately corresponding to the size of the compartment 23. The sections are arranged in side-by-side relation with the article containing compartment 23 of one section juxtaposed to the larger flattened area 25 of the other section as shown in Figure 19. The flattened portions 24 and 25 form extensions of the sections, and the extensions of each section are folded into overlying relation and separably secured to the adjacent extensions of adjacent sections, as shown at 26 in Figure 21. To remove the articles from the package, the end-most section is separated from the adjacent section and the strip is torn transversely of one of the sealed portions 24 close to the article containing compartment, as hereinbefore described.

It will be observed that in all forms of the invention the folded and overlying extension provide an approximately flat and substantially smooth surface which makes it possible to apply a label 27 to the package as shown in Figures 14 and 15. Preferably the label will be applied

adhesively, and with the label so applied to the package, the label will assist in holding the sections of the package against separation or unfolding.

5 It will be understood by those skilled in the art that the extensions may be formed on one or more and any edges of each section.

10 It will be seen that my invention provides an attractive and convenient package wherein a plurality of unit compartments or sections may be secured together and handled as an entity in the form of a block. This greatly facilitates the handling of a zigzag folded type of package, makes it easy to insert and remove the package
15 respectively into and from a carton, and eliminates the possibility of hindrance and annoyance that might be caused by unfolding or separation of the sections during handling of the package.

20 Having thus described my invention, what I claim is:

1. A package comprising a strip of flexible packaging material formed of superposed layers having article containing compartments there-
25 between and spaced longitudinally thereof, said strip being folded between adjacent compartments to form a plurality of rectangular sections disposed side-by-side with their general planes in opposed approximately parallel relation to each other, each section having an extension on at least one edge that is folded over
30 and separably secured to the corresponding extension of the next adjacent section, whereby all of said sections are held together as a unit and each section individually can be separated
35 from the other sections.

2. A package comprising a strip of flexible packaging material formed of superposed layers having article containing compartments there-
40 between and spaced longitudinally thereof, said strip being folded between adjacent compartments to form a plurality of rectangular sections disposed side-by-side with their general planes in opposed approximately parallel relation to each other, with the folds between said
45 sections forming opposite side edges of the sections, each section having an extension of the packaging material along at least one other edge and said extension of each section being folded into overlying relation and separably secured to
50 the extension of an adjacent section.

3. A package comprising a strip of flexible packaging material formed of superposed layers having article containing compartments there-
55 between and spaced longitudinally thereof, said strip having an extension of the packaging material along at least one longitudinal edge beyond said compartments and being folded trans-

versely between adjacent compartments to form a plurality of rectangular sections disposed side-by-side with their general planes in opposed approximately parallel relation to each other, the portion of said extension on each section being
5 folded over and separably secured to the corresponding portion of said extension on the next adjacent section.

4. A package comprising a strip of flexible packaging material formed of superposed layers
10 having article containing compartments therebetween and spaced longitudinally thereof, said strip being folded between adjacent compartments to form a plurality of sections disposed side-by-side with their general planes in opposed
15 approximately parallel relation to each other, each section having an extension of the packaging material along at least one longitudinal edge of the section and said extension of each section being folded into overlying relation
20 and separably secured to the extension of an adjacent section.

5. A package comprising a strip of flexible packaging material formed of superposed layers having article containing compartments there-
25 between and spaced longitudinally thereof, said strip being folded between adjacent compartments in zigzag form to produce a plurality of sections disposed side-by-side with their general planes in opposed approximately parallel relation to each other, and with the article contain-
30 ing compartment of each section in staggered relation to the compartment of the next adjacent section, each section having an extension of the packaging material along at least one longitudinal
35 edge of the section and said extension of each section being folded into overlying relation and separably secured to the extension of an adjacent section.

6. A package comprising a strip of flexible
40 packaging material formed of superposed layers having article containing compartments therebetween and spaced longitudinally thereof, said strip being folded between said compartments to form a plurality of sections disposed side-by-side
45 with their general planes in opposed approximately parallel relation to each other, each section having an extension of the packaging material along at least one longitudinal edge of the section and said extensions being folded into ap-
50 proximately a common plane perpendicular to the general planes of said sections with the extension of each section overlying and separably connected to the extension of one adjacent section.
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