Aug. 6, 1935. M. J. SCHUILING 2,010,203

SUPPORTING RACK

Filed March 3, 1934

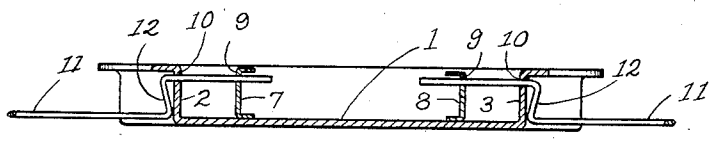


Fig. 1

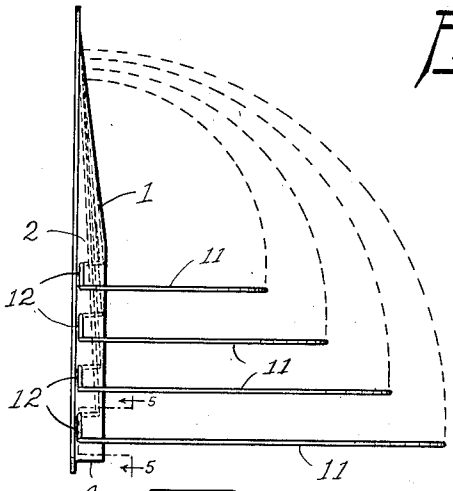


Fig. 2

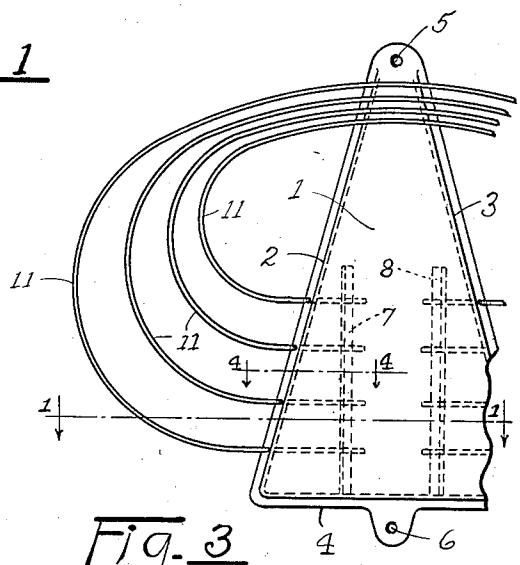


Fig. 3

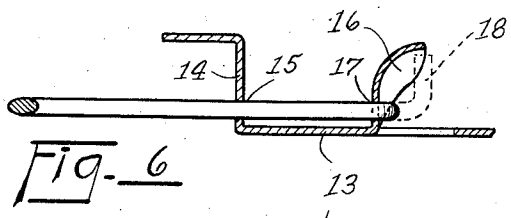


Fig. 6

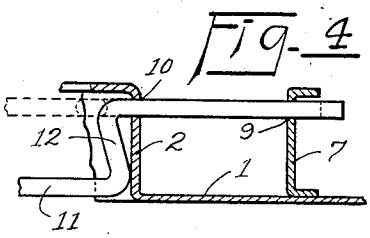


Fig. 4

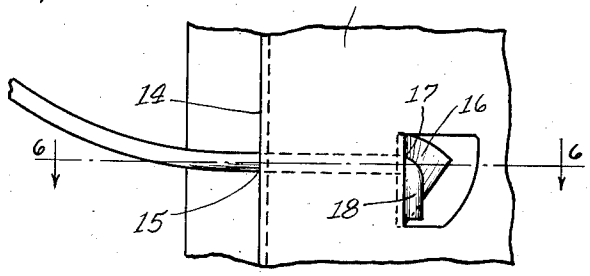


Fig. 7

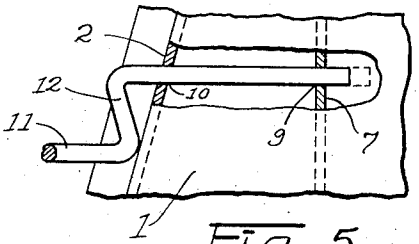


Fig. 5

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SUPPORTING RACK

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9 Claims. (Cl. 211—99)

The present invention relates to supporting racks and more particularly to retracting racks.

The main objects of the invention are to provide a supporting rack which is automatically retracting when the supported weight is removed therefrom; to provide a plurality of nested racks of the character above indicated particularly adapted for use when installed in a kitchen for supporting towels, dish cloths and the like; and, to provide such a device which is saleable as a kitchen accessory, is convenient in use, and is economical to manufacture.

Illustrative embodiments of the invention are shown in the accompanying drawing, wherein:

Figure 1 is a sectional view of the device on line 1—1 of Figure 3;

Figure 2 is a side elevational view thereof showing a plurality of the supporting racks in their open or unfolded position;

Figure 3 is a fragmentary front elevational view of the structure showing the supporting racks in their retracted or folded and nested position;

Figure 4 is an enlarged sectional view on line 4—4 of Figure 3 and showing a portion of one of the supporting racks in unfolded position in full lines and in its retracted position in dotted lines;

Figure 5 is an enlarged fragmentary sectional view on line 5—5 of Figure 2 and showing a portion of one of the supporting racks and means for effecting its retracting movement;

Figure 6 is a sectional view on line 6—6 of Figure 7 of a modified form of the device; and

Figure 7 is a fragmentary front elevational view of the modified form of the structure.

Referring to the drawing in which like parts of the structure are designated by the same numerals in the several views, the embodiment of the device shown in Figures 1 to 5 comprises a triangularly formed back plate 1, preferably of stamped sheet metal, whose opposite sides 2, 3 are laterally flanged rearwardly to form diverging inclined side surfaces and whose lower end 4 is likewise laterally and rearwardly flanged. The upper and lower ends of the plate are each respectively provided with a screw receiving aperture 5, 6 for securing the plate against a flat surface such as the wall of a kitchen.

A pair of spaced channel bar elements 7, 8, likewise of stamped sheet metal, are parallelly disposed and secured to the rear side of the plate as by spot welding and each element is provided with a linear series of spaced and laterally registering apertures 9. Each series of apertures in the element 7, 8 are in lateral registration with a like series of apertures 10 in the laterally flanged and diverging inclined side surfaces 2, 3 of the plate.

A plurality of springable bails or split loops 11, each of progressively differing diameter and preferably of wire, have their opposite ends passing through their respective apertures 9, 10 on opposite sides of the plate and to which each bail is thus pivotally secured. Portions 12 of each of the bails near each of their opposite ends and adjacent the flanged diverging inclined side surfaces 2, 3 of the plate are laterally bent, as best shown in Figures 1, 4 and 5, to contact and ride upon the adjacent inclined and diverging side surfaces of the plate in the downwardly swinging movement of a given bail relative to its back plate.

In manually swinging of any of the several bails downwardly from their position shown in Figure 3 to the position shown in Figure 2, the opposite ends of the bail are caused to spread by the contact of the portions 12 with the diverging inclined surfaces of the flanged sides 2, 3 of the plate and thereby increase the tensional contact between the bent portions of the bail and their respective inclined surfaces. Towels or the like which may thus be hung on the bails and by their weight retain them in a substantially horizontal position, when removed permit the bail to automatically retract to the vertical nesting position shown in Figure 3.

In the embodiment of the invention shown in Figures 6 and 7, the back plate 13 may be rectangularly formed from stamped sheet metal and provided with rearwardly flanged sides 14, each side being provided with a series of vertically spaced and laterally registering bail receiving apertures 15.

The back plate of this modified embodiment of the invention is provided with a series of vertically disposed spaced fins 16 blanked therefrom as best shown in Figure 7 and angularly disposed on opposite sides of the plate in spaced relation to the respective opposite marginal sides of the plate. Each fin is provided with a bail receiving aperture 17 in lateral registration with its cooperating aperture 15 on opposite sides of the plate and the opposite ends 18 of each bail thus pivotally connected to the plate are laterally bent to contact and ride upon the inclined surface of oppositely disposed pairs of fins to effect tensional engagement of the ends of the loop therewith in the swinging movement of the bail relative to the plate. Here again, towels, dish cloths and the like suspended from a given bail in its horizontal

position, when removed permit the bail to automatically retract to a vertical nesting position.

It will thus be seen that the supporting racks of the device automatically retract to nesting vertical position when the supported weight is removed therefrom and that the device is convenient in use and economical to manufacture.

While but several embodiments of this invention have been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. In a device of the class described, a back plate having an inclined surface, and a springable bail pivotally secured at its ends to opposite sides of the plate, a portion of the bail being disposed to contact and ride upon the inclined surface of the plate to increase the tension between the ends of the bail during its swinging movement relative to the plate.

2. In a device of the class described, a back plate having a pair of spaced inclined surfaces, and a springable bail pivotally secured at its ends to opposite sides of the plate, a portion of the bail adjacent both its ends being disposed to contact an inclined surface of the plate to increase the tension between the ends of the bail during its swinging movement relative to the plate.

3. In a device of the class described, a back plate having a pair of spaced inclined surfaces, and a springable bail whose ends are pivotally secured to opposite sides of the plate and in tensional engagement therewith, a portion of the bail adjacent both its ends being disposed to contact and ride upon an inclined surface of the plate to increase the tensional engagement of the ends of the bail with the plate in the swinging movement of the bail relative to the plate.

4. In a device of the class described, a back plate having a pair of spaced inclined surfaces disposed at opposite sides of the plate, and a springable bail whose ends are pivotally secured to opposite sides of the plate and in tensional engagement therewith, a portion of the bail adjacent both its ends being bent to contact and ride upon an inclined surface of the plate to increase the tensional engagement of the ends of the bail with the plate in the swinging movement to the plate.

5. In a device of the class described, a triangularly formed back plate whose opposite sides are laterally flanged to form diverging inclined surfaces, and a springable bail pivotally secured to the opposite flanged sides of the plate, a portion of the bail adjacent each flanged side being bent to contact and ride upon an inclined flanged surface of the plate to spread the ends of the bail and thus increase the tensional contact of the bent portions of the bail with the inclined flanged surfaces in the swinging movement of the bail relative to the plate.

6. A rack of the class described comprising a vertical back plate having an inclined surface, a plurality of work-supporting bails pivotally mounted at their ends on the back plate in vertically spaced relation, a portion of each bail being disposed to contact and ride upon the inclined surface of the plate to increase the tension between the ends of each bail during their individual swinging movements to an outwardly extending horizontal position of use.

7. A rack of the class described comprising a vertical back plate having an inclined surface, a plurality of curved work-supporting bails of progressively different diametrical dimension pivotally mounted at their ends on the back plate, a portion of each bail being disposed to contact and ride upon the inclined surface of the plate to decrease the tension between the ends of each bail during their individual swinging movements to a vertical position.

8. A rack of the class described comprising a vertical back plate having an inclined surface, a plurality of work-supporting bails pivotally mounted at their ends on the back plate, a portion of each bail being disposed to contact and ride upon the inclined surface of the plate to increase the tension between the ends of each bail during their individual swinging movements to an outwardly extending horizontal position of use and spring-pressed by the contacting and riding engagement of the individual bails on the inclined surface to a vertical nesting position.

9. A rack of the class described comprising a vertical back plate having an inclined surface, a work-supporting bail pivotally mounted at its ends on the back plate, a portion of the bail being disposed to contact and ride upon the inclined surface of the plate to increase the tension between the ends of the bail during its swinging movement to an outwardly extending horizontal position of use.

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