June 6, 1950 H. C. WILSON 2,510,357

MOUNTING FOR IMPLEMENTS SUCH AS CAN OPENERS

Filed Feb. 28, 1947

Fig. 1.

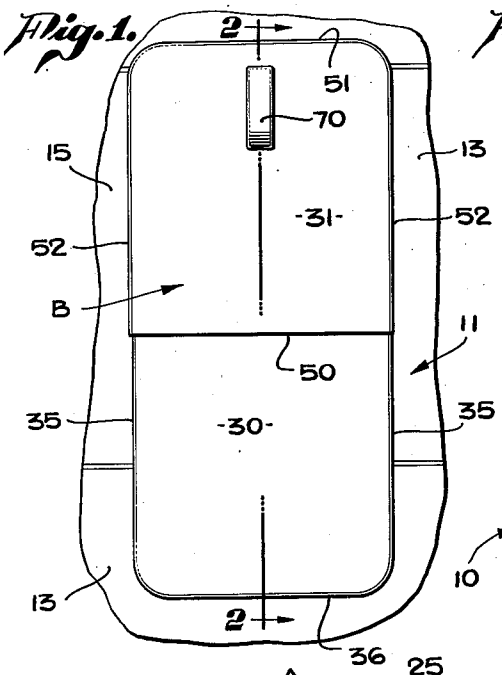


Fig. 2.

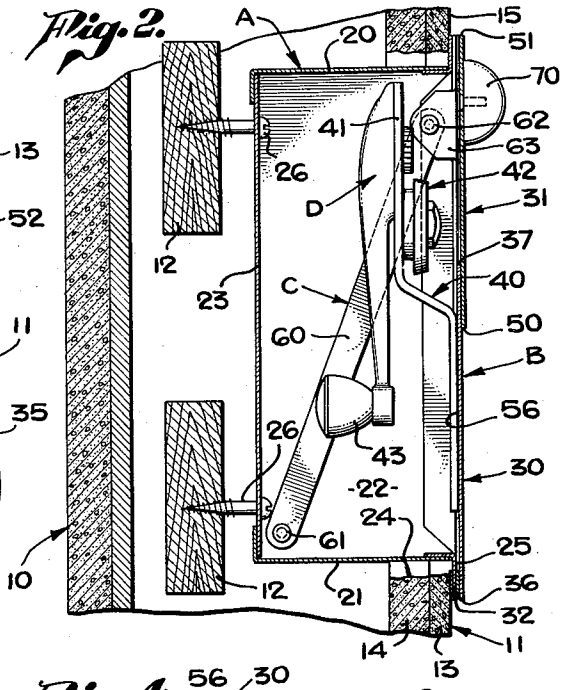


Fig. 3.

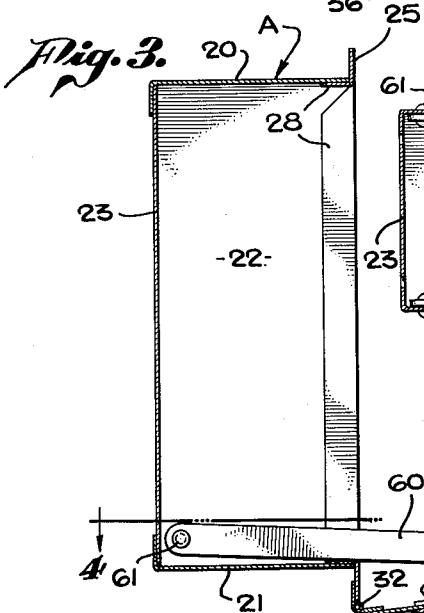
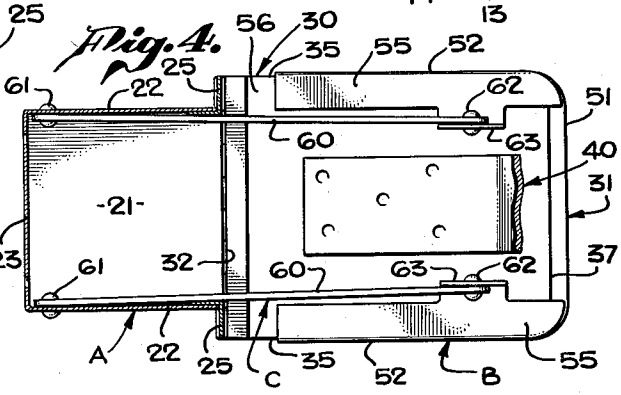


Fig. 4.



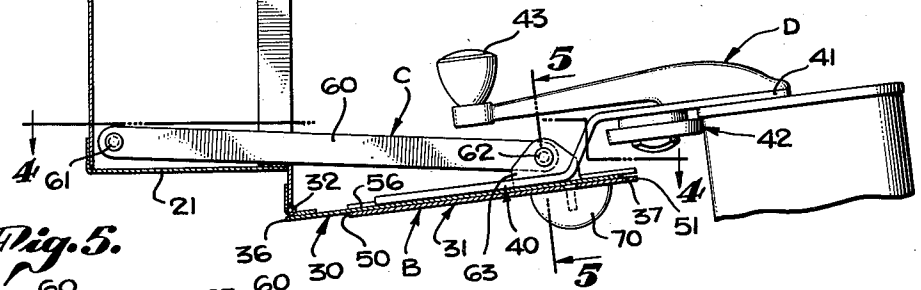
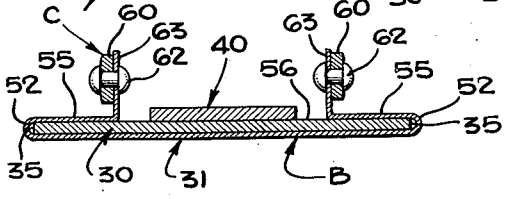


Fig. 5.



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MOUNTING FOR IMPLEMENTS SUCH AS CAN OPENERS

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22 Claims. (Cl. 312—22)

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This invention relates to a mounting for an implement such as a can opener and it is a general object of the invention to provide a simple, practical easily operated mounting of this general character.

There are various instruments, implements, or mechanisms used in shops, homes and offices, or in like situations, and which can be advantageously mounted on a support such as a wall or the like. As an example of such an instrument, implement, or mechanism I will refer to a can opener or can opening mechanism of the type that operates most advantageously when supported or carried by a mounting bracket. Heretofore can openers of this general type have been provided with mounting means enabling them to be attached to a wall or the like to project therefrom, and in some instances the mountings have provided for detachment of the openers from the mounting bracket when the openers are not in use. Generally speaking can openers of the type referred to are bulky or somewhat cumbersome and when mounted by means of the ordinary mounting means they project from the wall to which they are applied in a manner to be conspicuous and hazardous.

It is a general object of my present invention to provide a mounting for an implement such as a can opener which mounting is applicable to a wall, or the like, and carries the implement so that it is readily operable between an extended position where it is conveniently accessible for operation and a retracted position where it is folded into the wall leaving no unsightly or hazardous parts projecting from the wall. With the construction that I have provided the structure is substantially flush with the wall when collapsed or folded in.

It is another object of the invention to provide a mounting of the general character referred to which is neat and sightly. The structure that I have provided involves a frame applicable to the wall and a closure for the frame which carries the implement or can opener, which closure is the portion seen when the structure is folded or closed and may involve simple, plain elements pleasing in design and appearance.

Another object of the invention is to provide a mechanism of the general character referred to that is simple and convenient to operate between the open position where the implement carried thereby is accessible for use and the in or folded position where it is fully retracted and out of sight.

It is another object of the invention to provide a mechanism of the general character referred

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to that provides a firm, secure, and dependable mounting for an implement such as a can opener. The structure that I have provided forms a secure braced support for the mechanism holding it firmly and dependably in position for operation.

Another object of the present invention is to provide a mounting of the general character referred to that involves but few simple, easily formed parts making it practical and inexpensive of manufacture.

A further object of my invention is to provide a mounting of the character referred to which is such that it can be easily, quickly and advantageously applied to standard wall constructions making it suitable for general use.

The various objects and features of my invention will be fully understood from the following detailed description of a typical preferred form and application of the invention, throughout which description reference is made to the accompanying drawings, in which:

Fig. 1 is a front or face view of the mounting that I have provided showing it applied to a typical wall and showing it in the fully closed position. Fig. 2 is a detailed sectional view showing it as indicated by line 2—2 on Fig. 1. Fig. 3 is a view of the mounting showing it in section as illustrated in Fig. 2 and showing it in the open position with a can in position in connection with the opener carried by the mounting. Fig. 4 is a plan view taken substantially as indicated by line 4—4 on Fig. 3 and Fig. 5 is an enlarged transverse sectional view taken as indicated by line 5—5 on Fig. 3.

The mounting that I have provided may be varied as to form, size, shape and in various particulars to accommodate devices, implements or mechanisms of various kinds. For sake of example, I have shown the mounting carrying a simple article or implement in the form of a can opener and I have shown it shaped, proportioned, and designed to most advantageously carry the can opener and further I have shown it shaped and designed for application to a typical wall construction. The particular wall construction illustrated in the drawings involves spaced facings 10 and 11 and I have indicated fixed members 12 between the facings presenting parts to which the mounting may be fastened. The mounting that I have provided is illustrated as applied to or mounted in the facing 11 and this particular facing is shown as involving a plurality of tiles 13 or the like supported by a suitable backing 14. The tiles are set to present a smooth or flush outer wall face 15.

The mounting that I have provided involves,

generally a frame A applicable to the wall to be fixed therein, a closure B for the frame involving relatively movable sections and operating means C for the closure.

The frame A that I provide may vary widely in form, shape, proportioning and construction. In the case illustrated I show a preferred form of frame in which case the frame is a simple, rectangular box-like structure involving, generally, a top wall **20**, a bottom wall **21**, side walls **22** and a back **23**. The several elements or parts of the frame may be integrally or otherwise joined so that the frame forms a permanent or fixed structure in the nature of a box open at the front. In the preferred form of the invention I form the frame of sheet metal although it will be apparent that any other suitable material or combination of material may be employed as circumstances require.

I provide mounting means for the frame A whereby the frame is applied or fixed to a wall or the like. In the case illustrated the facing **11** of the wall is provided with an opening **24** which receives the frame with suitable clearance allowing the frame to project into the wall to a point where the back **23** is in the vicinity of the fixed elements **12** of the wall. The mounting means illustrated in the drawings involves a flange **25** at the outer edge or edge portion of the frame and one or more fasteners **26** securing the frame to the wall members **12**. As shown in the drawings the fasteners **26** may be simple screws engaged through the back **23** of the frame to enter the wall members **12** as clearly illustrated in Fig. 2 of the drawings.

The mounting flange **25** is a marginal flange provided at the front or outer end of the frame and it may be a continuous flange extending entirely around the frame to project therefrom in a manner to overlie the face **15** of the wall entirely around the opening **24** to receive the frame. The various parts of the flange project from the outer edge portions of the top, bottom and side walls of the frame. The flange may be an integral extension or continuation of the frame parts or it may be formed separately from the other elements of the frame and attached thereto through parts **28** secured to the walls of the frame, as illustrated in Fig. 3 of the drawings. In practice it is ordinarily desirable to make the flange **25** substantially uniform in size and shape as it extends around the frame and in the particular design illustrated it is rounded at the corners.

The closure B that I provide is a sectional element preferably in the form of a simple, flat, or substantially flat, panel shaped and proportioned to form a cover or closure overlying the frame parts including the mounting flange when it is in the closed position as shown in Figs. 1 and 2 of the drawings. The closure preferably involves two simple shiftable or relatively movable sections, an inner or lower section **30** and an outer or upper section **31**.

The inner section **30** of the closure serves to cover or close the lower portion of the frame while the upper section overlaps the lower section and serves to cover the upper portion of the frame. The inner portion is pivotally connected to the frame and in the preferred form of the invention a simple hinge **32** pivotally connects the lower edge portion of closure section **30** with the lower edge portion of the flange, preferably the outer edge of the flange **25** projecting from the bottom wall **21**. The inner section **30** may be substantially rectangular in form, in which case it has parallel side edges **35**, a bottom edge **36** and a top edge **37**. The section **30** is preferably made sufficiently wide to cover or substantially cover the frame A at the lower end portion thereof. In the drawings I have shown the section **30** wide enough to completely overlie all portions of the frame at the lower part thereof including the flange parts **25**.

The inner section **30** of the closure forms the mounting or carrier for the implement handled by the structure. In the case illustrated a can opener D is mounted on or applied to the closure section **30**. The particular can opener shown ing the drawings involves a mounting bracket **40** secured to the inner side of closure section **30** and having a projecting outer end portion **41** projecting a substantial distance beyond the top or outer edge **37** of section **30**. The opener includes a suitable can opening mechanism **42** carried by the projecting portion **41** of the bracket **40** and an operating handle **43** is provided to operate the mechanism **42**. The handle illustrated is rotatably supported by the portion **41** of the bracket and is operable to what may be termed a folded position where it overlies the portion of the bracket **40** secured to the section **30**.

The outer section **31** of the closure is mounted on or carried by the inner section **30** and is shiftable relative thereto between a retracted position such as is shown in Fig. 3, and an extended position such as is shown in Fig. 2. When the outer section **31** is in the retracted position, as shown in Fig. 3, it is practically confined to the inner section **30** so that little or no portion of it projects beyond the section **30** whereas when it is in the extended position there is only a limited portion of it overlying the section **30** while the major portion of it projects from section **30** and the projecting portion covers or overlies the upper portion of the frame in the manner that the section **30** covers or overlies the lower portion of the frame, to the end that the sections **30** and **31** combined completely overlie or cover the frame including flange **25**. It is to be understood, however, that it is not necessary for the closure to completely overlie all parts of the frame in that an effective design may be provided wherein the flange **25** is visible beyond the edges of the closure, although I prefer to cover the flange as I have shown in the drawings.

The outer section **31** of the closure, like the inner section, may be a simple flat plate and in the design illustrated it is substantially rectangular in form having a lower or inner edge **50**, an outer or upper edge **51** and parallel side edges **52**. The upper corners of plate section **31** are rounded as are the lower corners of plate section **30**.

In accordance with my construction I provide guide means slidably connecting the closure sections **30** and **31** and although I may employ various structures to effect the desired sliding connection between the sections I prefer to establish this connection by providing simple guide flanges **55**. The guide flanges **55** are provided at the side edges of one of the closure sections, preferably the outer closure section **31**, and they are formed to turn in so they engage over the side edges **35** of section **30** to overlie the back or inner face **56** of section **30** which is the section to which the bracket **40** is secured. In the particular case illustrated one continuous guide flange **55** is provided at each edge **52** of section **31** and the guide flanges are co-extensive

with the section 31 to provide ample bearing engagement with the section 30.

The operating means C that I provide for the closure acts to effect relative movement between the closure sections as the closure is swung between an open position such as is shown in Fig. 3 and the closed position shown in Fig. 2. The operating means acts to slide the outer section 31 out relative to section 30 as the closure moves from the open position to the closed position so that the outer section is fully extended when the closure reaches the closed position. In practice the operating means C may vary widely in form and construction. However, I prefer that it be a simple link means or link mechanism involving one or more links pivotally connecting the closure and frame. In the case illustrated I have shown two like links either one of which may be eliminated, if desired. Each link 60 of means C is preferably a simple, straight, elongate strap-like part which is rigid and has its inner end pivoted to the frame by a pivot pin 61 while its outer end is pivoted to the closure by a pivot pin 62.

In accordance with the arrangement that I have provided the inner end of the link 60 is pivotally mounted at the lower rear portion of the frame while the outer end of the link is pivotally connected to the outer section 31 of the closure. In the preferred arrangement the pin 61 pivotally connects link 60 to a side wall 22 of the frame at a point adjacent the back 23 and also adjacent the bottom wall 21. The pin 62 by which the outer end of the link is connected to the outer closure section 31 may be engaged with or carried by an ear 63 projecting from the section 31. In the particular case illustrated the ear 63 is shown projecting from the flange 55 that projects from the section 31 to slidably connect the section 31 with section 30.

It is to be noted that the link 60 is of such length as to fold into the frame as the closure is moved to the closed position shown in Fig. 2. When the closure is open, as shown in Fig. 3, the outer end of the link is spaced a considerable distance outward from the hinge 32, and as the closure moves from the open position to the closed position this distance increases, that is, the outer end of the link moves further away from the hinge 32 thus causing the section 31 to which the link is connected to be moved outward relative to section 30.

In accordance with the preferred form of my invention I arrange and relate the parts so that the links 60 form stop means limiting opening movement of the closure. In the case illustrated in the drawings the links 60 engage and bear down upon the outer edge portion of the bottom wall 21 when the closure is in the fully open position, as shown in Fig. 3. This arrangement forms an effective dependable stop and when two like links are employed, as I have shown in the drawings, the means C serves to uniformly and effectively operate the closure in the desired manner and they form a most firm and dependable stop means limiting opening movement of the closure.

From the foregoing description it will be apparent that I have provided a mounting for an article or implement such as a can opener that enables it to be readily moved between a folded or concealed position, as shown in Fig. 2, and an out or operating position such as is shown in Fig. 3. In practice the closure can be engaged in any suitable manner to effect the desired movement thereof. For instance, I may provide

an operating knob 70 on the outer side of the closure. The structure that I have provided is such as to make it practical and convenient to make the sections of the closure simple and pleasing in design and as I have pointed out, they may be made to completely cover all parts of the frame so that when the mounting is closed, as shown in Figs. 1 and 2 of the drawings only the faces or outer sides of the closure sections are apparent or visible, as will be seen from Fig. 1 of the drawings.

Having described only a typical preferred form and application of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art and fall within the scope of the followihg claims.

Having described my invention, I claim:

1. A structure of the character described including, a frame to be mounted in a fixed position, a closure for the frame including relatively movable sections, means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions, and an element carried by one section and located in the frame when the sections are in an extended position forming a closure for the frame and located clear of the frame when the sections are in a contracted position.

2. A structure of the character described including, a frame to be mounted in a fixed position, a closure for the frame including relatively movable sections one of which is pivoted to the frame, means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions, and an element carried by the section pivoted to the frame and located behind the closure when the sections are in an extended position over the frame and accessible at the front of the frame when the sections are in a contracted position.

3. A structure of the character described including, a frame to be mounted in a fixed position, a closure for the frame including an inner section pivotally connected with the frame and an outer section slidably carried by the inner section, means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions and an element carried by the inner section at the inner side thereof when the closure is closed and projecting therefrom forward of the frame when the closure is open.

4. A utensil mounting including, an open front box-like frame to be mounted in a fixed position in a wall, a closure for the front of the frame including an inner section pivotally connected with the frame at the lower forward portion thereof and an outer section slidably carried by the inner section, and means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions including a member connected to the frame at the lower rear portion thereof and to the outer section of the closure at the inner side thereon to be wholly within the frame when the closure is in a closed position.

5. A utensil mounting including, an open front box-like frame to be mounted in a fixed position in a wall, a closure for the front of the frame including an inner section pivotally connected with the frame at the lower forward portion thereof and an outer section slidably carried by the inner section at the inner side thereof, and

means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions including a link having one end pivoted to the frame at the lower rear portion thereof and the other end pivoted to the inner section of the closure at the inner side thereon to be wholly within the frame when the closure is in a closed position.

6. A structure of the character described including, a frame to be mounted in a fixed position, a closure for the frame including an inner section pivotally connected with the frame and an outer section slidably carried by the inner section, and means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions including a link pivotally connected with the frame and pivotally connected with the closure, the link engaging the frame to stop opening movement of the closure.

7. An article carrying structure of the character described including, an open front box-like frame to be mounted in a fixed position and having rearwardly projecting sides, a closure for the frame including an inner section pivotally connected with the frame and an outer section slidably carried by the inner section, and means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions including a pair of like links each pivotally connected with the sides of the frame rearward of the front of the frame and pivotally connected with the closure.

8. A structure of the character described including, a box-shaped frame open at the front, a closure including an inner section pivotally connected to the lower end portion of the frame and an outer section slidably carried by the inner section, and a link having one end pivotally connected to the lower end portion of the frame inward of the connection of the inner section with the frame and having its other end pivotally connected to the outer section whereby the outer section is moved inwardly relative to the inner section as the closure moves from a position closing the frame to an open position projecting forward from the frame.

9. A structure of the character described including, a box-shaped frame open at the front and including a back and top, bottom and side walls, a closure including an inner section pivotally connected to the lower end portion of the frame and an outer section slidably carried by the inner section, and a link having one end pivotally connected to the lower end portion of one of the side walls adjacent the back and having its other end pivotally connected to the outer section whereby the outer section is moved inwardly relative to the inner section as the closure moves from a position closing the frame to an open position projecting forward from the frame.

10. A structure of the character described including, a box-shaped frame open at the front and including a back and top, bottom and side walls, a closure including an inner section pivotally connected to the lower end portion of the frame and an outer section slidably carried by the inner section, and a link having one end pivotally connected to the lower end portion of one of the side walls adjacent the back and having its other end pivotally connected to the outer section whereby the outer section is moved inwardly relative to the inner section as the closure moves from a position closing the frame to an open position projecting forward from the frame, the link engaging the bottom wall to stop opening movement of the closure.

11. A structure of the character described including, a box-shaped frame open at the front and including a back and top, bottom and side walls, and a marginal flange projecting from the front edge portions of the walls, a closure including an inner section pivotally connected to the lower end portion of the frame and an outer section slidably carried by the inner section, and a link having one end pivotally connected to the lower end portion of one of the side walls adjacent the back and having its other end pivotally connected to the outer section whereby the outer section is moved inwardly relative to the inner section as the closure moves from a position closing the frame to an open position projecting forward from the frame, the closure overlying the flange when in closed position.

12. A structure of the character described including, a box-shaped frame open at the front, a closure including an inner section pivotally connected to the lower end portion of the frame and an outer section slidably carried by the inner section, an implement carried by the inner section and having a portion projecting from the outer end thereof, and a link having one end pivotally connected to the lower end portion of the frame inward of the connection of the inner section with the frame and having its other end pivotally connected to the outer section whereby the outer section is moved inwardly relative to the inner section as the closure moves from a position closing the frame to an open position projecting forward from the frame, the outer section projecting from the inner section and covering said portion of the implement when the closure is in the closed position and being withdrawn from said portion of the implement when the closure is open.

13. An article carrier of the character described including, a frame to be mounted in a fixed position, a closure for the frame including relatively movable sections, and means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions, one of the sections having guide flanges projecting therefrom and having sliding engagement with the other section, said means including a lug on one of the flanges and a link pivoted to the frame and to said lug.

14. An article carrier of the character described including, a frame to be mounted in a fixed position, a closure for the frame including an inner section pivotally connected with the frame and an outer section slidably carried by the inner section, and means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions, the outer section having guide flanges projecting therefrom and slidably engaging the other section, there being lugs projecting from said flanges, and said means including links pivotally connected to the frame and to said lugs.

15. A can opener mounting including, a box-shaped frame insertable into a wall opening and having an open front and a front flange to engage the wall, a closure including an inner section hinged to the frame at the lower end portion thereof and an outer section slidably carried by the inner section, and a link having one end pivotally connected to the frame at the lower end portion thereof and having its other end pivotally connected to the outer section.

16. An article carrier of the character described including, a box-shaped frame insertable into a wall opening and having an open front and a front flange to engage the wall, a closure including an inner section hinged to the frame at one end portion thereof and an outer section slidably carried by the inner section, and a link having one end pivotally connected to the frame at said end portion thereof and having its other end pivotally connected to the outer section, the link being received in the frame when the closure is in closed position and engageable with the frame to limit opening movement of the closure.

17. In combination, a box-shaped frame open at the front, a closure for the frame including an inner section hinged to the frame at the lower end portion thereof, and an outer section slidably carried by the inner section, a can opener carried by the inner section at the inner side thereof with a portion projecting from the outer end thereof, the opener being received in the frame when the closure is closed, and a link having one end pivotally connected to the frame at the lower end portion thereof and having its other end pivotally connected to the outer section, the link being received in the frame when the closure is closed and cooperating with the frame to limit opening movement of the closure.

18. An article carrying structure of the character described including, an open front box-like frame to be mounted in a fixed position, a closure for the front of the frame including an inner section pivotally connected with the frame at the lower portion thereof and an outer section slidably carried by the inner section, and means operating the closure to shift the sections relative to each other as the closure is moved between an open position where the sections are telescoped together and form a shelf-like projection at the front of the frame and a closed position where the sections are extended one relative to the other forming a cover at the front of the frame, said means including a member connecting the frame and the outer section of the closure.

19. A structure of the character described including, a frame to be mounted in a fixed position, a closure for the frame including an inner section pivotally connected with the lower end portion of the frame and an outer section slidably carried by the inner section, means operating the closure to shift the sections relative to each other as the closure is moved between open and closed positions, the closure being held in open position by the action of gravity, and stop means stopping the closure against movement by gravity beyond a full open position.

20. An article carrier of the character described including, a frame open at the front and having a marginal flange at the front, a closure including an inner section pivotally connected to the frame and an outer section slidably carried by the inner section, and an operating link pivoted to the frame and to the outer section, the closure being movable to a closed position at the front of the frame where the sections are extended relative to each other and overlie the flange of the frame.

21. A structure of the character described including, a frame open at the front, a closure including an inner section pivotally connected to the frame and an outer section slidably carried by the inner section, an implement carried by the inner section and having a portion projecting from the outer end thereof, and a link having one end pivotally connected to the frame and having its other end pivotally connected to the outer section whereby the outer section is moved inwardly relative to the inner section as the closure moves from a position closing the frame to an open position projecting forward from the frame, the outer section projecting from the inner section and covering said portion of the implement when the closure is in the closed position and being withdrawn from said portion of the implement when the closure is open.

22. A can opener mounting including, a box-shaped frame insertable into a wall opening and having an open front and a front flange to engage the wall, a closure including an inner section hinged to the frame and an outer section slidably carried by the inner section, and a link having one end pivotally connected to the frame at the lower end portion thereof and having its other end pivotally connected to the outer section.

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