Nov. 19, 1968 T. R. ROBINSON, JR 3,411,242

HINGED CLOSURE

Filed Sept. 16, 1966 2 Sheets-Sheet 1

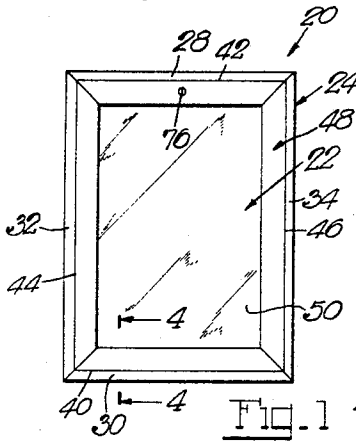


Fig. 1

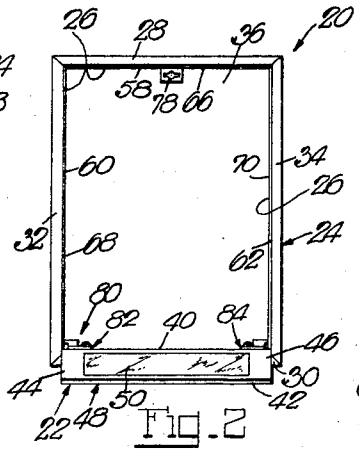


Fig. 2

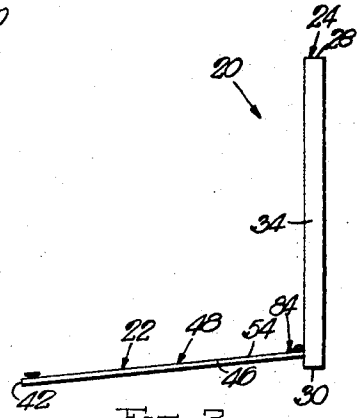


Fig. 3

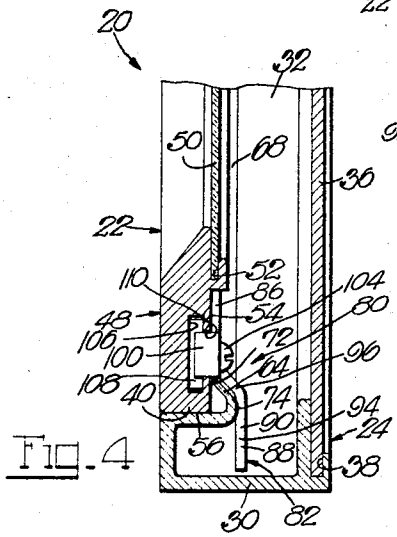


Fig. 4

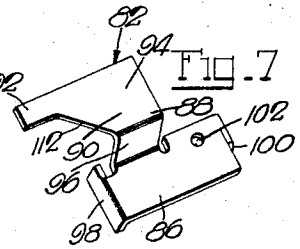


Fig. 7

Fig. 5

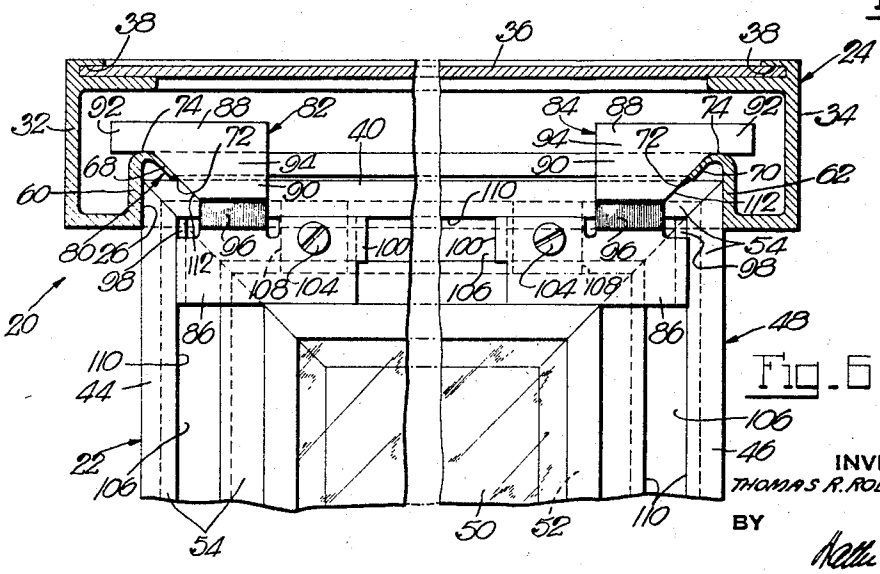


Fig. 6

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HINGED CLOSURE

Filed Sept. 16, 1966 2 Sheets-Sheet 2

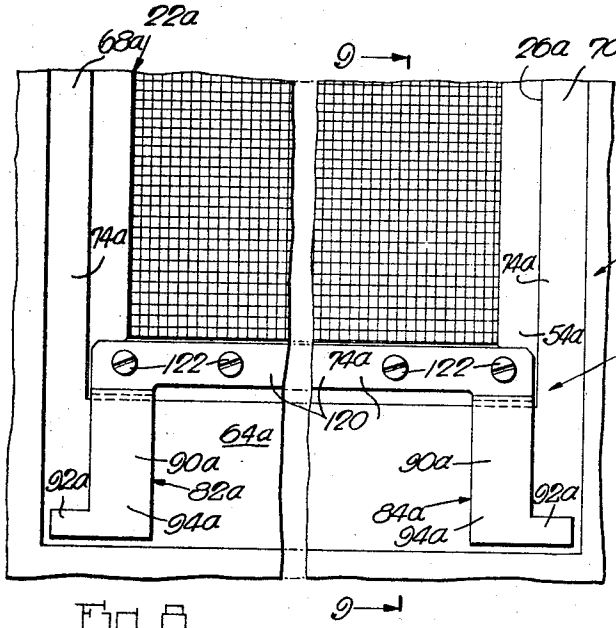


Fig. 8

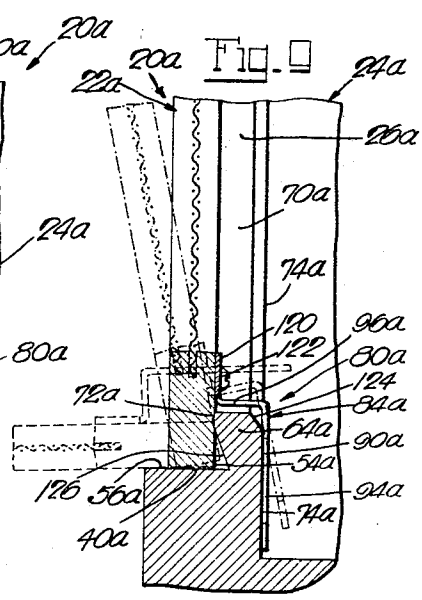


Fig. 9

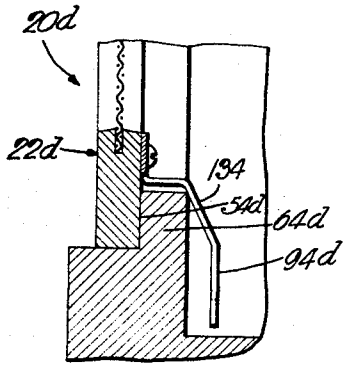


Fig. 12

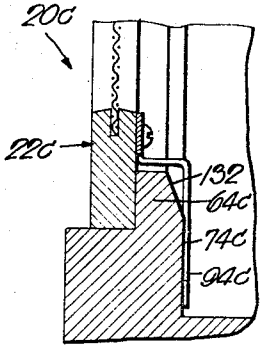


Fig. 11

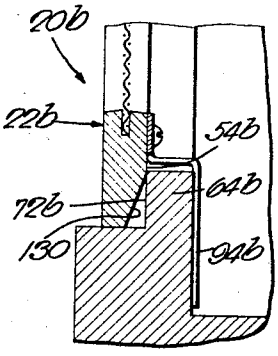


Fig. 10

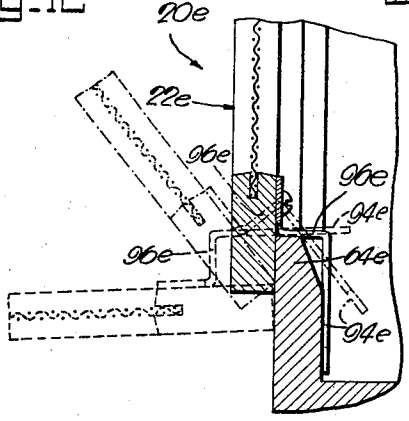


Fig. 13

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3,411,242

HINGED CLOSURE

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Filed Sept. 16, 1966, Ser. No. 580,091
17 Claims. (Cl. 49—400)

This invention relates to closures in general, and to hinged closures in particular.

The hinged closures to which the present invention relates may be of many different types, such as transparent covers on show cases, or window screens and storm windows, for example, all of which have in common a closure member hinged on an open frame-like support into and from which it pivots into closed and open positions, with the closure member being usually hinged at its bottom so as to have upward closing and downward opening movement.

It is among the objects of the present invention to provide a hinged closure of any of these types of which the hinge has united companion parts on the support and closure member and, as usual, securely holds the closure member on the support and permits its pivotal movement into open and closed positions, yet the companion hinge parts will be separated from and united with each other on mere, but deliberate, lifting of the closure member from and into the support in prescribed easy manner which has nothing in common with ordinary manipulation of the closure member into its open and closed positions. With this arrangement, secure pivotal mounting of the closure member in and its dismounting from the support are achieved instantaneously by its mere lift into and from the support without requiring any skill.

It is another object of the present invention to provide such a hinged closure of which the aforementioned hinge with its readily united and separated companion parts not only has at least the same holding strength as a conventional hinge, but seals the closed member in its support far more fully than does a conventional hinge, yet its cost is less than that of a conventional hinge and its application to the support and closure member requires less time and skill than the application of a conventional hinge.

It is a further object of the present invention to provide such a hinged closure with the aforementioned hinge which for its total manufacture requires but a single one of the readily united and separated companion parts, and the other hinge part is provided by available standard parts of the support which have primary functions entirely different from any aspect of hinging the closure member to the support. With this arrangement, the number of parts required for complete manufacture, sale and mounting of the hinge is significantly reduced to one part, with this one part being conveniently screwed to the closure member to conclude the entire mounting of the hinge.

Another object of the present invention is to provide such a hinged closure of which the aforementioned single manufactured hinge part on the closure member has its hinge connection with the support established by letting the closure member preferably rest with its bottom on a usual bottom ledge of the support in front of the usual complete circumferential backstop for the closure member in its closed position, and provide for hooking this single part to the support behind its backstop in such wise that its bottom ledge and the part of the backstop therealong serve as the fulcrum for the opening and closing member on which the latter is retained in all of its positions by virtue of its hooked connection with the support. With this arrangement, the hinge is effective over the entire width of the closure member and thus affords optimum pivotal support for the same, and the firmness of the mount of the closure member on the support is as exceptional as the likelihood of destruction of the hooked connection between the closure member and support is remote.

A further object of the present invention is to provide such a hinged closure in which the aforementioned single manufactured hinge part on the closure member is for its hooked connection with the support provided near the bottom corners of the closure member with lugs shaped substantially as the legs of an L, of which first legs of both lugs extend longitudinally of and in spaced relation with the closure member beyond the bottom of the latter and between and behind the backstop on the opposite sides of the support so that they will reach behind and swing into and from engagement with the backstop on the bottom ledge of the support on movement of the closure member into and from its closed position, respectively, and the other legs of the lugs extend outwardly toward the adjacent sides of the support, and are spaced from the bottom of the closure member, sufficiently to reach hook-like behind the backstop on the adjacent support sides and swing into and from engagement therewith on movement of the closure member into and from engagement therewith on movement of the closure member into and from its closed position, respectively, with these other legs of the lugs limiting opening movement of the closure member on their engagement with the backstop, and both legs of the lugs cooperating with the backstop in retaining the closure member on the bottom ledge on its swinging movements thereon into its open and closed positions. With this arrangement, the hinge connection of the closure member with the support is established instantaneously and in the simplest possible manner, by introducing in the support the closure member bottom-first and so tilted as to permit passage of the lugs between and behind the backstop on the opposite sides of the support, whereupon the closure member is simply lowered into full rest with its bottom on the bottom ledge of the support in which it is and remains hooked to the latter in its open and closed positions as well as in its normal opening and closing movements. The closure member is as readily removed from the support on going through the same procedure in reverse. Further, with the hinge part on the closure member being mounted in back of the latter and having its hooked connection with the support also in back of the closure member, the hinge is, in the closed position of the closure member, not only hidden from the outside but also out of reach thereat and, hence, cannot be tampered with.

It is another object of the present invention to provide such a hinged closure in which the aforementioned first legs of the lugs of the hinge part on the closure member are so spaced from the latter that they will in the closed position of this member hug the backstop on the bottom ledge of the support in the rear sufficiently to hold the closure member in firm sealing engagement with the backstop.

It is a further object of the present invention to provide such a hinged closure in which the aforementioned first legs of the lugs of the hinge part and their offset extensions to the spaced closure member are so spaced from each other that they will substantially fit between the backstop on the opposite sides of the support and thereby also locate and lock the closure member in correct lateral position in the support.

A further object of the present invention is to provide such a hinged closure in which the bottom ledge of the support need not support the closure member in its open and closed positions and in its opening and closing movements, and this supporting function may, instead, be performed by the aforementioned first legs of the lugs of

the hinge part and their offset extensions to the spaced closure member by simply resting these legs on the backstop along the bottom of the support. With this arrangement, the backstop at the bottom also serves as the fulcrum on which the closure member swings into its open and closed positions.

Another object of the present invention is to provide such a hinged closure of which the aforementioned single manufactured hinge part on the closure member is still further simplified structurally and also reduced in cost, by eliminating the long integral connector between the spaced left and right hand lugs of the hinge part and furnish the latter in two separate parts which form the respective left and right hand lugs and have separate mounting formations for their attachment to the closure member. In thus furnishing two separate hinge parts, their size will also be greatly reduced from that of a single hinge part, and they may also be applied to and adapt themselves to closure members of any width. Further, these separate hinge parts will, by virtue of their relatively small size, readily lend themselves to highly efficient and low-cost blanking from good-quality plate stock for optimum strength of these parts, and they may be thus blanked and also finish-formed in two die operations at the most.

Further objects and advantages will appear to those skilled in the art from the following, considered in conjunction with the accompanying drawings.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

FIG. 1 is a front view of a closure embodying the present invention;

FIGS. 2 and 3 are front and side views of the closure in open condition;

FIG. 4 is an enlarged fragmentary section through the closure taken substantially on the line 4—4 of FIG. 1;

FIG. 5 is a section similar to FIG. 4, but showing the closure in open condition;

FIG. 6 is a fragmentary section through the closure taken substantially on the line 6—6 of FIG. 5;

FIG. 7 is a perspective view of a prominent part of the closure;

FIG. 8 is a fragmentary rear view of a closure embodying the present invention in a modified manner;

FIG. 9 is a section through the modified closure taken substantially on the line 9—9 of FIG. 8; and

FIGS. 10 to 13 are fragmentary sections through further modified closures.

Referring to the drawings, and more particularly to FIGS. 1 to 6 thereof, the reference numeral **20** designates a closure which in the exemplary form shown may be a showcase or a bulletin board, having a closure member **22** in the exemplary form of a transparent window, and a support **24** therefor in the exemplary form of a casing having an opening **26** which is normally closed by the member **22**.

The support or casing **24** of exemplary rectangular outline (FIGS. 1 and 2) has a top **28**, a bottom **30** and opposite sides **32** and **34** which in this instance are formed by extruded metal channels that are mitered and suitably secured to each other at the corners, and a back panel **36** which is secured in a circumferential groove formation **38** in the top, bottom and sides of the support (FIGS. 4 to 6).

The closure member **22**, which is also of exemplary rectangular outline (FIG. 1) and has a straight bottom **40**, a top **42** and opposite sides **44** and **46**, comprises in this instance a frame **48** for a pane **50** of transparent glass or plastic. The frame **48** is in this instance formed of extruded metal channels which are mitered and suitably secured to each other at the corners, and also provide a circumferential groove formation **52** in which the pane **50** is received (FIGS. 4 to 6). The closure member **22** also has a back **54** which in this instance is plane over a circumferential margin thereof.

The support **24** also has a straight bottom ledge **56** on which the closure member **22** rests with its bottom **40** in all positions of the member (FIGS. 4 and 5). The support **24** has in this instance also top and side ledges **58**, **60** and **62** substantially fittedly to receive the closure member **22** in its closed position. The support **24** further has on the ledges **56** to **62** a straight bottom stop **64**, a top stop **66** and opposite side stops **68** and **70** with front and back faces **72** and **74** against the front faces **72** of which the closure member **22** rests with its back **54** in closed position of the member (FIG. 4). The ledges **56** to **62** and stops **64** to **70** are in this instance provided by integral formations of the extruded bottom, top and side channels of the support **24** (FIGS. 4 to 6), with the back faces **74** of the stop formations **64** to **70** being formed by inward flanges on the respective ledge formations **56** to **62** which in this instance continue as forwardly and inwardly inclined rib formations of which the foremost edges form the front faces **72** to the stops.

The closure member **22** is at its bottom hinged to the support **24**, and there is also provided a suitable lock having on top of the closure member and support companion members **76** and **78** (FIGS. 1 and 2) for locking and releasing the closure member in its closed position. The closure member **22** has with the support **24** a hinge connection **80** according to the present invention. This hinge connection has companion elements which include the bottom ledge **56** and the bottom and side stops **64**, **68** and **70**, and further provides in its preferred form two separate parts **82** and **84**. These parts **82** and **84** are mounted in back of the closure member **22** near the bottom corners thereof (FIGS. 2 and 6), and they reach through the opening **26** in the support **24** and hook-like behind the back face **74** of the bottom ledge **56** against which they rest in the closed position of the closure member **22** in which the latter is with its back **54** in engagement with the front faces **72** of the stops **64** to **70** (FIG. 4). These parts **82** and **84** also reach hook-like behind the back faces **74** of the side stops **68** and **70** and rest against the same to hold the closure member **22** in its open position and limit its opening movement (FIGS. 5 and 6). These parts **82** and **84** further cooperate with the bottom and side stops **64**, **68** and **70** in retaining the closure member **22** with its bottom **40** on the bottom ledge **56** and bottom stop **64** as a fulcrum in swinging motion of the closure member into its open and closed positions. To these ends, each part **82** and **84** has a base **86** and a therewith integral lug **88**, of which the base **86** is mounted on the closure member **22**. As best shown in FIG. 6, the lugs **88** of the parts **82** and **84** are, in back view of the closure member **22**, shaped substantially like the legs **90** and **92** of an L, of which the legs **90** extend toward and across the bottom **40** of the closure member and between the side stops **68** and **70** and beyond their back faces **74**, and the other legs **92** of these parts extend behind the back faces **74** of the side stops **68** and **70**. The lugs **88** of the parts **82** and **84** are, in side view of the closure member **22** (FIGS. 4 and 5), also substantially L-shaped to divide the legs **90** into tongue and yoke formations **94** and **96**, of which the yoke formations **96** hold the tongue formations **94** rearwardly offset from the bases **86** of the respective parts **82** and **84** and from the back **54** of the closure member **22**, with the tongue formations **94** extending preferably parallel to the back **54** of the closure member. The parts **82** and **84** are preferably and advantageously blanked from plate stock of adequate strength and finish-formed in two die operations at the most, with their bases **86** and tongue and yoke formations **94** and **96** being flat except for two depending end tabs **98** and **100** on the bases **86**, and the latter having holes **102** for their attachment to the closure member **22** by screws **104**.

For such screw attachment of the parts **82** and **84** to the

closure member **22**, the exemplary top, bottom and side channels **28** to **34** of the support **24** have in the back **54** thereof dovetail guides **106** of which that in the bottom channel **30** slidably receives two nuts **108**, one for each part **82** and **84** in this instance. In mounting the parts **82** and **84**, they are with their bases **86** placed against the back **54** of the closure member **22** at the correct locations thereon, whereupon the screws **104** are inserted through the holes **102** in the bases **86** and through the entry slot **110** of the bottom guide **106** and screwed tightly into the aligned nuts **108**. Correct location of the parts **82** and **84** on the closure member is in this instance instantaneous and unfailing by simply projecting the depending end tabs **100** on the bases **86** into the therewith fitting entry slot **110** of the bottom guide **106** and sliding the parts with their other end tabs **98** into engagement with the outer side edges of the entry slots of the respective side guides **106** (FIG. 6). With the end tabs **100** being fittedly received in the entry slot **110** of the bottom guide **106**, they also transmit all holding forces, and also possible shock forces in careless or accidental opening of the closure member, directly from the closure member to the parts **82** and **84**, and vice versa, and thus protect the screws **104** from these forces. As best shown in FIG. 6, the parts **82** and **84** are of the aforementioned left and right hand construction by virtue of the projection of their side legs **92** to the left and right, respectively, and ensuing reversal of other formations of these otherwise identically dimensioned and similarly shaped parts.

The rearward spacing of the tongue formations **94** of the parts **82** and **84** from the back **54** of the closure member **22** is, within easily kept tolerances, preferably such that they will, in closed position of the member **22**, hug the back face **74** of the bottom stop **64** rather tightly so as to then hold the back **54** of the closure member in secure sealing engagement with the front face **72** of the bottom stop **64** in any event, and also with the front faces **72** of the remaining stops **60**, **62** and **66** on arranging the top lock **76**, **78** for holding the member **22** playless in its closed position. The spacing of the side legs **92** of the parts **82**, **84** from the bottom **40** of the closure member **22** (FIG. 6) may be varied to obtain different open positions of the latter, and this spacing is in the present example so as to have the closure member in its open position as shown in FIG. 5 in which it rests with its bottom **40** on the bottom ledge **56** and against the front face **72** of the bottom stop **64**. The closure member **22** is in its open position also held in the support **24** securely as destruction of the hinge connection **80** on opening, and even self-opening, of the closure member is remote. Destruction of the hinge connection **80**, or damage thereto in the form of bending either or both parts, for example, by forces occurring in opening the closure member or on accidentally or carelessly straining it in its open position, are particularly remote due to the offset from the closure member of the tongue formations **94** of the parts **82**, **84** and, hence, also of their legs **92**, which affords to the counteracting forces from the side stops **68** and **70** to the part legs **92** the substantial leverage from the bottom engagement of the closure member with the bottom stop **64** to the part legs **92** (FIG. 5) which keeps these counteracting forces at tolerable magnitudes. Further, with the legs **92** of the parts **82**, **84** engaging the back faces **74** of the side stops **68** and **70** edgewise in open position of the closure member (FIG. 6), the hinge connection **80** is then of optimum strength. Conversely, engagement of the tongue formations **94** of the parts **82**, **84** with the back face **74** of the bottom stop **64** is planewise in closed position of the closure member and accordingly extensive as well as somewhat resilient for preferred tight closure of the member. The outer edges **112** of the tongue formations **94** of the parts **82**, **84** which lead to the side legs **92** thereof are also inclined similarly as the rib formations of the side stops **68** and **70** so that they will engage the same in the open position of the closure member (FIG. 6) and additionally locate the latter in its sidewise disposition on the bottom ledge **56**.

In opening the closure member **22**, as well as in closing the latter, the legs **90** and **92** cooperate with the bottom stop **64** and the side stops **68** and **70**, respectively, in retaining the closure member with its bottom **40** on the bottom ledge **56** and front face **72** of the bottom stop **64** as a fulcrum about which the closure member swings. Thus, on initial opening of the closure member the tongue formations **94** of the parts **82**, **84** will perform this retaining function as long as they extend behind the bottom stop **64**, and when they extend, on continued opening of the closure member, above the bottom stop **64** the side legs **92** of these parts will be sufficiently close to the back faces **74** of the side stops **68** and **70** to assume this retaining function until the closure member is in its open position and while it remains in open position. The same holds true in reverse on closing the closure member, as will be readily understood. Of course, since the closure member **22** has no fixed hinge axis on the support **24** about which to swing into its open and closed positions, the bottom of the closure member has on the bottom ledge **56** and bottom stop **64** some limited sliding movement during opening and closing movement of the closure member, but such sliding movement of the member is safely within the range of its retainment on the bottom ledge and bottom stop by the parts **82**, **84** and therewith cooperating stops **64**, **68** and **70**, wherefore the closure member remains securely assembled with the support not only in its open and closed positions but also in its opening and closing movements.

Provision is also made to avoid interference between the tongue formations **94** of the parts **82**, **84** and the bottom stop **64** in opening or closing the closure member. To this end, the back face **74** of the bottom stop **64** is over part of the extent of its overlap by the tongue formations **94** in closed position of the closure member, offset from the remaining overlap part to provide clearance for the tongue formations freely to swing with the closure member on its closing and opening movements into and from engagement with the back face of the bottom stop. This is achieved in this instance by the inclined back face of the rib-like formation of the bottom stop **64** (FIGS. 4 and 5). Further, with the front face of this rib-like formation of the bottom stop being also inclined (FIGS. 4 and 5), the same serves as an additional offset surface toward and from which the closure member may swing about the front face or edge **72** of the bottom stop **64** on initial opening and final closing of the closure member and thus afford additional clearance to the tongue formations **94** from the bottom stop **64** in opening and closing the closure member.

It is another feature of the present hinge connection **80** between the closure member **22** and support **24** that the same may be assembled and disassembled on merely lifting the closure member into and from the support. Thus, and as appears best in FIG. 6, the hinge connection **80** may be disassembled when in open position of the closure member the same is turned and simultaneously lifted such that the side legs **92** of the parts **82**, **84** clear all stops to permit removal of the closure member from the support. To assemble the hinge connection **80**, the closure member is, with its bottom first, lifted into the support in such turned condition that the side legs **92** of the parts **82**, **84** will pass between and behind the stops **64** to **70**, whereupon the closure member is simply lowered onto the bottom ledge **56**. Of course, the closure member may be captive in the support if the latter is sufficiently low in comparison to its width, as will be readily understood.

Reference is now had to FIGS. 8 and 9 which show a modified hinge connection **80*a*** employed in a different closure **20*a***. Thus, the closure **20*a*** provides a closure member **22*a*** in the exemplary form of a window screen, and the support **24*a*** therefor is in the form of a window having an opening **26*a***, a bottom ledge **56*a*** and stops of

which the bottom and side stops **64***a*, **68***a* and **70***a* are shown. The hinge parts **82***a* and **84***a* are in this instance not separate but form integral end parts of a single member having a strip **120** by which it is mounted on the back **54***a* of the closure member **22***a* with screws **122**. The parts **82***a* and **84***a* are, in back view of the closure member (FIG. 8), substantially L-shaped to provide the legs **90***a* and **92***a*, and these parts are, in side view of the closure member (FIG. 9), also L-shaped to provide the tongue and yoke formations **94***a* and **96***a*, respectively. The tongue formations **94***a* extend in this instance parallel to the back **54***a* of the closure member **22***a* and are spaced therefrom a distance substantially equal to the thickness of the bottom stop **64***a* between its front and back faces **72***a* and **74***a*, so that the tongue formations **94***a* engage the back face **74***a* of the bottom stop **64***a* and hold the back **54***a* of the closure member in sealing engagement with the front face **72***a* of the bottom stop in the full-line closed position of the closure member in FIG. 9. The side legs **92***a* of the parts **82***a*, **84***a* are in this instance spaced from the bottom **40***a* of the closure member so as to engage the back faces **74***a* of the side stops **68***a* and **70***a* in the exemplary dotted-line open position of the member in FIG. 9. The present support **24***a* need not have top and side ledges since the legs **90***a* of the parts **82***a*, **84***a* are in this instance received substantially fittedly between the side stops **68***a* and **70***a* (FIG. 8) and thereby locate the closure member in its correct sidewise disposition on the bottom ledge **56***a* in its open and closed positions and on its opening and closing movements. The tongue formations **94***a* and side legs **92***a* of the parts **82***a*, **84***a* cooperate with the bottom stop **64***a* and the side stops **68***a* and **70***a* in retaining the closure member on the bottom ledge **56***a* in its opening and closing swinging movements on the latter and on the front face **72***a* of the bottom stop as a fulcrum. A top part **124** of the back face **74***a* of the bottom stop **64***a* is offset from the remaining part thereof by being inclined thereto in order to provide clearance for the tongue formations **94***a* of the parts **82***a*, **84***a* for their unimpeded swing with the closure member into its open and closed positions through its exemplary dot-and-dash line position in FIG. 9. In this example also, further swing freedom of the tongue formations **94***a* with the closure member is provided for by inwardly offsetting, by inclination, a part **126** of the front face **72***a* of the bottom stop **64***a*. While in the exemplary hinge connection **80***a* the hinge part on the closure member is a single element, the formation of this element into the separate parts **82** and **84** in FIGS. 1 to 6 will be preferred in most cases owing to obvious advantages thereof, including their adaptation as standard parts to closure members of different widths.

FIGURE 10 shows a closure **20***b* which is quite similar to the closure **20***a* of FIGS. 8 and 9, except that in this case the back **54***b* of the closure member **22***b* is substantially over the extent of its overlap of the front face **72***b* of the bottom stop **64***b* inclined at **130** to provide clearance for the tongue formations **94***b* for their unimpeded swing with the closure member **22***b* on its opening and closing movements. In this exemplary arrangement, the back **54***b* of the closure member **22***b* has in the closed position of the latter virtual line contact with the front face **72***b* of the bottom stop **64***b*.

FIG. 11 shows a closure **20***c* which is quite similar to the closures **20***a* and **20***b* of FIGS. 8 to 10, except that in this case only a top part **132** of the back face **74***c* of the bottom stop **64***c* is offset, by inclination, from the remaining part thereof to provide clearance for the tongue formations **94***c* for their unimpeded swing with the closure member **22***c* into its open and closed positions.

FIG. 12 shows a closure **20***d* which is quite similar to the closures **20***a*, **20***b* and **20***c* of FIGS. 8 to 11, except that in this case lengths **134** of the tongue formations **94***d* are inclined to the back **54***d* of the closure member **22***d* to provide clearance between the bottom stop **64***d* and the tongue formations **94***d* for unimpeded swing of the latter with the closure member into its open and closed positions. With this arrangement, the tongue formations **94***d* have virtual line contact with the bottom stop **64***d* in the closed position of the closure member which is adequate in many cases.

While in the described closure forms **20** to **20***d* of FIGS. 1 to 12 the closure member rests and swings on a bottom ledge, FIG. 13 shows a closure **20***e* which is devoid of a bottom ledge and the closure member **22***e* of which rests and swings on the bottom stop **64***e* through intermediation of the parts which provide the tongue and yoke formations **94***e* and **96***e*. Thus, and as shown in full, dot-and-dash and dotted lines, the closure member **22***e* rests with the tongue formations **94***e* or with the yoke formations **96***e*, or both, on the bottom stop **64***e* in various positions of the closure member, including its open and closed positions, and the closure member also swings with these formations about the bottom stop as a fulcrum, as will be readily understood.

While in all described forms of the closure reference is made to bottom elements, the featured hinge connection between the closure member and support will be fully operative as described even if the closure is not upright but is reclining and even reposing in horizontal disposition, as will be readily understood.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

What is claimed is:

1. A closure, having a closure member with a back and straight bottom; a support therefor with an opening and front-and-back-faced side and straight bottom stops; and a hinge connection between said support and member providing in front of said bottom stop a ledge on which said member rests with its bottom, and a part secured to the back of said member and having spaced lugs shaped substantially like the legs of an L in back view of said member, of which first legs are spaced from the back of said member and extend longitudinally toward and across the bottom thereof and into said opening to the other legs of said lugs, and said other legs extend in all positions of said member behind the back faces of said side stops, with said legs and stops being coordinated so that said first legs engage the back face of said bottom stop when said member engages with its back the front faces of said stops in position to close said opening, and also permit opening movement of said member about said ledge as a fulcrum, and said other legs will on opening movement of said member swing into engagement with the back faces of said side stops and thereby limit such opening movement.

2. A closure as in claim **1**, in which said first lug legs are also substantially L-shaped in side view of said member to provide tongues spaced from the back of said member and extending to said other lug legs to engage the back face of said bottom stop in the closed position of said member.

3. A closure as in claim **2**, in which said first lug legs extend into said opening substantially fitted between said side stops in all positions of said member to locate the latter on said ledge in its sidewise disposition thereon.

4. A closure as in claim **1**, in which said member is in comparison to its width of adequate length to permit assembly and disassembly of said hinge connection on tilting said member and lifting it into and from said support, respectively.

5. A closure as in claim **1**, in which said part is formed as two separate elements providing said lugs, respectively,

and each having means for its separate mount on the back of said member.

6. A closure, having a closure member with a back, a straight bottom, a top and sides; a support therefor with an opening and front-and-back-faced top, side and straight bottom stops against the front faces of which said member rests with its back in position to close said opening; and a hinge connection between said support and member providing in front of said bottom stop a ledge on which said member rests with its bottom, and two parts each having a base with which it is mounted on the back of said member, and an integral lug with a tongue and a yoke of which the latter connects said base with one end of said tongue to hold the latter in offset, substantially parallel spaced relation with the back of said member, said parts being spaced widthwise of said member and said tongues being shaped substantially like the legs of an L in back view of said member, of which first legs extend longitudinally toward and across the bottom of said member into said opening and beyond said stops in all positions of said member, and the other legs are provided at said other tongue ends and project behind the back faces of the respective side stops, with said legs and stops being coordinated so that said first legs rest against the back face of said bottom stop in closed position of said member, and also permit opening movement of said member about said ledge and front face of said bottom stop as a fulcrum, and said other legs will on opening movement of said member swing into rest against the back faces of said side stops and thereby limit such opening movement.

7. A closure as in claim 6, in which the back of said member and said tongues have faces, respectively, which are companions to, and in closed position of said member rest against and overlap, the front and back faces, respectively, of said bottom stop, of which at least one of said faces is over part of its overlap extent with the companion face offset from the remaining part of its overlap extent to provide clearance for said tongues for their swinging movement with said member into its open and closed positions.

8. A closure as in claim 6, in which the spacing of said tongues from the back of said member is substantially equal to the thickness of said bottom stop between its front and back faces so that said tongues will in closed position of said member hold the latter in firm sealing engagement with the front face of said bottom stop.

9. A closure as in claim 6, in which said lugs extend into said opening substantially fitted between said side stops in all positions of said member to locate the latter on said ledge in its sidewise disposition thereon.

10. A closure as in claim 6, in which said member is in comparison to its width of adequate length to permit assembly and disassembly of said hinge connection on tilting said member and lifting it into and from said support, respectively.

11. A closure as in claim 6, in which said lugs are also of substantial L-shape in side view of said member, with the legs thereof forming said tongues and yokes.

12. A closure as in claim 6, in which said tongues are plane plate formations substantially parallel to the back of said member, so that said first legs rest planewise against the back face of said bottom stop in closed position of said member, and said other legs rest edgewise against the back faces of the respective side stops in open position of said member.

13. A closure as in claim 6, in which each of said parts is in side view of said member shaped substantially like the arms and connector of a Z, of which said arms form said base and tongue, respectively, and said connector forms said yoke.

14. A closure as in claim 6, in which said base and tongue of each of said parts are substantially parallel plane plate formations, and said connecting yoke is also a plane plate formation.

15. A closure as in claim 14, in which said parts are formed of plate stock of uniform thickness.

16. A closure as in claim 6, in which said member has in its back and rear and along the bottom thereof a dovetail guide with a groove and an entry slot thereto of smaller than groove width of which said groove slidably receives nuts, said base of each of said parts is an apertured plate resting on the back of said member and having a depending tab formation fittedly projecting into said entry slot, and said parts are secured to said member by screws extending through said apertures in said plates and said entry slot to said groove and being threadedly received by said nuts, whereby said tab formations transmit all operational forces of said parts directly to said member, and vice versa, in open position of the latter.

17. A closure as in claim 6, in which said hinge connection is devoid of a bottom ledge as a rest for said member, and said member is supported solely on said bottom stop through intermediation of said parts, of which said yokes and tongues rest on said bottom stop in the closed and open positions, respectively, of said member, and said yokes and tongues swing about said bottom stop as a fulcrum in opening and closing said member.

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