Aug. 3, 1965 J. C. BRIGHTON 3,198,426

REFUSE CONTAINER

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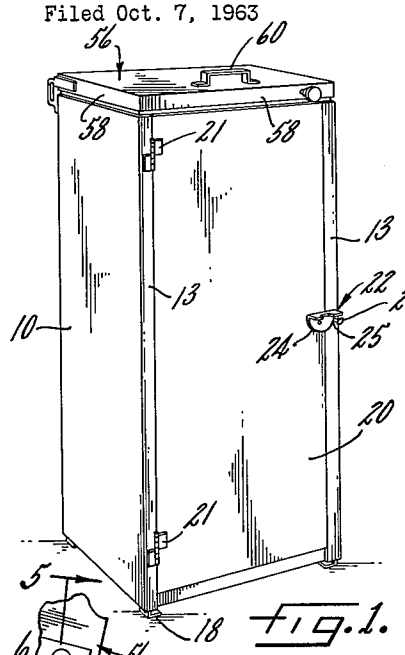


Fig. 1.

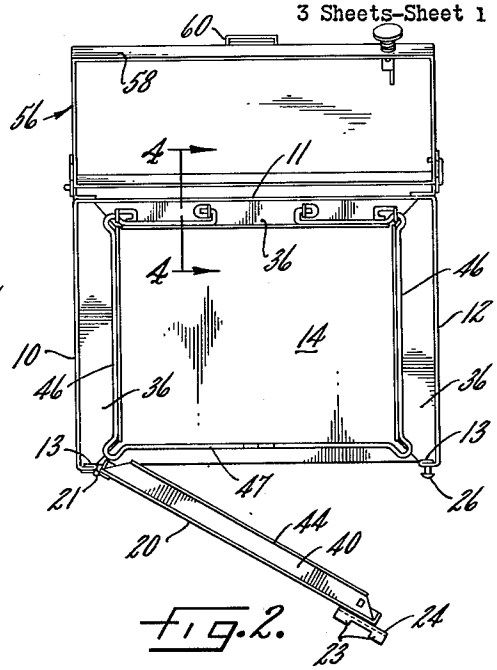


Fig. 2.

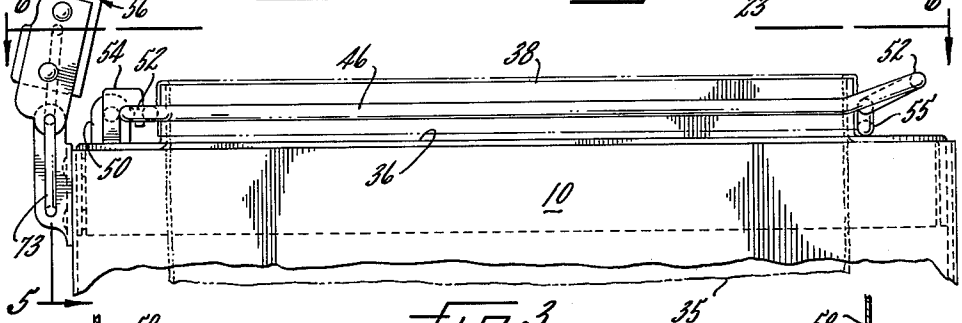


Fig. 3.

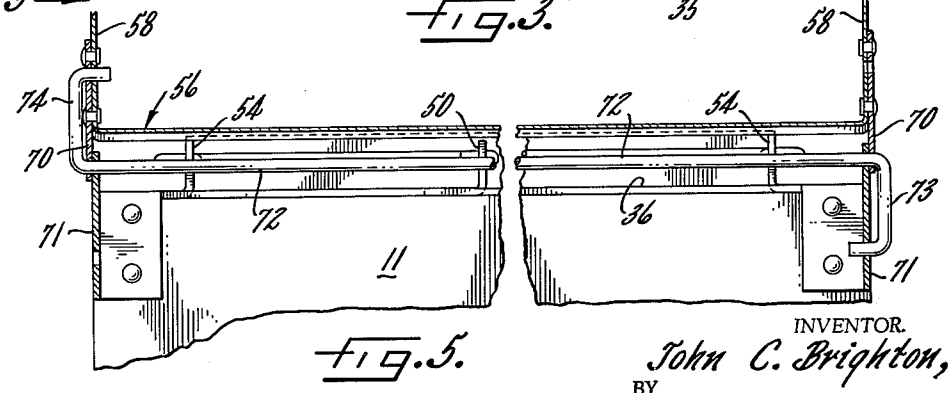


Fig. 5.

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REFUSE CONTAINER

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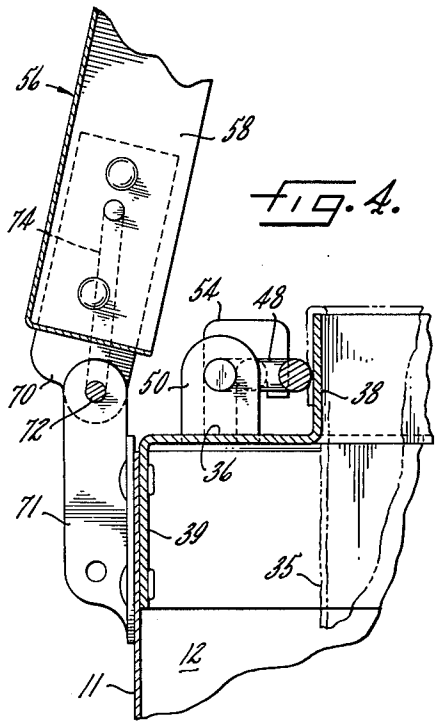


Fig. 4.

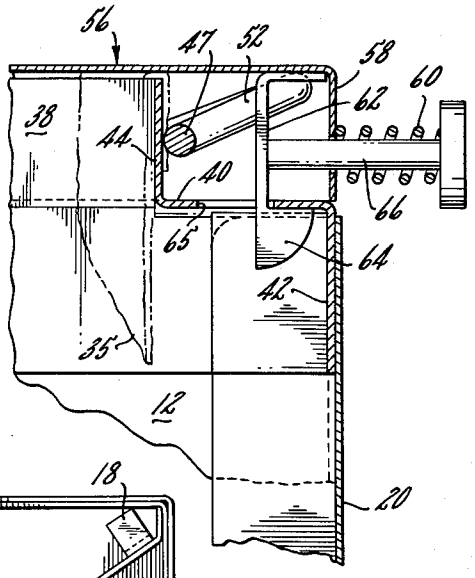


Fig. 9.

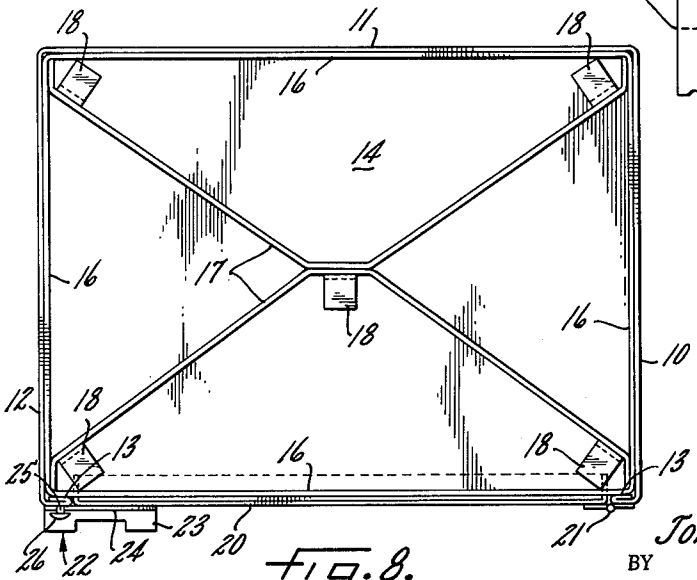


Fig. 8.

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REFUSE CONTAINER

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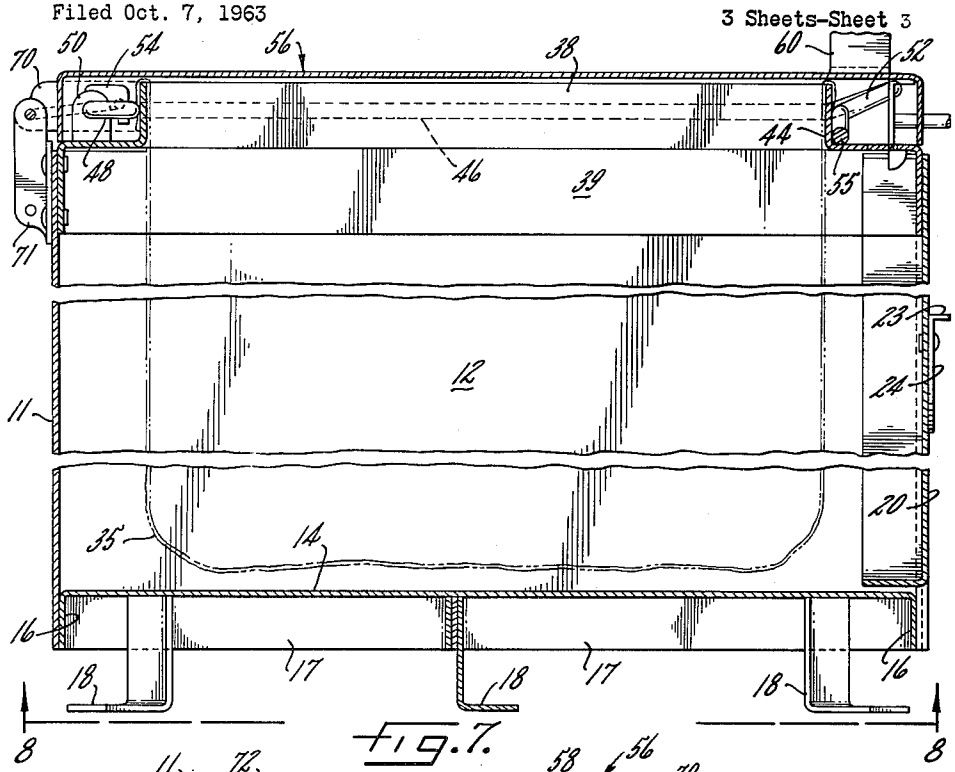


Fig. 7.

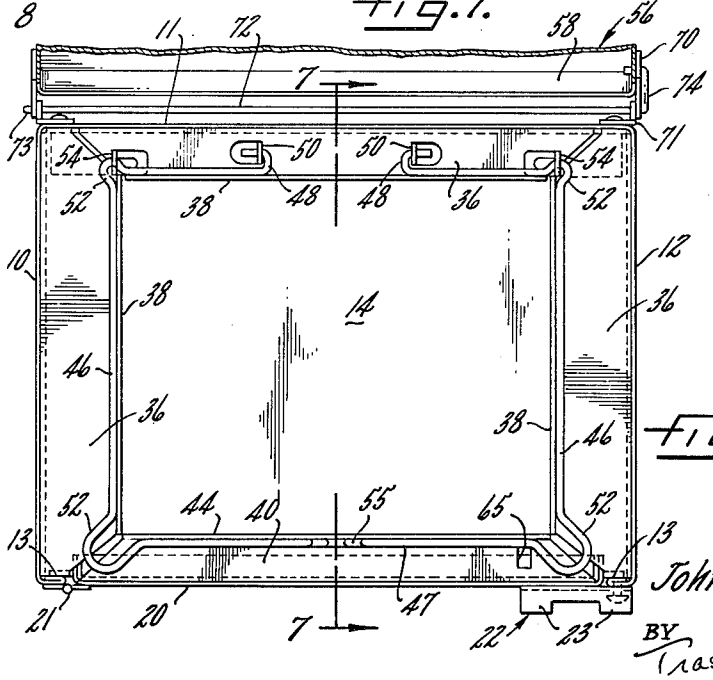


Fig. 6.

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United States Patent Office 3,198,426 Patented Aug. 3, 1965

3,198,426

REFUSE CONTAINER

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Filed Oct. 7, 1963, Ser. No. 314,299
8 Claims. (Cl. 232—43.2)

This invention relates to a refuse container, and more particularly to a refuse container employing a disposable refuse bag.

It is an object of the invention to provide a refuse container of attractive appearance which can be inexpensively manufactured largely from sheet metal, which can be used in combination with a disposable refuse holding bag, which will securely retain said bag in open operative position but which will permit said bag to be quickly and easily placed in and removed from said operative position, and which will protect said bag from animals.

In accordance with the preferred form of the invention, there is provided a cabinet having a plurality of interconnected side walls. The lower end of said cabinet is enclosed by a floor rigidly connected to said side walls. A door is mounted on the cabinet for swinging movement about a vertical axis between an open and closed position. A throat forming member is mounted on each of said side walls and the door adjacent the upper ends thereof. Each of said members is provided with a horizontal stretch and a vertical stretch, so that with said door in its closed position said vertical stretches will form a generally rectangular throat through which a refuse bag can hang with its open end folded thereover. A lid is hingedly connected to the cabinet for movement between an open position in which the open end of the bag is accessible and a closed position in which it is disposed on the upper faces of the horizontal stretches of the throat forming members for thus closing the top of the bag and the cabinet.

In order to releasably retain the bag on the throat, a generally rectangular collar is swingably connected to the horizontal stretch of one of the throat forming members. Said collar has a plurality of stretches parallel to the vertical stretches forming the throat, whereby upon movement of said collar into its operative position said plurality of collar stretches will bindingly retain the folded over edges of the open end of the bag against the throat. The plurality of collar stretches are interconnected at the collar corners by outwardly directed projections, with the projections at the corners adjacent the door being angled upwardly to serve as finger-lifts. Desirably, a downwardly extending offset is formed in the collar to engage the horizontal stretch on one of the throat forming members to insure that said collar lies within the vertical extent of the throat and the edge portion of the bag folded thereover.

Other objects and features will become apparent from the more detailed description which follows and from the accompanying drawings, in which:

FIG. 1 is a perspective view of a refuse container embodying the invention;

FIG. 2 is a plan view of the refuse container shown in FIG. 1, but showing the lid and door thereof in open position;

FIG. 3 is an enlarged fragmentary side elevation of the container shown in FIG. 1, but showing the lid in open position;

FIG. 4 is a fragmentary vertical section taken on the line 4—4 of FIG. 2 and showing a portion of a bag mounted in the container;

FIG. 5 is a fragmentary vertical section taken on the line 5—5 of FIG. 3;

FIG. 6 is a horizontal section taken on the line 6—6 of FIG. 3;

FIG. 7 is a vertical section taken on the line 7—7 of FIG. 6; but showing the lid in closed position;

FIG. 8 is a bottom plan view of the container shown in FIG. 1; and

FIG. 9 is an enlarged fragmentary vertical section showing the lid latching mechanism.

As shown, the container comprises a cabinet conveniently formed from sheet metal and having a plurality of interconnected side walls **10**, **11**, and **12** with the front edges of the side walls **10** and **12** being bent inwardly at **13**. The lower end of the cabinet is closed by a floor **14** having a peripheral skirt **16** rigidly connected to the side walls **10–12**. A pair of braces **17** are mounted on the lower face of the floor **14** to stiffen said floor over its cross-sectional extent. Conveniently, ground-engaging feet **18** project downwardly from the braces **17** to support the cabinet in an elevated position above the ground.

The front of the cabinet is enclosed by a door **20** provided with inwardly projecting flanges along its lateral and lower edges and connected to the inwardly directed stretch **13** of the side wall **10** by a plurality of hinges **21** for swinging movement about the vertical axis of said hinges. A finger latch **22** is swingably mounted on the door **20** along its edge opposite the hinges **21**. Said latch has a pair of horizontally disposed finger-lifts **23** integrally connected to a generally semi-cylindrical plate **24** parallel with the front face of the door **20** and having a lateral extent such that it projects laterally outwardly from said door to engage the inwardly directed portion **13** of the side wall **12** for limiting the closing movement of the door. The plate **24** has a downwardly open notch **25** formed therein which is receivable over a latch pin **26** mounted on the stretch **13** of the side wall **12** for releasably locking the door in closed position.

In order to support the bag **35** in the container, a plurality of throat forming members are mounted on the cabinet side walls and door **20** along the upper ends thereof. As shown, each of said throat forming members on the cabinet side walls comprises a horizontally disposed stretch **36** interconnected to an upwardly extending stretch **38**. Conveniently, the edges of the horizontal stretches **36** remote from the stretches **38** are bent downwardly, as at **39**, and rigidly secured to their associated cabinet side walls. As shown in FIG. 2, the horizontal stretches **36** form a continuous U-shaped platform adjacent the upper ends of the cabinet side walls and the vertical stretches **38** form three sides of a rectangular upwardly projecting throat extending above the upper edges of said cabinet side walls. The throat forming member on the door **20** is also provided with a horizontal stretch **40** interconnecting a flange **42** connected to the inner face of the door **20** and an upwardly projecting stretch **44**. As shown in FIG. 2, the horizontal stretch **40** on the door and the adjacent ends of the stretches **36** interconnected to the side walls **10** and **12** are mitred so that upon closing of the door **20**, the vertical stretch **44** of the throat forming member on the door will abut the ends of the vertical stretches **38** of the throat forming members on the cabinet side walls **10** and **12** so that the vertical stretches **38** and **44** form the rectangularly shaped upwardly projecting throat through which a refuse bag **35** can hang with the edges of its open upper end folded thereover.

To releasably retain the bag **35** on the throat formed by the stretches **38** and **44**, a collar conveniently formed from a wire rod is swingably connected to the cabinet. Said rod has a generally rectangular configuration to provide a plurality of stretches **46** in parallel to the throat stretches **38** and a stretch **47** parallel to the throat stretch **44**. As shown in FIG. 6, the ends of the collar are hooked, as at **48**, and are swingably received in a pair of fingers **50** struck upwardly from the horizontal stretch **36** along the cabinet side wall **11**. Outwardly directed looped pro-

jections 52 are provided at each of the collar corners, and the loops 52 adjacent the rear of the cabinet are swingably received in a pair of downwardly hooked fingers 54 struck upwardly from the horizontal stretch 36 along the cabinet side wall 11. The loops 52 adjacent the forward end of the cabinet are bent slightly upwardly to serve as finger-lifts. Intermediate its ends, the collar stretch 47 is provided with the downwardly extending offset 55 engageable with the horizontal stretch 40 on the throat forming member mounted on the door 20 for thus locating the collar within the vertical extents of the throat and the edges of the bag 35 folded over said throat. The cross-sectional extent of the collar is slightly less than the cross-sectional extent of the throat so that upon movement of the collar into its operative position within the vertical extent of the throat, said collar will be stressed over the folded over edges of the bag 35 to bindingly retain said bag edges against the outer face of the throat. As is shown in FIG. 9, with the collar stretch 47 bindingly retaining the bag against the outer face of the throat stretch 44 on the door 20, said collar thus further serves to retain said door in its closed position. As the collar is moved into its operative position, there will be a tendency for the rear portion of said collar to be sprung upwardly, but the fingers 54 will retain said rear portion within the vertical extent of the throat.

The upper end of the cabinet and thus the open end of the bag 35 is enclosed by a lid 56 conveniently formed of sheet metal and having a downwardly extending peripheral skirt 58 engageable with the horizontal stretches 36 and 40 of the throat forming members when said lid is moved into its closed position. A handle 60 is mounted on the upper face of the lid, and a latch is mounted on the lower face of said lid adjacent the front face thereof. As shown in FIG. 9, said latch comprises a downwardly projecting finger 62 formed of spring-steel and mounted on the lower face of the lid. The lower end of the finger 62 is provided with a latch nose 64 receivable in an opening 65 formed in the horizontal stretch 40 of the throat forming member on the door 20. A plunger 66 is monuted on the finger 62 and projects through an opening in the lid skirt 58. A spring 60 carried on the plunger shaft acts between the lid skirt 58 and the plunger head to urge said plunger outwardly to position the latch nose 64 in locking engagement with the lower face of the stretch 40.

A pair of brackets 70 extend downwardly from the lid skirt 58 adjacent the rear edge thereof and immediately adjacent a pair of upwardly projecting brackets 71 mounted on the cabinet side wall 11. The brackets 70 and 71 are interconnected by a torsion spring hinge 72 having one of its ends 73 fixedly retained in one of the cabinet brackets 71 and the adjacent lid bracket 70 and its opposite end 74 fixedly retained in the opposie lid bracket 70 and cabinet bracket 71. In this manner, the spring hinge 72 will bias the lid 56 toward its open position shown in FIG. 2 for disposing the open end of the bag 35 in a position of access. As viewed in FIG. 2, the inherent torque of the hinge 72 will exert a constant upward force on the right side of the lid 57, and it is therefore desirable to mount the lid latch adjacent the right side of said lid to insure that the lid is transversely uniformly slated in its closed position on the upper end of the container.

I claim:

1. A refuse container, comprising
(a) a cabinet having a plurality of interconnected side walls,
(b) a door mounted on said cabinet for swinging movement about a vertical axis between open and closed positions,
(c) a throat forming member mounted on each of said side walls and said door and having a horizontal stretch and a vertical stretch, whereby upon said door being in closed position said vertical stretches form a generally rectangular throat over which the open end of a refuse bag may be folded, and

(d) a generally rectangular collar swingably connected to the horizontal stretch of one of said throat forming members for movement between a retracted position above said throat and an operative position immediately adjacent the outer faces of the vertical stretches of said throat forming members and within the vertical extent thereof for bindingly retaining the edges of said bag against said throat.

2. A refuse container as set forth in claim 1 in which
(a) said throat forming members extend continuously around said cabinet when the door is in its closed position, and
(b) the horizontal and vertical stretches on the throat forming member on the door abut the ends of the horizontal and vertical stretches of the throat forming members on said cabinet.

3. A refuse container, comprising
(a) a cabinet having a plurality of interconnected side walls,
(b) a door mounted on said cabinet for swinging movement about a vertical axis between open and closed positions,
(c) a throat forming member mounted on each of said side walls and said door and having a horizontal stretch and a vertical stretch, whereby upon said door being in closed position said vertical stretches form a generally rectangular throat over which the open end of a refuse bag may be folded,
(d) a generally rectangular collar swingably connected to the horizontal stretch of one of said throat forming members for movement between a retracted position above said throat and an operative position immediately adjacent said throat and within the vertical extent thereof for bindingly retaining the edges of said bag against said throat,
(e) said collar having a plurality of stretches parallel to the vertical stretches of said throat and interconnected at the corners of said collar by outwardly directed projections, the projections at the corners adjacent said door being angled upwardly, and
(f) a downwardly extending offset on the collar stretch adjacent said door abutting the horizontal stretch on the throat forming member on the door when said door and collar are in closed and operative positions, respectively.

4. A refuse container as set forth in claim 3 in which
(a) the ends of said collar are swingably connected to a first pair of fingers on the throat forming member along the cabinet side wall remote from the door, and
(b) each of said projections has a looped configuration, the loops at the corners of the collar adjacent the collar ends being swingably connected to a second pair of fingers on said throat forming member along said cabinet side wall remote from the door.

5. A refuse container as set forth in claim 4 in which
(a) said first and second pairs of fingers are struck upwardly from the horizontal stretch of said throat forming member,
(b) said first pair of fingers having openings formed therein in which the ends of said collar are received and said second pair of fingers having downwardly open hooks received over said pair of loops.

6. A refuse container, comprising
(a) a cabinet having a plurality of interconnected side walls,
(b) a door mounted on said cabinet for swinging movement about a vertical axis between open and closed position,
(c) a throat forming member mounted on each of said side walls and said door and having a horizontal stretch and a vertical stretch, whereby upon said door being in closed position said vertical stretches form a generally rectangular throat over which the open end of a refuse bag may be folded,

(d) a generally rectangular collar swingably connected to the horizontal stretch of one of said throat forming members for movement between a retracted position above said throat and an operative position immediately adjacent the outer faces of said throat forming members and within the vertical extent thereof for bindingly retaining the edges of said bag against said throat,

(e) a lid swingably connected to said cabinet and having a peripheral skirt abutting the horizontal stretches on said throat forming members when said lid is moved into closed position, and

(f) a latch on said lid receivable in an opening formed in the horizontal stretch of the throat forming member on the door for releasably retaining said lid in closed position.

7. A refuse container, comprising

(a) a cabinet having a plurality of interconnected side walls,

(b) a door mounted on said cabinet for swinging movement about a vertical axis between open and closed position,

(c) a throat forming member mounted on each of said side walls and said door and having a horizontal stretch and a vertical stretch, whereby upon said door being in closed position said vertical stretches form a generally rectangular throat over which the open end of a refuse bag may be folded,

(d) a generally rectangular collar swingably connected to the horizontal stretch of one of said throat forming members for movement between a retracted position above said throat and an operative position

immediately adjacent said throat and within the vertical extent thereof for bindingly retaining the edges of said bag against said throat,

(e) a lid swingably connected to said cabinet and having a peripheral skirt abutting the horizontal stretches on said throat forming members when said lid is moved into closed position, and

(f) a latch on said lid receivable in an opening formed in the horizontal stretch of the throat forming member on the door for releasably retaining said lid in closed position,

(g) said lid being connected to said cabinet by a torsion spring connected to pairs of brackets on said cabinet and lid adjacent the opposed lateral sides thereof and biasing said lid toward open position,

(h) one end of said spring being fixedly retained in one of the brackets on said cabinet and the other end of said spring being fixedly retained in one of the brackets on said lid for movement therewith.

8. A refuse container as set forth in claim 7 in which

(a) said latch and said one lid bracket in which said other end of the spring is fixedly retained are mounted on said lid adjacent the same lateral side thereof.

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