July 24, 1951 L. A. CASNATI 2,561,842

SANITARY HOLDER FOR ARTICLES

Filed July 23, 1948 2 Sheets-Sheet 1

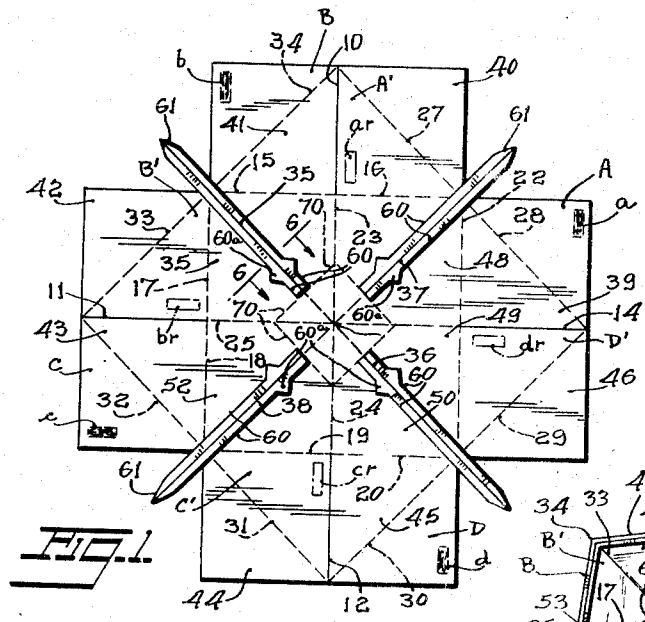


FIG. 1.

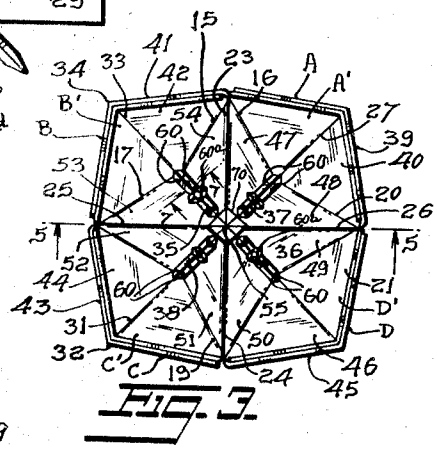


FIG. 3.

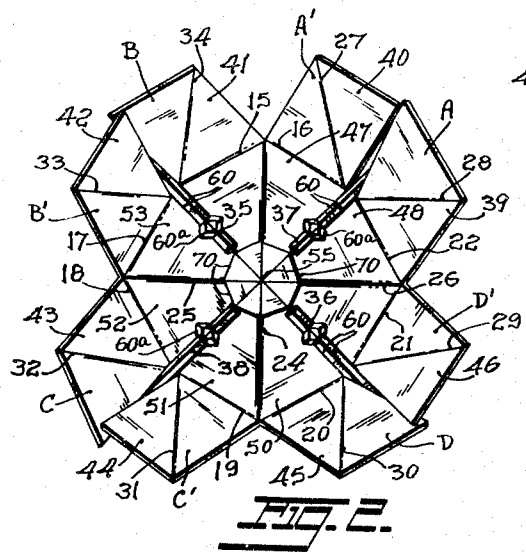


FIG. 2.

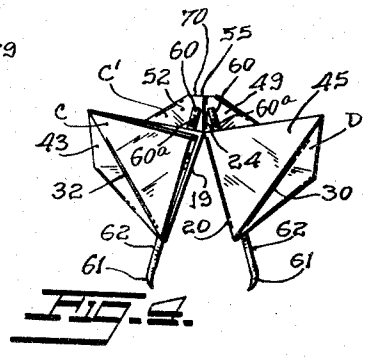


FIG. 4.

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SANITARY HOLDER FOR ARTICLES

Filed July 23, 1948 2 Sheets-Sheet 2

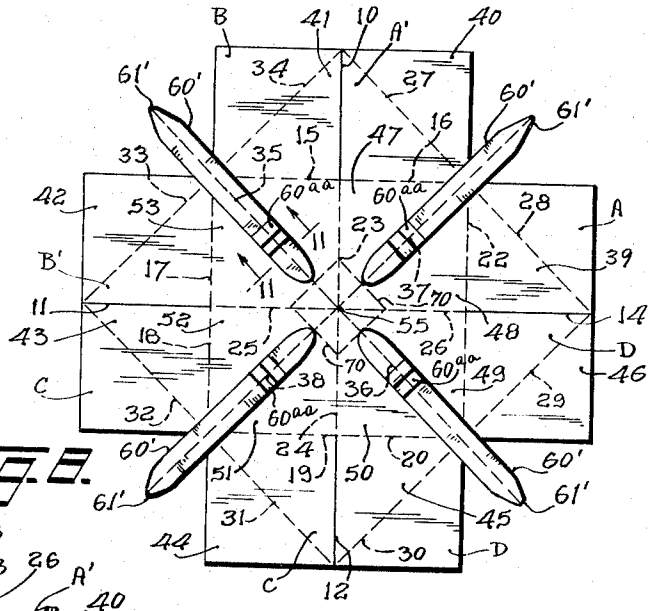


FIG. 8.

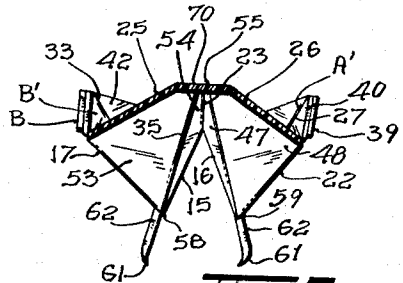


FIG. 5.

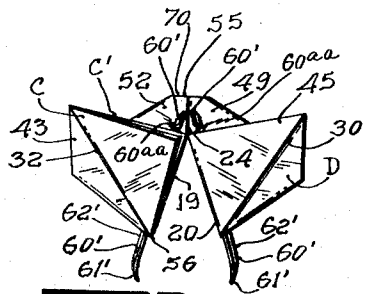


FIG. 9.

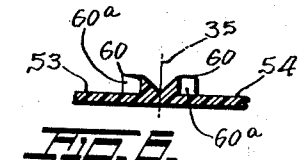


FIG. 6.

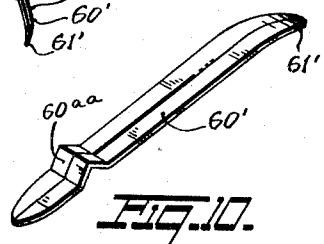


FIG. 10.

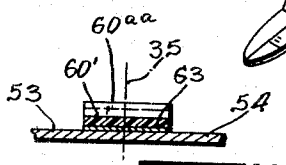


FIG. 11.

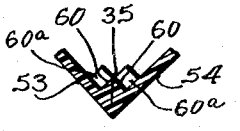


FIG. 7.

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UNITED STATES PATENT OFFICE

2,561,842

SANITARY HOLDER FOR ARTICLES

Lola A. Casnati, New York, N. Y.

Application July 23, 1948, Serial No. 40,271

1 Claim. (Cl. 294—25)

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This invention relates to new and useful improvements in sanitary holders of the kind disclosed in my U. S. Patent No. 2,373,651; such holder being made by folding a sheet or blank of paper or the like in such manner that the holder incorporates an upwardly directed central collapsible apex portion, and a plurality of downwardly directed side pocket portions into which side pocket portions may be engaged one's fingers for compressing the side pocket portions toward each other by temporarily resiliently compressing said central apex portion. Incidental to such collapse, the bottoms of the side pocket portions are moved in toward each other.

In this way said pocket bottoms are employable as artificial fingers, for gripping, holding and picking up various articles, while direct contact between the human hand and such an article is avoided, and therefore the fingers of the hand are shielded from chemicals in the articles and vice versa. Said artificial fingers are usable for picking up all kinds of articles, for instance, wads of cotton and the like.

According to the patent aforesaid, and also according to my now pending U. S. patent application Ser. No. 790,419 filed December 8, 1947, now U. S. Patent No. 2,471,308, the paper blank to be folded up is desirably of square shape; and a feature of both of these previous concepts is the provision of an auxiliary member or auxiliary members for fortifying and stiffening the picker fingers.

According to the present invention, a blank other than a square one is used, and the foldings thereof are so related that, even with material as the stock of which the blank is constituted, a sturdy structure is provided, at and above the side pocket bottoms.

A further object of the present invention proposes forming the blank of heavy paper, plastic coated paper, resinous plastic material or other similar inexpensive materials so that the cost of replacing the holder when dirty or otherwise unuseable will be very small.

Another object of the present invention proposes forming the blank with a novel arrangement of integrally formed ribs which combine in the folded position of the blank to form extensions which project below the bottom ends of the side pockets in a manner to form finger-like projections for more effectively gripping articles to be picked up.

In accordance with a modification of the invention, it is proposed to form the blank and the ribs of separate and different materials and to secure the ribs to the top face of the blank in a manner to be in their proper positions to form the finger-like projections when the blank is properly folded.

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Still another object of the present invention proposes the provision of finger grip portions on the ribs against which one's fingers are adapted to engage in a manner to retain the holder against slipping off the ends of the fingers.

It is a further object of this invention to construct a novel sanitary holder which is simple and durable, which may be quickly and easily assembled by the user, which can be replaced at a small cost, and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a top plan view of the blank for forming the improved sanitary holder, with folds indicated by broken lines.

Fig. 2 is a top plan view, showing said blank, after all foldings have been made to a preparatory extent, in process of being shaped to form the article of the present invention, and so showing in top perspective various relatively angularly offset triangular areas or sections of the blank.

Fig. 3 is a top plan view of said device, as finally formed.

Fig. 4 is a side elevation thereof, looking toward the bottom of Fig. 3.

Fig. 5 is a vertical section, taken on the line 5—5 of Fig. 3.

Fig. 6 is an enlarged partial sectional view taken on the line 6—6 of Fig. 1.

Fig. 7 is an enlarged partial sectional view taken on the line 7—7 of Fig. 3.

Fig. 8 is a plan view similar to Fig. 1, but illustrating a blank constructed in accordance with a modification of the invention.

Fig. 9 is a side elevational view of the sanitary holder folded from the blank shown in Fig. 8.

Fig. 10 is a perspective view of one of the ribs used on the blank shown in Fig. 8.

Fig. 11 is an enlarged partial sectional view taken on the line 11—11 of Fig. 8.

In Figs. 2–5, the thickness of the blank where seen is much exaggerated, to make the drawing clearer; and for the same reason, in Figs. 3, 4 and 9 parts which actually substantially completely

overlap other parts are illustrated as slightly out of full registry with said other parts.

The sanitary holder, according to the present invention, is formed of a blank which is of cruciform outline, having four slits 10, 11, 12 and 14. These slits, together with four fold lines 15—16, 17—18, 19—20 and 21—22 (which four fold lines bound a central square section), subdivide the four outwardly projected arm ends of the cross into eight smaller squares, each representing one-half the area of one of said arm ends. Also, a vertical fold line 23—24 joins the slits 10 and 12, and a horizontal fold line 25—26 joins the slits 11 and 14. The fold lines 23—24 and 25—26 subdivide said large square at the center of the blank into four smaller squares, all of the same size and each of the same size as the eight smaller squares at the outwardly projected arm ends of the cross. Thus twelve equal small squares are defined.

Further, there are a number of diagonal fold lines, these marked 27—28, 29—30, 31—32, 33—34, 35—36 and 37—38.

The fold line 28 divides the upper one of the two squares of the rightwardly projected arm end into two like triangular areas or sections A and 39; and the fold line 27 divides the right-hand one of the two squares of the upwardly projected arm end into two like triangular areas A' and 40.

The fold line 34 divides the other of the two squares of the upwardly directed arm end into two like triangular sections B and 41; and the fold line 33 divides the upper one of the two squares of the leftwardly projected arm end into two like triangular sections B' and 42.

The fold line 32 divides the other of the two squares of the leftwardly projected arm end into two like triangular sections C and 43; and the fold line 31 divides the left-hand one of the two squares of the downwardly projected arm end into two like triangular sections C' and 44.

The fold line 30 divides the other of the two squares of the downwardly projected arm end into two like triangular sections D and 45; and the fold line 29 divides the lower one of the two squares of the rightwardly directed arm end into two like triangular sections D' and 46.

The large central square section bounded by the fold lines 15—16, 17—18, 19—20, and 21—22, by being traversed by the four diagonal fold lines 35—36 and 37—38, is subdivided into eight sections each also of triangular outline; these eight sections being marked, respectively, 47, 48, 49, 50, 51, 52, 53 and 54.

The eight sections last mentioned are all of isosceles triangular outline, as are the twelve triangular sections at the four cross arm ends. And all twenty-four of said triangular sections are of the same area.

The blank of this first form of the invention is preferably formed of resinous plastic material in sheet form and the top face of the blank on opposite sides of the fold lines 35—36 and 37—38 is integrally formed with upwardly extending triangular bosses 60 arranged opposite to each other, as shown particularly in Fig. 6. These bosses 60 are so arranged that when the holder is folded as shown in Fig. 3, the bosses 60 combine to form reinforcing ribs along the inside faces of the side pockets. The outer ends of the bosses 60 extend beyond the peripheral edges of the central section of the blank at the junction of the projecting side arms thereof, as shown in Fig. 1. The bosses 60 are formed with inturned outer ends 61 and in the folded condition of the blank, the extended ends of the bosses form pointed finger-like projections 62 which project beyond the bottoms of the side pockets, as shown in Figs. 4 and 5, to facilitate gripping of the articles to be picked up by the holder.

In the preferred form of this modification, the bosses 60 are integrally molded with the resinous sheet material from which the blank is formed; however, if desired the blank could be formed of heavy paper or plastic coated paper and the bosses could be separately formed and then incrustated on the top face of the blank by a suitable coating material.

Intermediate of their ends, the bosses 60 are formed with finger grip portions 60^a against which one's fingers are adapted to engage in the completed formation of the holder for retaining the holder against slipping off the fingers.

Considering the side of the blank seen in Fig. 1 as the top of the blank, the folding bends are upward along the lines 23—24 and 25—26, and downward along all the fold lines 35—36 and 37—38. The blank when thus creased, and then again laid flat with its top uppermost, becomes arranged as in Fig. 2.

Now, there are four partially formed but definitely existing gully-like depressions all downwardly and flaringly outwardly sloped, these partially to provide the four side pocket portions aforesaid. One of these side pocket portions now has two of its four sides constituted by the sections 47 and 48, with these two sections downwardly laterally converging toward the crease at the fold line 37; the second of said side pocket portions now has two of its four sides constituted by the sections 49 and 50, with these two sections downwardly laterally converging toward the crease at the fold line 36; the third of said side pocket portions now has two of its four sides constituted by the sections 51 and 52, with these two sections downwardly laterally converging toward the crease at the fold line 38; and the fourth of said side pocket portions now has two of its four sides constituted by the sections 53 and 54, with these two sections downwardly laterally converging toward the crease at the fold line 35. Each of these gully-like depressions, all of which diverge radially from the meeting point 55 of various fold lines at the center of the blank, has centrally of its bottom one of the four fold lines 23, 24, 25 and 26. Said point 55 will mark the apex of the central collapsible apex portion aforesaid, when the device is finally formed.

Further, at this point, however, considering Fig. 2, the slits 10, 11, 12 and 14, are now widely diverged toward the outer limits of the blank; thereby as here shown to bring the section A closely adjacent to the section 40, the section D closely adjacent to the section 46, the section C closely adjacent to the section 44, and the section B closely adjacent to the section 42.

This situation having been set up, the device is completed, as shown in Figs. 3–5, by swinging around the square A—39 under and so as to enclose the section A'—40, by swinging around the square section B—41 under and so as to enclose the section B'—42, by swinging around the square section C—43 under and so as to enclose the section C'—44, and by swinging around the square section D—45 under and so as to enclose the section D'—46. Thus, finally, the fold line 28 will lie outwardly of but aligned with the fold line 27, the fold line 34 will lie outwardly of but aligned with the fold line 33, the fold line 32 will lie outwardly of but aligned with the fold line 31, and

the fold line 30 will lie outwardly of but aligned with the fold line 29.

Consequently, as shown more clearly in Fig. 3, four side pockets will be provided, each of the shape defined by an inverted four-sided pyramid. One of said pockets will be interiorly bounded by the four triangular sections A', 46, 47 and 48, with this pocket of two-ply thickness at the sections A' and 40 (note also A and 39); another of said pockets will be interiorly bounded by the four triangular sections B', 42, 53 and 54, with this pocket of two-ply thickness at the sections B' and 42 (note also B and 41); another of said pockets will be interiorly bounded by the four triangular sections C', 44, 51 and 52, with this pocket of two-ply thickness at the sections C' and 44 (note also C and 43); and the fourth of said pockets will be interiorly bounded by the four triangular sections D', 46, 49 and 50, with this pocket of two-ply thickness at the sections D' and 46 (note also D and 45). In regard to these two-ply thickness at the two outer sides of each of said four pockets, note also Fig. 4, in regard to the pocket including the sections C and C', and note also Fig. 5, in regard to the pocket including the sections B and B'.

With the fingers of a person's hand placed in said four pockets, four artificial picker fingers having extending finger-like projections 62 pursuant to the invention, are provided as shown, in the case of two of them, at 56 and 57 in Fig. 4, and in the case of the other two thereof, at 58 and 59 in Fig. 5.

At the inner ends of the ribs 60, the blank is formed with four fold lines 70 arranged about the central apex 55 along which the central portion of the blank is adapted to be flattened to form a flattened top portion at the center of the holder, see Figs. 4 and 5.

Very light weight resinous plastic sheet material may be used for the blank, and a most satisfactory holding device provided. With a material employed which is of such inherent stiffness that creases or folds therein have a fairly strong tendency toward self-sustentation, the foldings described may be relied on to hold the device as in Figs. 3–5. However, additional means may be used, as staples, adhesives or the like, for attaching together the sections A and A', the sections B and B', the sections C and C' and the sections D and D'.

In the connection last-mentioned, and recalling the previous statement that the blank as shown in Fig. 1 is assumed there to have its top uppermost, and if formed of plastic material or plastic coated material, the spots of the triangular sections A, B, C and D as respectively indicated at *a*, *b*, *c*, and *d*, when the device is finally formed as in Figs. 3–5, are adapted to secure the then overlapping sections A—A', B—B', C—C' and D—D' together under slight heat and pressure which will seal the spots *a*, *b*, *c* and *d* to the spots indicated in dot and dash lines at *ar*, *br*, *cr* and *dr* on, respectively, the sides of the sections A', B', C' and D' which when the device is formed as in Figs. 3–5 will be the outer sides of the four sections last-named—said sides of said sections being the reverse sides thereof as the blank is seen in Fig. 1.

In the modification of the invention shown in Figs. 8 to 11, the construction of the sanitary holder is similar to that previously described, except that the blank from which the holder is folded is formed of heavy paper, plastic coated paper or other similar material.

In addition, the bosses 60' are separately formed of a foldable resinous plastic material and are secured throughout a major portion of their length to the top face of the blank by means of an adhesion 63, see Fig. 11.

The free ends of the bosses 60' extend beyond the peripheral edges of the central portion of the blank at the junctions of the projecting side arms, as shown in Fig. 8, and in the folded position of the blank shown in Fig. 9, those free ends extend beyond the bottoms of the side pockets forming finger-like projections 62' for gripping the article to be picked up by the holder.

The free ends of the bosses 60' are bent inwards as shown at 61' in Figs. 9 and 10, so as to contact one another when the side pockets of the holder are drawn together to insure a grip upon very small articles which it is desired to pick up with the holder.

As in the previous form of the invention, the bosses 60' are formed intermediate their ends with finger grip portions 60^{aa} against which one's fingers are adapted to engage to retain the holder against slipping from the ends of the fingers. The finger grip portions 60^{aa} are formed by providing the bosses 60' adjacent their top ends with inward projecting V-shaped formations as clearly illustrated in Fig. 10.

In other respects this form of the invention is similar to that previously described, and like reference numerals identify like parts in each of the several views.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claim.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

A sanitary holder for picking up small articles, comprising a sheet of folded material having an upwardly directed central apex portion and a plurality of downwardly directed side pocket portions into which one may engage one's fingers for pressing the side pocket portions toward each other, each of said side pockets being of the shape defined by an inverted four-sided pyramid, in the case of each pocket, two of the walls of such pyramid being of two-ply thickness, each such ply being provided by a section of the sheet of triangular shape, in the case of each pocket said walls of two-ply thickness being immediately adjoining, and being the two walls of said pocket remote from said central apex portion, said sheet being of cruciform outline before folding and having a central square area from the four sides of which project the arm ends of the cross, each of said arm ends being of an area equal to one-half that of said central square area.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
847,545	Braine	Mar. 19, 1907
2,373,651	Casnati	Apr. 17, 1945
2,439,335	Casnati	Apr. 6, 1948
2,471,308	Casnati	May 24, 1949