Sept. 27, 1966 D. W. STACKHOUSE 3,274,735

JAMB AND DOOR HINGE SUPPORT

Filed Dec. 10, 1964

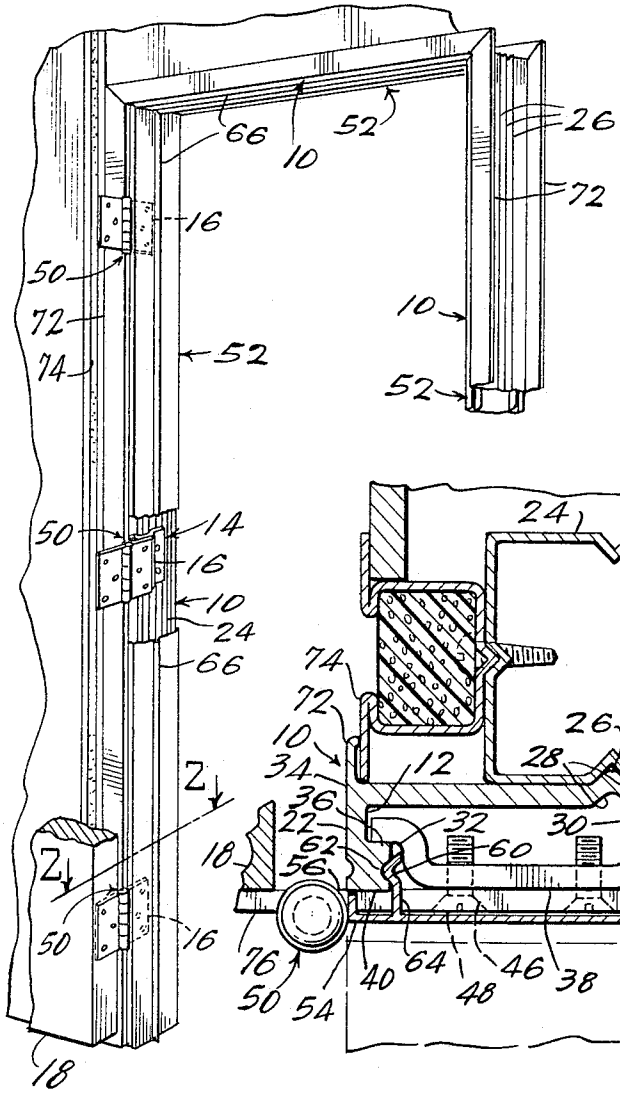


FIG-1-

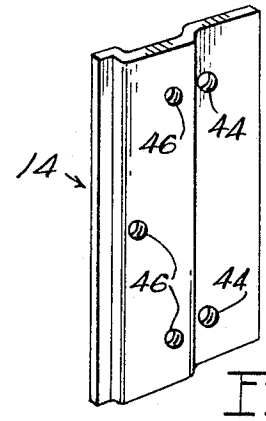


FIG-3-

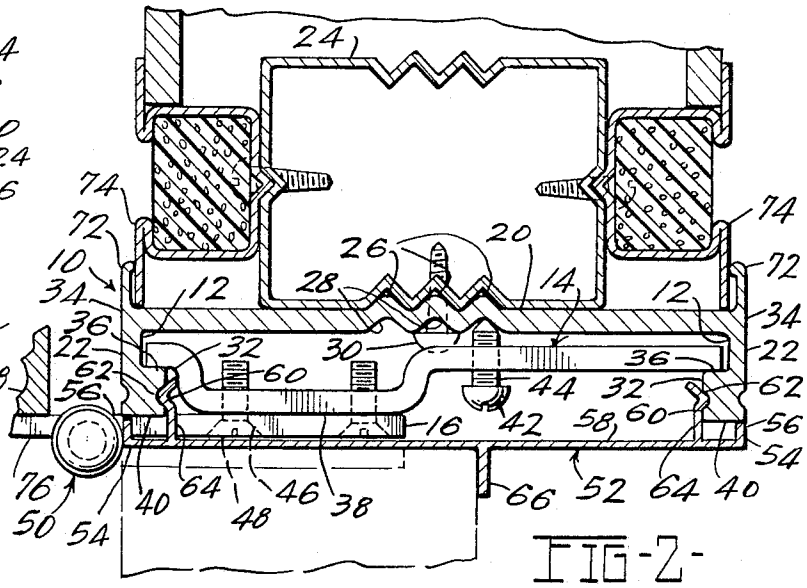


FIG-2-

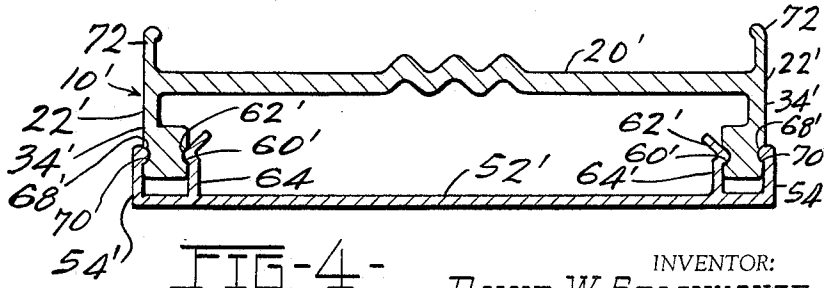


FIG-4-

INVENTOR:
DAVID W. STACKHOUSE.
BY
ATT'YS.

United States Patent Office 3,274,735 Patented Sept. 27, 1966

3,274,735

JAMB AND DOOR HINGE SUPPORT

David W. Stackhouse, Bronson, Mich., assignor to The L. A. Darling Company, Bronson, Mich., a corporation of Delaware

Filed Dec. 10, 1964, Ser. No. 417,412
4 Claims. (Cl. 49—504)

The present invention relates to a doorjamb construction; and more particularly to a doorjamb construction which facilitates the mounting of hinged doors thereto and which includes structure which covers the hinge plate affixed to the doorjamb.

In the usual method of hinging a door to a doorjamb, one hinge plate of each hinge is secured to the door, following which the door is placed in the desired position relative to the doorjamb with the other hinge plate of each hinge overlying the doorjamb. Suitable markings are made on the jamb at the center of the mounting holes in the hinge plate overlying the jamb, the hinge plates which overlie the doorjamb are removed from the door and the doorjamb is suitably routed to receive the hinge plates. The hinge plates are then loosely secured to the doorjamb by means of screws, the hinge plates on the door are assembled to the hinge plates on the doorjamb, and the screws are thereafter securely tightend to the doorjamb. Considerable time is required to locate the hinge plates accurately in the above described manner, and in many instances after the door is hung, the hinge plates of each hinge do not align accurately so that binding occurs to some degree. In the usual type of construction previously described, the hinge plates mounted to the doorjamb are exposed to view when the door is open, so that a smooth neat appearance is lacking.

An object of the present invention is the provision of a new and improved doorjamb and hinge mounting structure which allows a hinge plate of each hinge to be mounted to a hinge support plate without regard to its final location on the doorjamb, following which the hinge support plates are then clamped into position while the door is supported in its desired position.

Another object of the present invention is the provision of a new and improved doorjamb and hinge mounting structure wherein the hinge plates secured to the doorjamb are covered by structure easily snapped in place to provide a neat flush appearance.

A still further object of the present invention is the provision of a new and improved generally channel-shaped doorjamb member for mounting a hinged door in the manner above described and onto which can be snapped either a cover member which provides a door abutment shoulder, or another decorative flush type facing member.

The invention resides in certain constructions and combinations and arrangements of parts; and further objects and advantages of the invention will become apparent to those skilled in the art to which it relates from the following description of the preferred embodiments described with reference to the accompanying drawing, forming a part of this specification, and in which:

FIGURE 1 is a fragmentary isometric view of a doorjamb structure embodying principles of the present invention and onto which a door is hinged;

FIGURE 2 is a fragmentary sectional view taken approximately on the line 2—2 of FIGURE 1;

FIGURE 3 is an isometric view of a hinge support plate shown in FIGURE 2; and

FIGURE 4 is a sectional view of the doorjamb shown in FIGURE 2 but having a cover member positioned thereon of a type which is intended for use in a passageway which is not provided with a hinged door.

The jamb and door hinge support of the present invention (see FIG. 1) generally comprises a channel-shaped upright jamb member **10** having guide ways **12** therein in which a plurality of vertically slidable hinge support plates **14** are mounted. To hang a door **18** on the support, each of a plurality of hinge plates **16** is secured to one of the hinge support plates **14**, the hinge support plates **14** are secured to the door **18**, following which the hinge support plates **14** are locked in place on the jamb member **10** while the door is supported in its vertically adjusted position.

The channel-shaped upright jamb member **10** (see FIG. 2) has a web portion **20** and a pair of laterally extending flanges **22**, respective ones of which are located at the opposite ends of the web portion **20**. The doorjamb assembly of the present invention can be used with any type of wall construction wherein the web **20** can be fastened to an upright member. The embodiment shown in the drawing is specifically intended for use with the type of wall construction shown and described in the David W. Stackhouse application Serial No. 394,086, filed September 2, 1964. In order that the jamb member **10** will be self-centering with respect to an upright stud member **24** of the wall construction shown in the above identified application, the web **20** has three projections **26** on the back face of the web **20** for reception in corresponding recesses in the side face of the stud member **24**. The face of the web **20** opposite the projections **26** has corresponding recesses **28** therein which among other things, provide for the self-centering of retaining sheet metal screws **30** which secure the jamb member **10** to the upright stud member **24**.

The laterally extending flanges **22** have inner side surfaces **32** which face each other, and outer side surfaces **34** which are generally parallel with the outer surfaces of the wall in which the doorjamb is to be mounted. Each of the inner side surfaces **32** has a shoulder **36** thereon which faces the web **20** and inwardly of which is a guide way or recess **12**. The recesses **12** are adapted to receive the opposite ends of the hinge support plates **14** shown isometrically in FIGURE 3 and in section in FIGURE 2. The hinge support plates **14** have an intermediate section **38** which is positioned inwardly of an end portion received in the recess **12**, and the outer surface of which is flush with the laterally outer ends **40** of the flanges **22** when the ends of the plate abut the shoulders **36**. In the embodiment shown in the drawing, the intermediate section **38** of the hinge support plate **14** terminates short of the center of the hinge plate **16**, and jamb screws **42** extend through threaded openings **44** into engagement with one of the recesses **28**. Upon tightening of the jamb screws **42** into firm engagement with the web **20**, the hinge support plate **14** is biased laterally outwardly into firm frictional engagement with the shoulders **36** to such a degree as to adequately support the weight of the door. The intermediate section **38** is provided with tapped openings **46** which receive machine screws **48** that extend through similarly positioned openings of one hinge plate **16** of a hinge structure **50** which supports the door **18**. Any suitable number of hinges **50** can be used, and in the embodiment shown in the drawing three such hinges **50** are used to support the door **18** relative to the channel member **10**.

It will be seen that the hinge plate **16** extends over the lateral outer end **40** of one of the flanges **22**, and that the edge of the door when closed is spaced from the channel structure **10** by a distance which slightly exceeds the thickness of the hinge plate **16**. In order that the structure will be finished to be esthetically acceptable, a generally U-shaped facia strip **52** is provided laterally outwardly of the U-shaped channel member **10**. Legs **54** of the U-shaped facia strip **52** extend laterally inwardly by

a distance slightly exceeding the thickness of the hinge plate **16** to abut in the embodiment shown in FIGURE 2, the laterally positioned outer ends of the flanges **22**. The legs **54**, therefore, close off the space or crack which would otherwise exist between a web **58** of the channel-shaped facia strip **52** and the ends of the flanges **22** of the channel member **10**; and in the embodiment shown in FIGURE 2, outer faces **56** are made flush with the outer surfaces of the flanges **22** to provide a neat flush appearance.

While any suitable means can be used to secure the facia strip **52** to the channel member **10**, the preferred embodiment utilizes detent means by which the facia strip **52** can be snapped into position. In the embodiment shown in FIGURE 2, each of the inner surfaces **32** of the flanges **22** are provided with a small second recess **60** positioned outwardly of the recess **12** for the reception of a projection **62** on detent legs **64** which are carried by the facia strip **52**. The detent legs **64** preferably extend for the full length of the facia strip **52**, and it has been found that such an arrangement not only seals off the space between the facia strip **52** and the channel member **10** to prevent accumulation of dirt, but also so firmly connects the facia strip **52** to the channel member **10** as to preclude the necessity of any further connection between the two members. The structure so far described provides a neat appearance and can be used to finish doorways whether or not a hinged door is to be provided immediately. In those instances where a hinged door is to be provided, the facia strip **52** will preferably also include a door stop **66** formed by a projection on the exposed surface of the facia strip **52**. The door stop **66**, of course, provides an abutment for the closed position of the door, and seals the crack which exists between the side edges of the door and the facia strip **52**.

In those instances where a hinged door is not to be immediately provided, a facia strip identical with the facia strip **52**, previously described, can be used except that it will not include the door stop **66**. A neat flush appearance is thereby provided in entranceways which do not have doors. If at some future time a hinged door is to be provided in the entranceway, the flush type facia strip **52** can be snapped out of position, a door can be hinged to the jamb member **10**, and another facia strip **52** which includes the door stop **66** can be snapped into position. It will be apparent that a section of one leg **54** of the facia strip will be notched to receive the hinge plates **16** at each hinge before the new facia strip **52** is installed.

Portions of a second embodiment of the invention are shown in FIGURE 4 of the drawing. Those portions of FIGURE 4 which are similar to corresponding portions previously described are designated by a like reference numeral characterized further in that a prime mark is affixed thereto. The embodiment shown in FIGURE 4 differs principally from that previously described in that the legs **54'** of the facia strip **52'** are made to overlie the outer surfaces **34'** of the flanges **22'**. Such a construction may be required in certain instances for architectural reasons. Where the flange **54'** is desired to overlie the outer face **34'** of the flanges **22'** the facia strip **52'** can be held in position by providing projections **68** on the inside face of the legs **54'**, and by providing outer recesses **70** in the faces **34'** adapted to receive the projections **68** of the legs **54'**. This has the advantage of providing a seal at the extremities of the facia strip **52'** and also provides an adequate connection between the facia strip **52'** and the channel member **10'** for most installations.

Alternatively, when it is desired for some reason to provide additional retention between the two members, the facia strip **52'** may also be provided with the detent legs **64'**, in which instance the flanges **22'** will also be provided with the recesses **62'** into which the projections **62'** may be snapped to provide additional retention.

In both embodiments so far described, the jamb members **10** and **10'** include flanges **72** which extend in the opposite directions from the flanges **22** and **22'** to engage the outer surfaces of splines **74** that are used in the construction described in the above identified Stackhouse application.

As previously indicated, one of the advantages of the construction of the present invention is that it makes the hanging of hinged doors onto the doorjamb extremely easy. Prior to the mounting of the jamb members **10**, the desired number of hinge support plates **14** are slid lengthwise of the channel members so that their side edges are received in the recesses **12**. One hinge plate of each hinge **50** is mounted to the door **18** and the other hinge plate **16** of each hinge **50** is fastened to one of the hinge support plates **14** by means of the machine screws **48**. This can be accomplished either by blocking the door **18** with the hinges **50** mounted thereon in the desired position relative to the doorjamb **10**, following which the jamb screws **42** are tightened. Alternatively, the hinge pins **76** can be removed, the hinge plates **16** fastened to the hinge support plate **14** when separate from the door, following which the hinge plates **16** are aligned with those of the door and the hinge pins installed. Thereafter the door **18** is adjusted vertically to its proper position while in its open position, and the jamb screws **42** are tightened against the webs **20** to lock the hinge support plate **14** in the exact vertical position required to preclude binding of the hinge structures **50**. After the jamb screws **42** are tightened, the facia strips **52** are notched at the proper locations to clear the hinge plates **16**, and are thereafter snapped into position to finish the doorway.

While the invention has been described in considerable detail, it is not intended to be limited to the particular embodiment shown and described, and it is desired hereby to cover all novel adaptations, modifications and arrangements thereof which come within the practice of those skilled in the art to which the invention relates.

Having described my invention, I claim:

1. A doorjamb assembly comprising: an upright generally U-shaped channel member having a web and a pair of laterally extending flanges respective ones of which are located at opposite ends of said web, said flanges having inner sides which face each other and outer sides which face away from each other, each of said inner sides forming a first recess adjacent said web with a shoulder facing said web, a hinge support plate opposite ends of which are seated in said first recesses, said hinge support plate having a section intermediate said ends which is flush with the lateral outer ends of said flanges when said ends are seated against said shoulders, a hinge having two hinge plates, means fastening one of said hinge plates to said intermediate section of said hinge support plate, at least one jamb screw for forcing said hinge support plate laterally outwardly from said web against said shoulders of said flanges, a generally U-shaped facia strip overlying said channel member laterally outwardly of said hinge plate, and means securing said facia strip to said channel member.

2. A doorjamb assembly comprising: an upright generally U-shaped channel member having a web and a pair of laterally extending flanges respective ones of which are located at opposite ends of said web, said flanges having inner sides which face each other and outer sides which face away from each other, each of said inner sides forming a first recess adjacent said web with a shoulder facing said web, a hinge support plate opposite ends of which are seated in said first recesses, said hinge support plate having a section intermediate said ends which is flush with the lateral outer ends of said flanges when said ends are seated against said shoulders, a hinge having two hinge plates, means fastening one of said hinge plates to said intermediate section of said hinge support plate, at least one jamb screw for forcing said hinge support plate laterally outwardly from said web against said shoulders of said flanges, a generally U-shaped facia

strip overlying said channel member laterally outwardly of said hinge plate, one of said inner and outer surfaces of each of said flanges having a second recess therein, and said facia strip having detents which snap into said second recesses to secure said facia strip outwardly of said hinge plate.

3. A doorjamb assembly comprising: an upright generally U-shaped channel member having a web and a pair of laterally extending flanges respective ones of which are located at opposite ends of said web, said flanges having inner sides which face each other and outer sides which face away from each other, each of said inner sides forming a first recess adjacent said web with a shoulder facing said web, a hinge support plate opposite ends of which are seated in said first recesses, said hinge support plate having a section intermediate said ends which is flush with the lateral outer ends of said flanges when said ends are seated against said shoulders, a hinge having two hinge plates, means fastening one of said hinge plates to said intermediate section of said hinge support plate, at least one jamb screw for forcing said hinge support plate laterally outwardly from said web against said shoulders of said flanges, a generally U-shaped facia strip overlying said channel member laterally outwardly of said hinge plate, said inner surfaces of each of said flanges having a second recess therein outwardly of said first recess, said facia strip having laterally extending legs which abut the ends of said flanges with the outer surfaces of said legs being flush with said outer surfaces of said flanges, and said facia strip having detents which snap into said second recesses to secure said facia strip in position laterally outwardly of said hinge plate.

4. A doorjamb assembly comprising: an upright generally U-shaped channel member having a web and a

pair of laterally extending flanges respective ones of which are located at opposite ends of said web, said flanges having inner sides which face each other and outer sides which face away from each other, each of said inner sides forming a first recess adjacent said web with a shoulder facing said web, a hinge support plate opposite ends of which are seated in said first recesses, said hinge support plate having a section intermediate said ends which is flush with the lateral outer ends of said flanges when said ends are seated against said shoulders, a hinge having two hinge plates, means fastening one of said hinge plates to said intermediate section of said hinge support plate, at least one jamb screw for forcing said hinge support plate laterally outwardly from said web against said shoulders of said flanges, a generally U-shaped facia strip overlying said channel member laterally outwardly of said hinge plate, said outer surfaces of each of said flanges having an outer recess therein, said facia strip having laterally extending legs which overlie said flanges and engage said outer recesses to retain said facia strip in position overlying said hinge plate, and said facia strip having detents which snap into said outer recesses to secure said facia strip in position laterally outwardly of said hinge plate.

References Cited by the Examiner

UNITED STATES PATENTS

2,605,869	8/1952	Backman	189—46 X
2,766,858	10/1956	Johnson et al.	52—217
2,818,145	12/1957	Bragman et al.	189—46
2,910,154	10/1959	Hammitt et al.	189—46
2,985,263	5/1961	Maciunas	52—731 X

HARRISON R. MOSELEY, *Primary Examiner.*

K. DOWNEY, *Assistant Examiner.*