

STACKABLE SHELF UNIT

The present invention relates generally to utility shelf arrangements, and more particularly to a stackable shelf unit.

- Shelves, racks, and other like household conveniences are widely available in many forms. Products of this description are often fabricated from metal wire which is appropriately shaped, and which is coated with vinyl or other plastics material. The resultant coated wire product is suitably corrosion and scratch resistant. The coating is available in a variety of colours for a pleasing appearance, and provides a resilient surface suitable for engaging porcelain, decorative laminates such as that sold under the Registered Trade Mark Formica, metal, and other household surfaces without scratching or marring.

- One type of coated wire product which is particularly convenient is a utility shelf which is suitable for use in the kitchen, bathroom, and other areas where shelving accommodates easy storage and use of items found in the home. While some shelves of this type may be hung from a wall, others are adapted to be free-standing, and may be placed in kitchen cabinets, pantries, bathroom cabinets, or the like.

- One desirable feature for free-standing shelf units is the capability of the shelf unit being stackable and supported upon a like shelf unit. In this way, a user may conveniently select the number of shelf units desired for use in a particular location, and readily stack the units so that, in

essence, a multitiered shelf arrangement is provided. This feature of shelf arrangements of this type permits a user to "customize" the shelving units to their individual needs, with addition to or reduction of

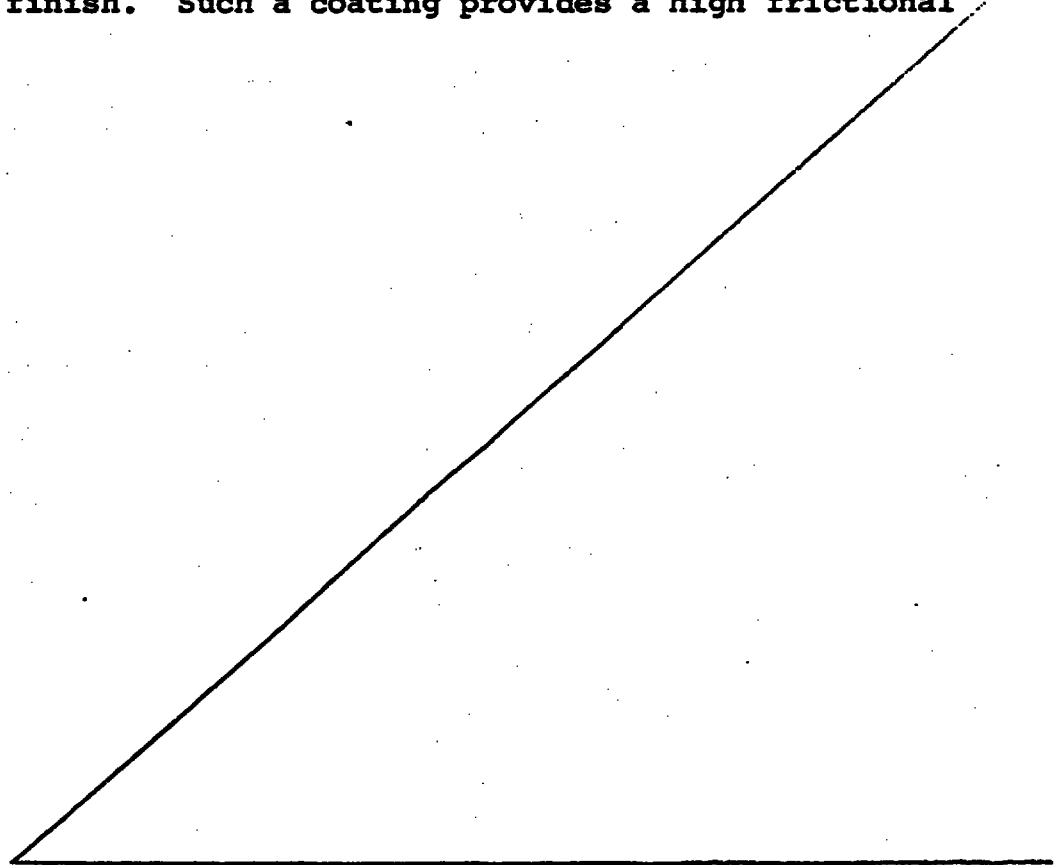
5. the number of shelf units being easily accomplished whenever desired.

- According to the present invention a stackable shelf unit capable of being supported and stacked upon an associated identical shelf unit without the use of
10. fasteners comprises a pair of laterally spaced, generally U-shaped side frame members arranged in parallel relation, each said side frame member comprising a single length of metal wire and each including a horizontal portion and a pair of integral, downwardly
15. depending resiliently flexible legs extending downwardly from respective ends of said horizontal portion at generally right angles; a plurality of spaced apart, laterally extending shelf members affixed to and extending between said horizontal portions of said
20. side frame members for supporting objects, said resilient legs depending freely below said shelf members, the endmost ones of said shelf members extending between respective ends of said horizontal portions in closely spaced relation to said freely depending
25. resilient legs; and releasably lockable stacking means comprising an offset portion of each of said legs; each said offset portion including a horizontal support portion adapted to be supported on said associated shelf unit, and a substantially vertical
30. locking portion depending from said horizontal portion,

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- said horizontal support portion extending longitudinally inwardly of said shelf unit for engagement of said offset portions with the endmost shelf members of said associated shelf unit, and
5. terminating in a free end, said stacking means providing resiliently biased, releasable engagement of each said offset portion with said associated shelf unit by the resilience of said legs for support and stacking of the shelf unit on said like
10. shelf unit.

- In a preferred embodiment the side frame members and shelf members comprise plastics-coated wire e.g. vinyl coated wire. This provides a shelf unit which is corrosion resistant and has a pleasing resilient
15. finish. Such a coating provides a high frictional



interengagement of like shelf units to help ensure secure stacking and stability. The shelf members are preferably joined to the side frame members, such as by welding, before the entire assembly is coated

5. with vinyl or other suitable plastics material.

The invention may be carried into practice in various ways but a stackable shelf unit embodying the invention will now be described by way of example with reference to the accompanying drawing. The

10. single figure is a perspective view of the shelf unit shown stacked upon a like shelf unit (shown in phantom).

With reference now to the drawing there is illustrated a stackable shelf unit 10. Preferably,

15. the shelf unit 10 is fabricated from so-called coated wire. Materials of this description consist of metal wire having various shapes and sizes which is formed to the desired configuration. The entire arrangement is then coated with vinyl or other suitable plastics

20. material so that the entire assembly has a pleasing appearance, resists corrosion and scratching, and provides a resilient surface which avoids scratching or marring of surfaces upon which the shelf unit is positioned. Additionally, the resilient nature of the

25. plastics coating affords a highly frictional inter-engagement of the shelf unit 10 with a like shelf unit when stacked thereon as will be described.

The shelf unit 10 includes a pair of laterally spaced side frame members 12. Each side frame member

30. 12 has a generally inverted U-shaped configuration,

- and includes a generally horizontal shelf portion 14, and a pair of integral, downwardly depending leg portions 16. Each side frame member 12 is fabricated from a single length of metal wire bent or otherwise
5. formed to the desired configuration.

- In order to provide for support of objects on the shelf unit 10, it further includes a plurality of laterally extending spaced shelf or support members 18 extending between and connected with the shelf
10. portions 14 of the side frame members 12. Each shelf member 18 comprises a single length of metal wire which is suitably affixed to each side frame 12 such as by welding, before the entire shelf unit is coated with plastics material.

15. Each leg portion 16 of the side frame members 12 is provided with means for engaging portions of a like shelf unit. Thus, each leg portion includes an offset portion 20 having a generally Z-shaped configuration. As clearly shown, each offset portion
20. 20 forms a shoulder and is adapted to engage and fit against a like shelf unit 22 (shown in phantom) which includes side frame members 24 and shelf members 26. The offset portions 20 extend longitudinally inwardly of the shelf unit 10 so that the offset
25. portions readily fit against and are supported upon the shelf members 26 of the shelf unit 22.

As noted above, the shelf unit 10 is preferably fabricated from plastics coated metal wire. In this regard, the resilient nature of the plastics coating provides a highly frictional engagement of each

5. offset portion 20 with the like shelf unit shown in the drawing. In this way, the stability of the stacked shelf units is enhanced.

It will be appreciated that the frictional engagement of the offset portion of each leg 16 of the shelf unit with a like shelf unit could be further enhanced by providing a biased engagement of the two shelf units. For example, if each leg portion 16

10. of the shelf unit 10 shown depended straight downwardly, and like shelf unit 22 is similar to shelf unit 10, it would be necessary for leg portions 16 to be urged or biased inwardly so that the offset portions 20 of each leg 16 clear the side frame members 24 of the like shelf unit 22, and properly seat upon the portion of the like shelf unit 22 they are adapted to engage (such as the shelf members 26 and the portions of the side frame member 24 as shown). Due to the resilient nature of the preferred coated wire construction of the shelf unit, flexing of the shelf unit in this manner may be easily accomplished, with the resilient nature causing the leg portions 16 to be biased outwardly thus enhancing engagement with the like shelf unit 22. Similarly, the leg portions 16 could be formed so as to extend slightly outwardly of the shelf unit 10 (thus having a somewhat splayed configuration) so that after they are flexed inwardly

to accommodate stacking of the shelf unit 10 on a like shelf unit, the resilient nature of the unit urges the leg portions outwardly into engagement with the like shelf unit for added stability in stacking of the

5. shelf units.

It should be noted that while the present description has discussed the stackable nature of the shelf unit 10 with regard to "a like shelf unit", the like shelf unit may be other than a shelf unit

10. substantially similar to shelf unit 10. For instance, the shelf unit 10 could easily be stacked upon a shelf unit having a like construction, such as where side frame members of the like shelf unit are similarly spaced but are longer than the side frame
15. members 12 of the shelf unit 10.

Thus, a simple, efficient stackable shelf unit is described, the unit offering convenience in assembling a multitiered shelf arrangement.

CLAIMS

1. A stackable shelf unit capable of being supported and stacked upon an associated identical shelf unit without the use of fasteners, comprising:

a pair of laterally spaced, generally U-shaped side frame members arranged in parallel relation, each said side frame member comprising a single length of metal wire and each including a horizontal portion and a pair of integral, downwardly depending resiliently flexible legs extending downwardly from respective ends of said horizontal portion at generally right angles;

a plurality of spaced apart, laterally extending shelf members affixed to and extending between said horizontal portions of said side frame members for supporting objects, said resilient legs depending freely below said shelf members, the endmost ones of said shelf members extending between respective ends of said horizontal portions in closely spaced relation to said freely depending resilient legs; and

releasably lockable stacking means comprising an offset portion of each of said legs; each said offset portion including a horizontal support portion adapted to be supported on said associated shelf unit, and a substantially vertical locking portion depending from said horizontal portion, said horizontal support portion extending longitudinally inwardly of said shelf unit for engagement of said offset portions with the endmost shelf members of said associated shelf unit, and terminating in a free end,

said stacking means providing resiliently biased, releasable engagement of each said offset portion with said associated shelf unit by the resilience of said legs for support and stacking of the shelf unit on said like shelf unit.

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2. A stackable shelf unit as claimed in Claim 1 in which the side frame members and shelf members comprise plastics-coated wire.

3. A stackable shelf unit substantially as described herein with reference to the accompanying drawings.

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