

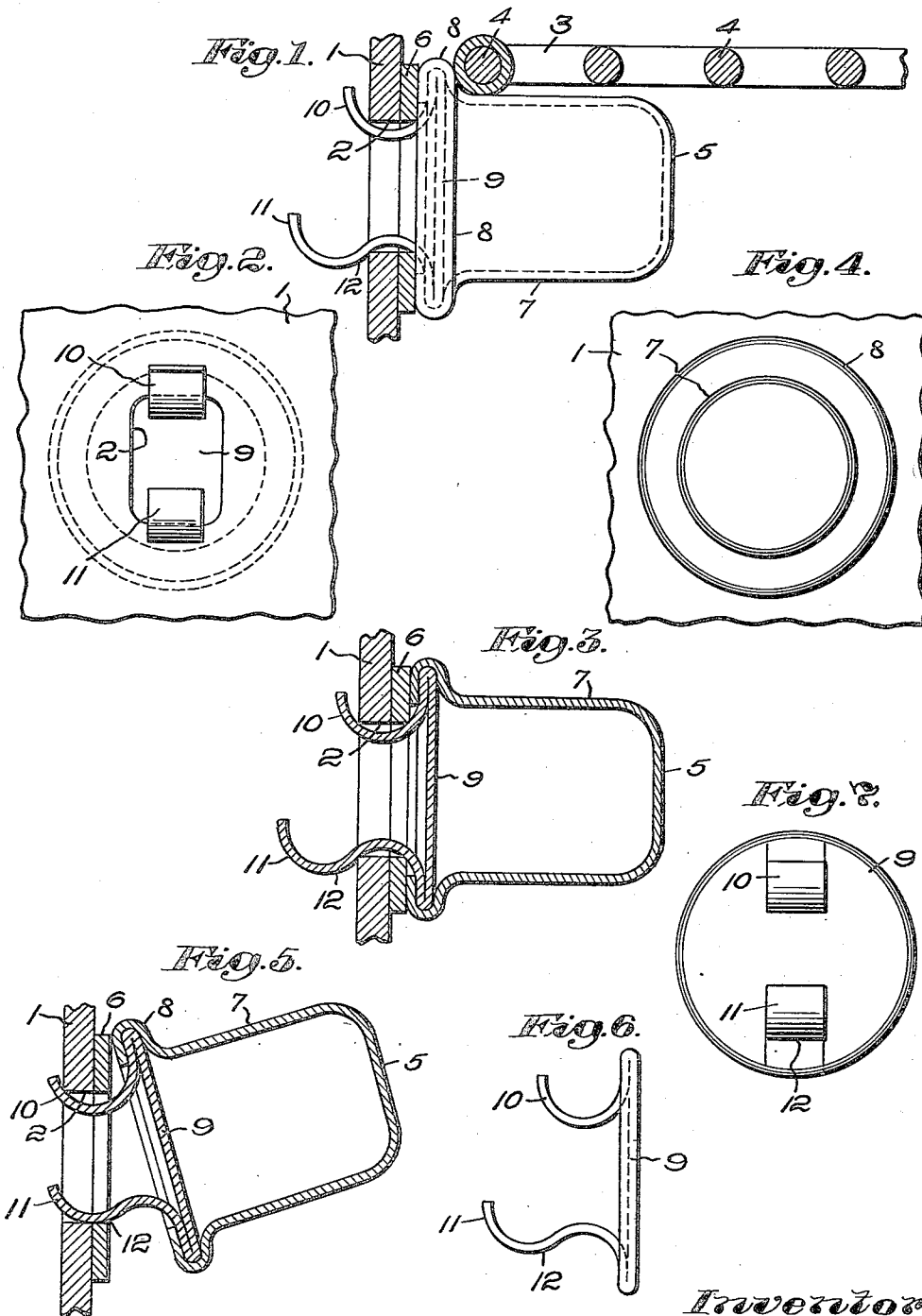
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SHELF SUPPORT

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SHELF SUPPORT

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3 Claims. (Cl. 248—239)

My invention relates to improvements in shelf support fasteners for refrigerators and the like structures and installations for such fasteners.

Referring to the drawing which represents a preferred embodiment of my invention:

Figure 1 is a sectional view of my improved fastener installation including a supporting wall, a fastener member and the part to be carried by the fastener member;

Fig. 2 is an elevation of the installation shown in Fig. 1 as it appears when viewed from the left of the figure;

Fig. 3 is a sectional view of my improved fastener attached to a supporting wall;

Fig. 4 is an elevation of the installation shown in Fig. 3 taken from the right of the figure;

Fig. 5 is a section of the parts shown in Fig. 3 showing the manner of attachment of the fastener member to the supporting wall;

Fig. 6 is a side elevation of the attaching part of my fastener member; and

Fig. 7 is a front elevation of the attaching part shown in Fig. 6.

The particular purpose of my invention is to provide improvements in shelf support fasteners which are adapted to engage the walls of a refrigerator or the like for the purpose of carrying the shelf or shelves thereof. My improved fastener is especially useful in that it may be applied directly to the supporting wall from the front face of the wall thereby providing a great improvement over the nut and screw type of shelf support fastener for which attachment, access to the rear face of the wall is necessary.

Although my invention is especially adapted for use in connection with shelf supports for refrigerators, I do not wish to limit myself to that particular installation as there are many parts and combinations of parts with which my improved fastener could be advantageously used which would fall within the scope of the present invention.

Referring to the drawing, I have illustrated in Fig. 1 a portion of a supporting structure, such as a refrigerator wall 1, having an aperture 2, a shelf 3 made up of the wires 4, and my improved shelf support fastener 5 which is adapted to engage the shelf 3 and be detachably secured to the wall 1. A washer 6, preferably made of fibrous material, is located, in my preferred form, between the shelf support 5 and the wall 1.

The shelf support 5, as best illustrated in Figs. 3, 4 and 5, has a relatively narrow tubular projection 7 which is drawn from sheet metal material. Integral with the open end of the

tubular projection I have provided the flanged base portion 8. The longitudinal edges of the projection extend from the base, when the support is secured to the wall 1, in a plane which is substantially perpendicular to that of the wall so as to provide a suitable surface upon which the shelf 3 may rest.

In order to secure the shelf support to the wall 1, I have provided an attaching member (Figs. 6 and 7) which has a base plate 9 adapted to fit within the flanged base 8 of the tubular projection 7. The peripheral edges of the flange 8 are crimped over the peripheries of the base plate, as illustrated in Figs. 4 and 5, thereby firmly securing the attaching member to the projection 7.

Integral with the base plate of the attaching member I have formed the two retaining arms 10 and 11. The arm 10 extends from the outer edge of the plate for a predetermined distance toward the center and then is flared outwardly away from the plate in a gradual curve to form a hook-shaped portion. The arm 11 extends from the outer edge of the plate toward the center for a predetermined distance and then away from the plate in an S-shaped formation presenting the shoulder portion 12. The free end of the arm 11 is turned inwardly in order to aid in guiding the arm into fastening position.

In attaching the shelf support to the wall 1, the washer 6 may be placed over the arms 10 and 11. The arm 10 is then inserted through the aperture 2 and hooked over the walls surrounding the aperture. The arm 11 is brought up to the aperture as shown in Fig. 5, and when pressure is exerted in the direction of the aperture, the arm will contract sufficiently to allow the shoulder 12 to be forced by the aperture, after which action the arm will spring back toward normal position and the shoulder 12 will bear firmly upon the sides of the aperture thereby securely anchoring the shelf support in attached position (Fig. 4). The shelf support may not now be removed except by intentionally exerting lifting pressure to dislodge the shoulder 12 from its seat.

It will be noted that as a result of the particular construction of the arms it is possible for them to engage in a firm spring grip the edges of varying sized apertures having a distance from one engaged edge to the other which is less than the distance between the arms when the arms are in normal unengaging position. Furthermore, the shape of the arms will permit them to engage edges of slightly varying thicknesses.

When the support is in attached position, the

washer 6 will be located adjacent to the outside surface of the wall 1 and the crimped over edges of the base flange 7.

Although I have shown in the drawing only a portion of the retaining wall, it is understood that the entire wall or walls may have as many supports as are necessary to carry the shelf or shelves which are to be located within the retainer.

I do not wish to be limited by the preferred embodiment of my invention which I have illustrated and described, because the scope of my invention is best described in the following claims.

I claim:

1. An article of manufacture comprising a tubular portion and a flanged base portion at one end of said tubular portion and an attaching member for securing said article to a supporting structure, said attaching member having a base plate assembled with said flanged base portion and a pair of arms integrally joined to said base plate and extending therefrom, one of said arms being curved from a point adjacent said base plate to its free end and being adapted for hooking engagement with the walls surrounding an aperture of a supporting structure, and the other arm having a shoulder portion for spring engagement with said walls whereby said arms may cooperate to secure said article to said supporting structure.

2. An article of manufacture including a tubular portion and a flanged base portion at one end of said tubular portion and an attaching member for securing said article to a supporting structure, said attaching member having a base

plate assembled with said flanged base portion and a pair of arms integrally joined to said base plate and extending therefrom, one of said arms having a shoulder portion extending outwardly therefrom for spring engagement with the walls surrounding an aperture of a supporting structure, said arm being curved from a point adjacent said base plate to said shoulder portion, and the other of said arms having means for engaging the walls surrounding the aperture of said supporting structure whereby said arms may cooperate to secure said article to said supporting structure.

3. An article of manufacture including a tubular portion and a flanged base portion at one end of said tubular portion and an attaching member for securing said article to a supporting structure, said attaching member having a base plate assembled with said flanged base portion, and a pair of yieldable arms extending beneath said base plate, said arms being integrally joined to opposed ends of said base plate and each of said arms having a portion extending beneath said plate in substantially parallel relation thereto and a portion extending downwardly in angular relation to said plate, the downwardly-extending portion of one of said arms having a hooked formation and adapted for hooking engagement with the walls surrounding an aperture of a supporting structure and the downwardly-extending portion of the other of said arms having a shoulder means for spring engagement with said walls whereby said arms may cooperate to secure said article to said supporting structure.

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