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ADJUSTABLE DOOR JAMB

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FIG. 1.

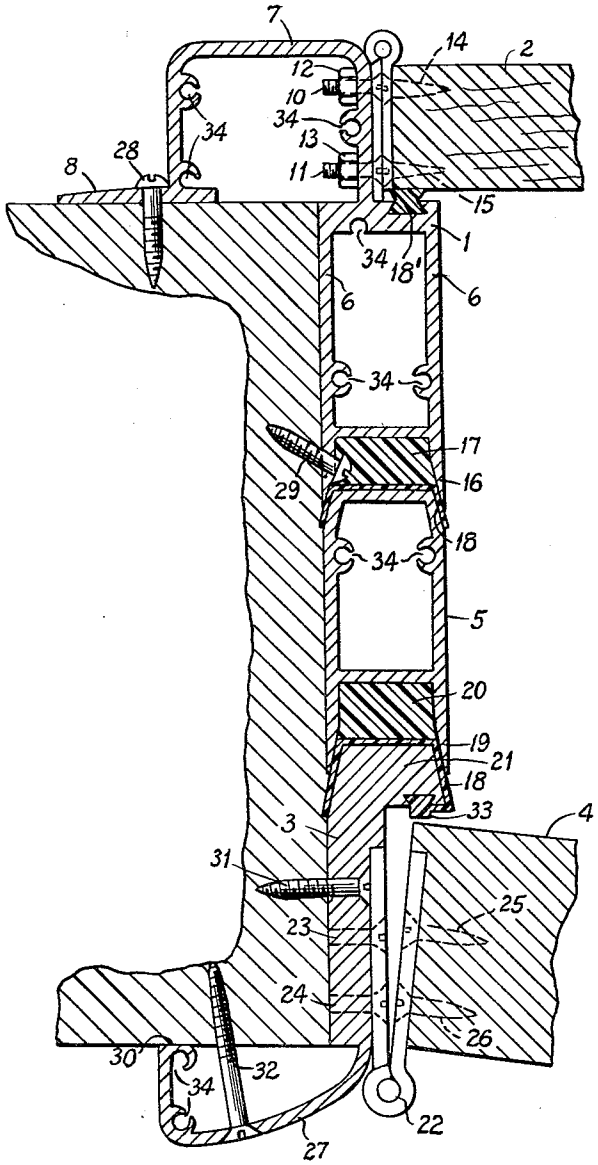
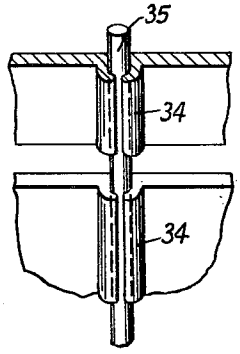


FIG. 2.



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ADJUSTABLE DOOR JAMB

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Metallic doors and jambs are employed at great advantage in commercial and industrial construction such as warehouses and such buildings. Metal jambs however have not been as popular as their advantages would indicate for residential construction.

One of the principal objections is that in residences the problems of weatherproofing and of efficiency of construction have provided for some time difficult obstacles in the field.

The principal object of my invention is to provide an adjustable door jamb combination which carries both an inside door and an outside door or storm door.

A second object of my invention is to provide a door jamb which can be accommodated to any width wall.

A third object of my invention is to provide a door jamb which is formed of telescoping pieces of extruded metal sections.

A further object of my invention is to provide a door jamb which can be formed of pieces of a length less than the full length of the jamb.

Another object of my invention is to provide a door jamb which is fully waterproofed and weatherproofed against moisture by a membrane seal.

A further object of my invention is to provide a construction which will prevent condensation due to transfer from the outside of cold so that moisture condenses on the inside.

An additional object of my invention is to provide a jamb construction which can be put in place immediately after the masonry has set up. First the jamb and the storm door are put in place to close up the place. Then later the inside door is put in place.

These and other objects of my invention will be apparent to those skilled in the art of jamb construction from a study of the following specification and the claims appended thereto, together with the drawing.

In the drawings:

FIGURE 1 is a cross-sectional view of my novel jamb construction; and

FIGURE 2 is a detail view of a manner of securing together two small portions of the jamb extension.

In FIGURE 1 my door jamb structure is shown to be formed of three pieces of extruded metal, aluminum or steel being the metals of choice.

Numeral 1 is given to the outer extrusion. It is called this because it carries the outer door or the so-called storm door 2. Numeral 3 is given to the inner extrusion which carries the inner door 4. Between the inner extrusion and the outer extrusion is disposed the extender extrusion section 5.

The outer extrusion 1 is formed of a box-like section 6, to which is integrally attached a U-shaped section 7. At the left side of FIGURE 1 the U-shaped section 7 is seen to terminate in a strip section 8. At the right side of FIGURE 1 the U-shaped section is seen to carry the hinge 9. The hinge 9 is attached to the U-shaped section 7 by means of bolts 10 and 11 which are fastened to the inner side of the U-shaped section 7 with the nuts 12 and 13 respectively. The hinge 9 is fastened to the outer door 2 by means of the wood screws 14 and 15, shown in dotted lines.

The box-like section 6 terminates at 16 in an open end, having tapered sides, which is filled with a strip of compressible Styrofoam 17. The portion of the box-like section 6 which lies next to the outer door 2 when

that door is in the closed position, holds a strip of neoprene 18' in a recess cut into the box-like section. The closing of the door 2 against the neoprene strip 18' compresses the portion of neoprene lying outside the recess and provides a tight seal between the door and the box-like section 6.

The extender section 5 is also of a box-like shape. At its lower portion it terminates in an open end 19 having tapered sides. This open end is filled with a strip of compressible Styrofoam 20. At its upper portion, the closed end of the extender section is tapered also and is covered with a U-shaped strip of neoprene 18 also, which is held to the metal surface of the closed end by the use of adhesive.

The inner extrusion 3 has a tapered upper end 21 which is covered with a strip of neoprene on four surfaces and held to these four surfaces with adhesive.

The inner extrusion carries a butt hinge 22 by means of two bolts 23, 24 threaded into the body of the extrusion 3. The butt hinge 22 is attached to the inner door 4 by means of two wood screws 25, 26 shown in dotted lines. The lower portion of the inner extrusion 3 has an ornamental guard section 27.

It will be noted that the taper on the upper end of the extender section 5 and the taper on the upper portion of the inner extrusion 3 cooperate respectively with and fit into the lower end of the outer extrusion 1 and the extender section 5.

For assembly in position, I first cut a length of each extrusion 1, 3 and 5 of a length equal to the length of the doorway, that is what is called the "rough jamb length." I mitre each end of the 3 lengths. It will of course be understood that there are only two hinges on each door. These are placed in the appropriate positions and fixed in place.

Then I take at first the length of the outer extrusion and fix it against the outside masonry. I attach it into place by placing the large metal screw 28 through the outer masonry and I place the large metal screw 29 through the side of the tapered end of the section into the rough jamb. Then I lay the extender section in place so that its upper tapered end lies inside the open tapered sides at the position 16. And then I place the inner extrusion in position so that its upper tapered end lies inside the open tapered sides of the extender section at 19.

Then I force the three extrusions together until the end 30 of the inner extrusion lies against the inside wall of the house. In forcing these extrusions together it will be found that the tapers on the ends 16, the upper end of 5, on 19 and on 21 have all telescoped together until they have accommodated to the depth of the doorway between the outer door and the inner door. In fact in that position I put in place the screws 31 and 32 into the face of the rough jamb.

Some doorways will be so short in depth that the extender can be omitted and the end 21 placed directly in the end 16 of the outer extrusion 1. However most doorways will require the extender section, which can be supplied in various widths, corresponding to the depths of various doorways. However it will be seen that this arrangement of telescoping ends fitting into tapered open sided ends allows for some play of a matter of an inch or so at each side of the extender section. That is the upper end of the extender section can be forced in for a matter of an inch or more into the open end 16 of the section 1. The same is true of the depth of penetration of the end 21 into the end 19.

In both cases, no matter how far the telescoping ends are forced together, the action is the same: A tight seal

is formed between the neoprene 18 and the compressible Styrofoam 17 or 20 in either case.

The inner door 4 also when closed rests tightly against a strip of neoprene 33 positioned in a recess in the inner extrusion 3, which seals the opening between the door 4 and the neoprene 18 when the door is closed. The neoprene 18 is an integral part of the strip 33 in the recess of extrusion 3.

The portion over the doorway is cut, mitred and assembled in the customary way, except that three extruded pieces are used for that as they were for the side. Also of course no hinges are employed. Then the other side of the doorway is formed, cut, mitred and assembled as the first one was to provide a complete doorway which has been adjusted in width to conform to the depth of the doorway as left "rough finished" by the carpenters.

It will be noted that the neoprene at 18 and 33 serves to prevent metal from touching metal. The neoprene insulation therefor serves to prevent the cold outside from making the inner extrusion cold by conduction. This arrangement thereby prevents moisture from condensing on the inner extrusion inside the house, which has heretofore been a very difficult problem.

When masonry walls exist on the inside of the house my adjustable door jamb construction can be used. In each such case only one door is attached and I use sections 1 and 3 together to form the adjustable door jamb and I use the extender section in such cases where there are extremely thick walls.

It will be noted that at various positions marked by numeral 34 I have provided a flute extension on each of the extrusions. The flute extension contains a hole which has the following purpose. If I have a short length as in FIGURE 2 left over and wish to use it I can take a small piece of metal rod 35 and place it in the abutting ends of two similar extrusions in each flute extension to form an integral piece which is as long as the two shorter pieces of the similar extrusions. I usually use a sealing compound between the two ends to keep out moisture and water in such a case.

It will be understood that various modifications, variations and rearrangements may be made in my invention without departing from the essence of the invention. I intend to limit my invention only by the appended claims.

What I claim is:

1. In an adjustable door jamb for a house doorway having an inner wall surface and an outer wall surface, an outer extrusion having a U-shaped section adapted to lie against the outer wall surface and a box-like section adapted to lie perpendicular to said outer wall surface, an outer door hinge portion on said outer extrusion between said U-shaped section and said box-like section, an open end provided with tapered sides on said box-like section, an inner extrusion having an ornamental guard section adapted to lie against the inner wall surface, a body portion on said inner extrusion adapted to lie perpendicular to said inner wall surface and said outer wall surface, said body portion adapted to carry hinges for an inner door, a tapered end on said inner extrusion on the end opposite the ornamental guard section, and an extender extrusion having a box-like shape, an open end provided with tapered sides on the latter box-like shape, the opposite end of said latter box-like shape being tapered and telescopingly engaged with the open end of the box-like section on said outer extrusion, the said open end of said extender extrusion being telescoped over and cooperating with the tapered end of said inner extrusion.

2. The combination of claim 1 further characterized in that the open end of the outer extrusion contains a strip of Styrofoam, the open end of the extender extrusion contains a strip of Styrofoam, the tapered end on said inner extrusion is covered with a strip of neoprene between said tapered end and the open end of the extender extrusion and the tapered end of said extender extrusion is covered with a strip of neoprene between said tapered end of said extender extrusion and the open end of the outer extrusion.

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