

Aug. 6, 1935.

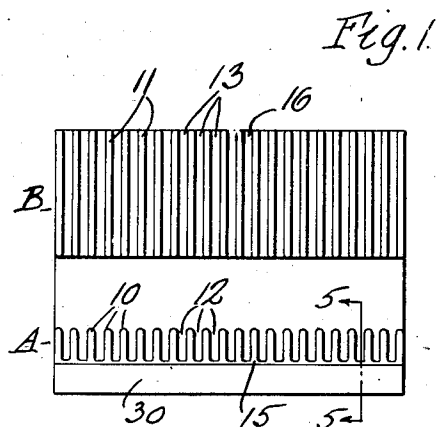
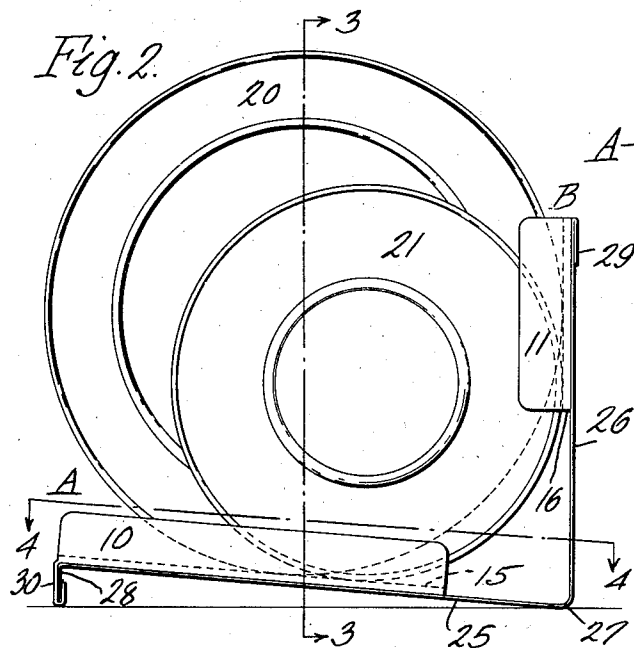
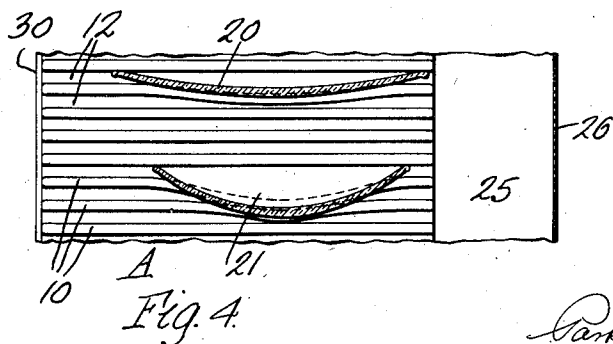
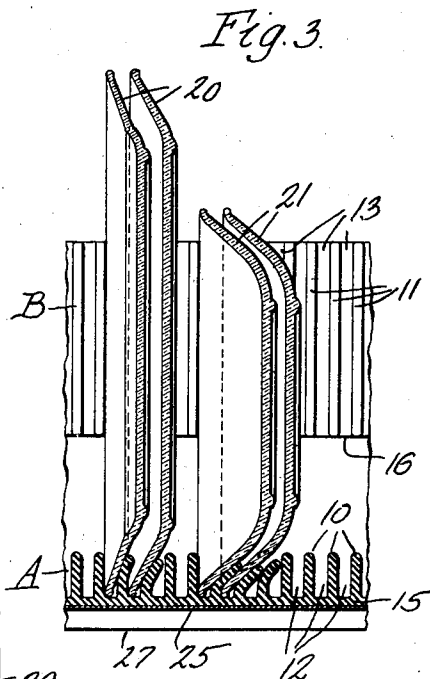
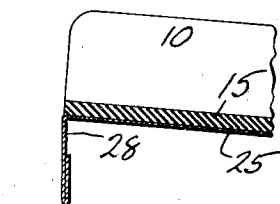
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2,010,734

DISH RACK

Filed July 5, 1934

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 6.

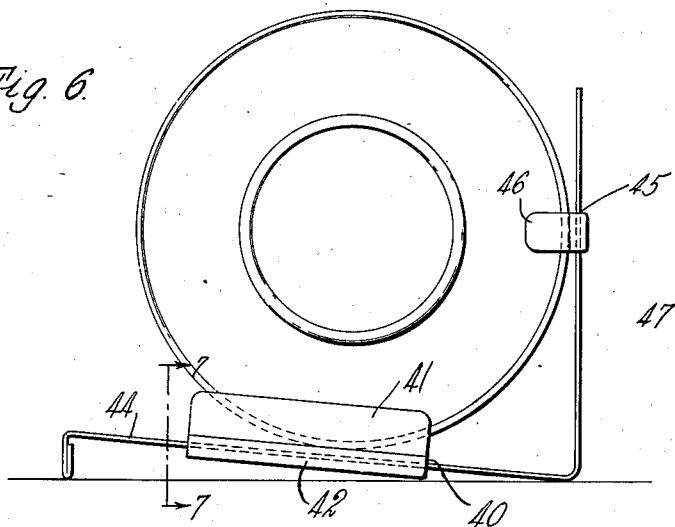
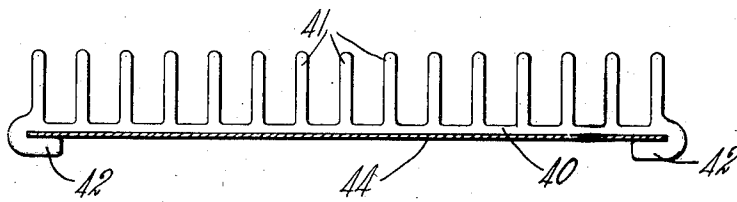
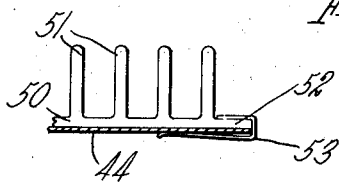


Fig. 7.

Fig. 8.



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DISH RACK

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10 Claims. (Cl. 211—41)

This invention relates to a dish rack for supporting and storing dishes when not in use.

The storage of dishes, such as plates, saucers, soup plates and other relatively shallow dishes of this general character, in the usual manner in stacks results in considerable inconvenience, as when it is desired to remove a dish from the lower part of a stack, all the dishes above must first be removed. Also in practice it has been found that, owing to the presence of a more or less rough bead or rim upon the bottoms of many dishes, the upper surfaces of the dishes engaged by such roughened parts become marred or dull as the result of minute scratches. This effect will even take place when dishes are not used for long periods of time, due to the vibration of houses or buildings from the passing of trains, trucks and other causes acting to shift the dishes slightly one upon another.

Some objects of this invention are to provide a novel and desirable dish rack on which dishes of the character stated may be supported on edge in compact or closely spaced but out-of-contact relation; upon which dishes may be placed or from which they may be removed with facility and without danger of breaking the edges of dishes, due to binding or sudden or too forcible contact; upon which dishes may be placed on or removed without objectionable noise due to engagement of the dishes therewith; in which the edges of the dishes engage with a resilient cushion and in which the marginal or edge portions of the dishes are engaged and the dishes separated or spaced by resilient or yielding parts or projections; and in which such yielding parts can flex or be deflected when engaged by dishes the contour of which is greater than the normal space provided for each dish.

Other objects of the invention are to provide a dish rack of compact construction and attractive appearance, which is of light weight and which can be manufactured at low cost; which is readily portable, upon which when placed thereon, the dishes will have a tendency to be retained in proper relation to the rack by an edgewise rolling action as the result of gravity; which can be formed in part of sheet metal; and in which the dishes are prevented from contacting with the metal parts of the rack both when placing them into position and while in supported position on the rack.

Various other objects and advantages of the invention will be apparent from the following description of an embodiment thereof, and the

novel features thereof will be particularly pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a face view of my novel dish rack.

Fig. 2 is an end elevation thereof, on an enlarged scale, showing dishes of varying form and size in position thereon.

Fig. 3 is a fragmentary, vertical section thereof, taken approximately on the line 3—3, Fig. 2.

Fig. 4 is a fragmentary, horizontal section thereof, taken on line 4—4, Fig. 2.

Fig. 5 is a fragmentary, vertical cross section thereof, on a still larger scale, of a portion of a dish rack of slightly modified form.

Fig. 6 is a side elevation of a dish rack of another modified form.

Fig. 7 is a vertical section thereof, on line 7—7, Fig. 6.

Fig. 8 is a similar fragmentary view showing modified means for attaching the resilient strips or sheets to the wall members of the dish rack.

In general, my invention consists in providing two groups or sets A and B of spaced yielding or resilient projections or elements suitably supported or mounted so that such groups of elements are disposed in mutually facing angular relation. Dishes may thus be supported on the dish rack upon edge with a marginal portion of each dish engaging between the elements of one group and another marginal portion engaging between the elements of the other group.

In the embodiment which I have chosen to illustrate my invention, the yielding projections or elements are arranged in the form of parallel ribs, one group A having such projections extending approximately horizontally from the front towards the rear of the rack, and the other group B of such elements comprising a similar series of ribs or elements which are disposed in upright position at the back of the rack. The ribs are spaced similarly to the ribs and are disposed in alinement therewith, thereby providing mutually facing channels or grooves and respectively in which spaced marginal or edge portions of dishes may be inserted so that the dishes may stand upright on edge extending crosswise of the rack.

The projections or ribs and are formed of suitable yielding or resilient material, such as fairly stiff or firm rubber or the like. These parts are maintained in proper, spaced, parallel relation in any suitable way, a practical and convenient one being to form them integrally with or upon a sheet of rubber or material of the same character and texture of that of which

the ribs are formed. For example, the ribs 10 in the construction illustrated are formed on and extend away from a flat sheet of rubber or the like 15, while the ribs 11 are formed on and extend from a corresponding or similar sheet of rubber or material 16.

By forming these parts in this way, the portions of the perimeters or outer edges of the plates or dishes which engage in the channels 12 and 13, rest directly against a soft, yielding cushion or support, while the ribs or projections 10 and 11 forming the channels 12 and 13 respectively are capable, by the character of the material of which they are formed, of being laterally deflected more or less, as shown clearly in Figs. 3 and 4, by the engagement therewith of the curved under faces of the marginal portions of the dishes which are received in the respective channels. That is to say, with relatively shallow dishes, such as plates, as illustrated at 20 in Fig. 3, the ribs of each channel which are adjacent to the under faces of each of the plates will be slightly deflected as shown, thus permitting the plates to be closely arranged in adjacent channels while at the same time being held out of contact with each other by the intervening ribs.

Similarly with relatively deep dishes, such as are indicated at 21 in Figs. 3 and 4, the projections or ribs 10 and 11, while being deflected to a considerably greater extent than in the case just described, nevertheless permit the dishes to be engaged in adjacent channels with the inner portions of the dishes nesting one within the other.

The groups or sets of projections or ribs 10 and 11, and the cushions or sheets 15 and 16 of yielding material on which they are formed or from which they extend, may be supported in the relative angular arrangement described in any suitable manner.

In the construction illustrated in Figs. 1 to 4, the resilient sheet 15 of the group or set A is secured, as by the use of rubber or metal cement, or other adhesive, upon the upper face of a base member 25 which may be conveniently formed of a flat plate of metal, while the sheet 16 of the group B may be similarly attached to an upright or upstanding flat metal plate 26. If desired, the plates 25 and 26 may be formed from a single piece of sheet metal bent at 27 into angular form, thus forming a dihedral upon which the projections 10 and 11 are secured in mutually facing relation.

In order to retain the dishes in proper relation upon the rack and prevent them from rolling along the lower channels 12 out of engagement with or away from the upright channels 13, the front edge of the base plate or member 25 is preferably bent to form a depending flange 28 which is preferably turned upon itself as shown in Fig. 5, and the lower edge of which may rest upon a supporting surface, thus tilting the base member 25 and the group of projections A so that these parts incline rearwardly with the dihedral angle 27 of the rack also resting upon the supporting surface.

By this arrangement any jarring movement or vibrations imparted to the dish rack will act to keep the dishes in proper position on the rack, since any movement imparted to the dishes from such causes will tend to make the dishes roll downwardly along the inclined channels 11 towards the back member of the rack. Thus the

dishes will always be maintained in firm engagement in the upright channels 12.

If desired the upper horizontal edge of the back member 26 may be bent backwardly upon itself, as at 29, to give a more finished appearance to the dish rack.

The sheet metal, of which the supporting portion of the rack is formed, may be suitably finished, and the rubber or material of which the groups A and B are formed can also be made in any desired color so that the finished rack will be of neat and attractive appearance.

If desired, the depending flange 28 at the front edge of the rack may be covered with resilient material as shown in Fig. 2 so as to obviate finishing this front portion with enamel or paint which would be liable to be chipped off in positioning the dishes on the rack.

In said Fig. 2, the resilient material on the base plate 25 is formed or provided with a marginal strip or edge portion 30 which may be carried down over the front face of the flange 28 around the bottom edge and back upon the rear face thereof, where it may be suitably secured by adhesive or by other means.

It will be noted that since the ribs or projections 10 and 11 of the groups A and B are formed of yielding or resilient material they can be made relatively high or can project to a considerable extent to thereby provide relatively deep channels, thus providing a more secure and definite seat or receiving groove for each dish. Also, since the ribs or projections can yield, as stated, the dishes may be positioned in closely spaced relation regardless of their depth, while the edges of the dishes will at all times extend to and rest against the yielding bottom walls of the channels.

Also, by making the ribs or projections of resilient material, breaking of the dishes is avoided when placing them on or taking them from the rack, as might be the case if projections formed of rigid material were used such as metal or wood, since in such case, unless the dishes were very carefully placed or removed, a lateral twisting or turning of the dishes would be liable to result in breaking the edge portions thereof.

A less expensive and somewhat simpler way of mounting the two groups of resilient elements is illustrated in Figs. 6 and 7. In this construction, I provide a somewhat narrower base strip 40 of rubber or the like having spaced yielding ribs or projections 41 preferably formed integrally therewith. This strip 40 is provided at each end with attaching means in the form of integral resilient hook or channel-like portions 42 which are engageable over the opposite end edges of the base member 44. By making the distance between the bottoms of the two opposed channels slightly less than the distance between said end edges of the base member 44, the rubber of the strip will be stretched sufficiently to hold the strip firmly in position. At the same time the construction described permits the strip 40 and its ribs 41 to be adjusted or slid forwardly or rearwardly upon or relatively to the base member, thus affording accommodation for different sizes of dishes, and affords ready means for attaching the strip to or removing the same from the rack. A similar but somewhat narrower flexible rubber strip 45 provided with spaced ribs or projections 46 is adjustably secured upon the upright member 47 of the dish rack, for similarly accommodating dishes of different sizes.

A still less expensive way of providing the adjustable feature of the dish rack is illustrated in

Fig. 8. In this construction, a rubber strip 50 having integral spaced ribs or projections 51, as before, is formed without the integral attaching portions 42 of Figs. 6 and 7, the free end edges 52 of this strip being secured by spring-like metal clips 53 as shown. Obviously, the strips in this case can be adjusted upon the base members and upright members respectively of the dish racks, as in the previously described construction.

In order to meet the possible demand for a still cheaper arrangement, the rubber strips, instead of being attached to a portable metal or other support, as described, may, if desired, be secured as by suction cups, or otherwise, directly to the top face of a shelf and to an adjacent upright wall or surface respectively.

A plate rack constructed as described, is relatively simple, consists of few parts and can be manufactured at low cost. The sheet metal of which the base and back members are formed can be easily and quickly bent into shape, and the rubber or other sheets together with the yielding projections thereon, can be moulded to the desired form and easily applied in the various ways explained. The use of a plate rack having the yielding cushioning sheets and ribs of rubber or the like enables the dishes to be placed upon or removed from the rack with almost no noise, and since the dishes are held out of contact with one another, no rattling or marring of the dishes is possible while they are on the rack.

I claim as my invention:

1. A dish rack comprising an approximately horizontal base member and an upright back member secured together to form a unitary structure, said members having upon their mutually opposed faces spaced projecting elements formed of yielding material between which marginal portions of dishes may be inserted to support them in upright position crosswise of said rack, and from which they can be removed in a substantially horizontal direction, the parts of the dish rack being arranged to cause dishes to be retained by gravity in engagement with said projecting elements of said back member.

2. A dish rack having two groups of spaced, yielding projecting elements, and means for mounting said groups of elements in mutually facing, relatively fixed, angular relation, whereby a dish may be supported on said rack in upright position with a marginal portion thereof engaging between elements of one group and another marginal portion engaging between elements of the other group, said dish rack being unobstructed at the front thereof to permit dishes to be removed therefrom in a substantially horizontal direction, and means for counteracting the tendency of dishes to roll forwardly out of engagement with said projecting elements.

3. A dish rack comprising a flat base member, a flat upright back member connected to the back edge thereof to form a dihedral, a group of spaced resilient projecting elements on each of said members forming mutually facing and aligned channels for receiving the edge portions of dishes placed crosswise of said rack to support them in spaced upright position thereon, and said base member having at its front edge a depending flange engageable with a supporting surface to maintain the base member in a rearwardly inclined position with the dihedral angle of the rack resting upon said surface, whereby the dishes resting in the channels of said base member will have a tendency to roll rearwardly and be maintained in their intended positions en-

gaging in the channels of said back member, and can be removed from said rack by drawing them forward in a substantially horizontal direction.

4. A dish rack formed of a single rectangular piece of sheet metal bent along a straight line between two parallel edges thereof to form a dihedral with a substantially horizontal base member and an upright back member separated by the dihedral angle, and said base member and said back member having thereon mutually facing groups of yielding projections between which edge portions of dishes may be positioned.

5. A dish rack formed of a single rectangular piece of sheet metal bent along a straight line between two parallel edges thereof to form a dihedral with a substantially horizontal base member and an upright back member separated by the dihedral angle, said base member and said back member having thereon mutually facing groups of yielding projections between which edge portions of dishes may be positioned, and said base member having that edge portion thereof which is parallel to the dihedral angle bent to form a depending flange, the edge of which is engageable with a supporting surface to thereby support the base member in a rearwardly inclined position with the dihedral angle also engaging said surface.

6. A dish rack comprising two angularly disposed wall members each having upon the face thereof which is mutually opposed to that of the other member a sheet of resilient material, each sheet having spaced parallel ribs integrally formed thereon and which are disposed in alignment with the ribs on the other sheet, thereby forming channels for the reception of the edge portions of dishes placed in upright position crosswise of said rack, and means for detachably and adjustably securing each sheet of resilient material to its supporting wall member, comprising mutually facing integral channel-like portions at opposed end edges of said sheet which are formed to engage over the adjacent end edges of said wall member and which detachably holds said sheet in place and enables the same to be slid upon said wall member to different operative positions.

7. A dish rack comprising two angularly disposed wall members each having upon the face thereof which is mutually opposed to that of the other member a sheet of resilient material, each sheet having spaced parallel ribs integrally formed thereon and which are disposed in alignment with the ribs on the other sheet, thereby forming channels for the reception of the edge portions of dishes placed in upright position crosswise of said rack, each of said sheets having opposite free edges adjacent and parallel to the end edges of its supporting wall member, and a clip releasably embracing each of said free edges and the corresponding end edge of said wall member for detachably securing said sheet in place and permitting it to be adjusted upon and relatively to said wall member.

8. A dish rack having a rigid substantially upright back member and a substantially horizontal base member and having an open front through which dishes may be inserted and removed in a substantially horizontal direction, and two groups of yielding, spaced, parallel ribs secured to said base and said back, the ribs of one group being approximately in alignment with the ribs of the other group to support dishes with their marginal portions arranged between ribs, at least one of

said groups engaging marginal portions of the dishes at points sufficiently far apart to hold the dishes substantially perpendicularly to said base and back, and means for yieldingly urging said dishes toward engagement with the ribs of said back.

9. A dish rack having a rigid substantially upright back member and a substantially horizontal base member and having an open front through which dishes may be inserted and removed in a substantially horizontal direction, and two groups of yielding, spaced, parallel ribs secured to said base and said back, the ribs of one group being approximately in alinement with the ribs of the other group to support dishes with their marginal portions arranged between ribs, said base having a slight downward inclination toward said back, to counteract the tendency of

dishes to roll out of engagement with the ribs of said back.

10. A dish rack having a rigid substantially upright back member and a substantially horizontal base member and having an open front through which dishes may be inserted and removed in a substantially horizontal direction, and two groups of yielding, spaced, parallel ribs secured to said base and said back, the ribs of one group being approximately in alinement with the ribs of the other group to support dishes with their marginal portions arranged between ribs, and means for adjusting at least one of said groups of ribs relatively to its member in a direction toward and from the other group to accommodate said rack to hold dishes of different sizes.

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