United States Patent [19]

Brand

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[54] **MODULAR DISPLAY STAND**

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[73] Assignee: **Oberly & Newell, Inc.,** New York, N.Y.

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[52] **U.S. Cl.** **108/94,** 108/101, 211/129

[51] **Int. Cl.** **A47b 57/00**

[58] **Field of Search**... 108/94, 95, 101; 211/129, 211/144, 165, 163, 148, 177, 182

[56] **References Cited**

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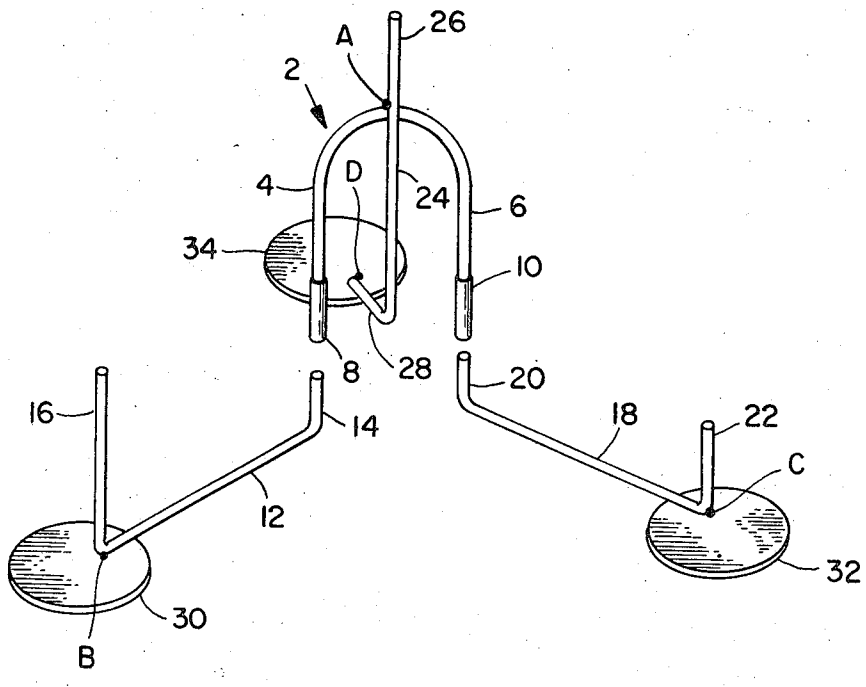
Primary Examiner—James C. Mitchell

Attorney, Agent, or Firm—Anthony F. Cuoco

[57] **ABSTRACT**

A modular display stand includes a plurality of trays supported at various levels so as to be eccentrically rotatable and arcuately displaceable for imparting a high degree of spacing flexibility to the stand.

12 Claims, 10 Drawing Figures



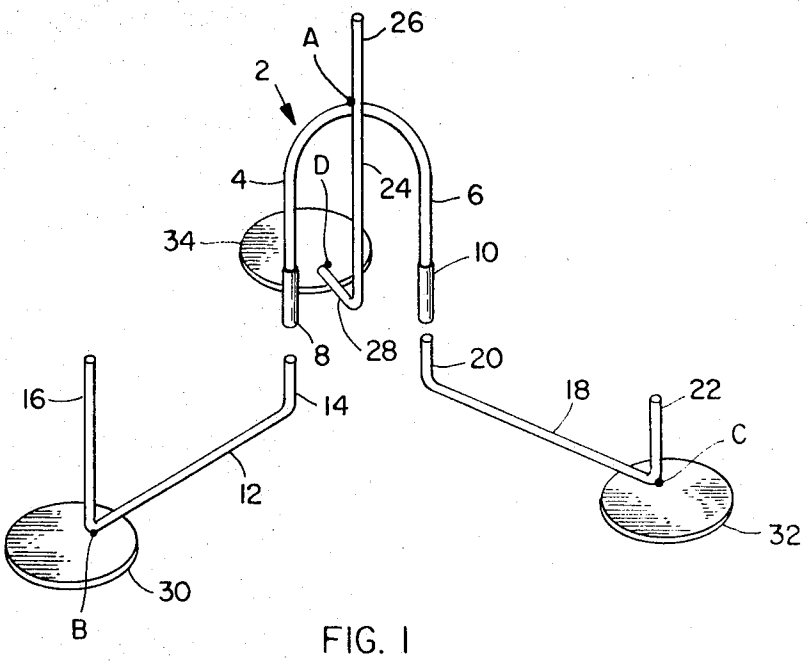

A
26
2
4
D
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34
10
8
28
20
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22
C
16
14
12
32
30
B

FIG. 1

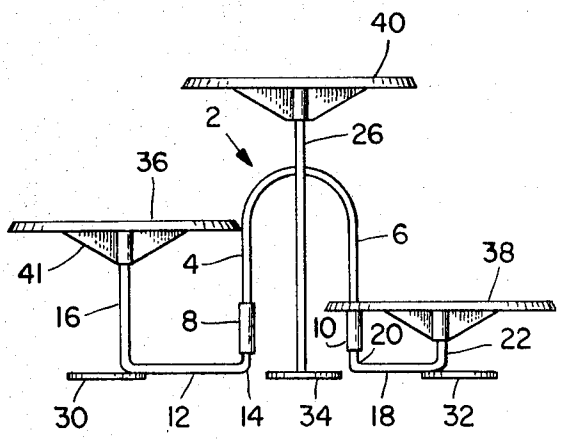

40
2
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38
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FIG. 3

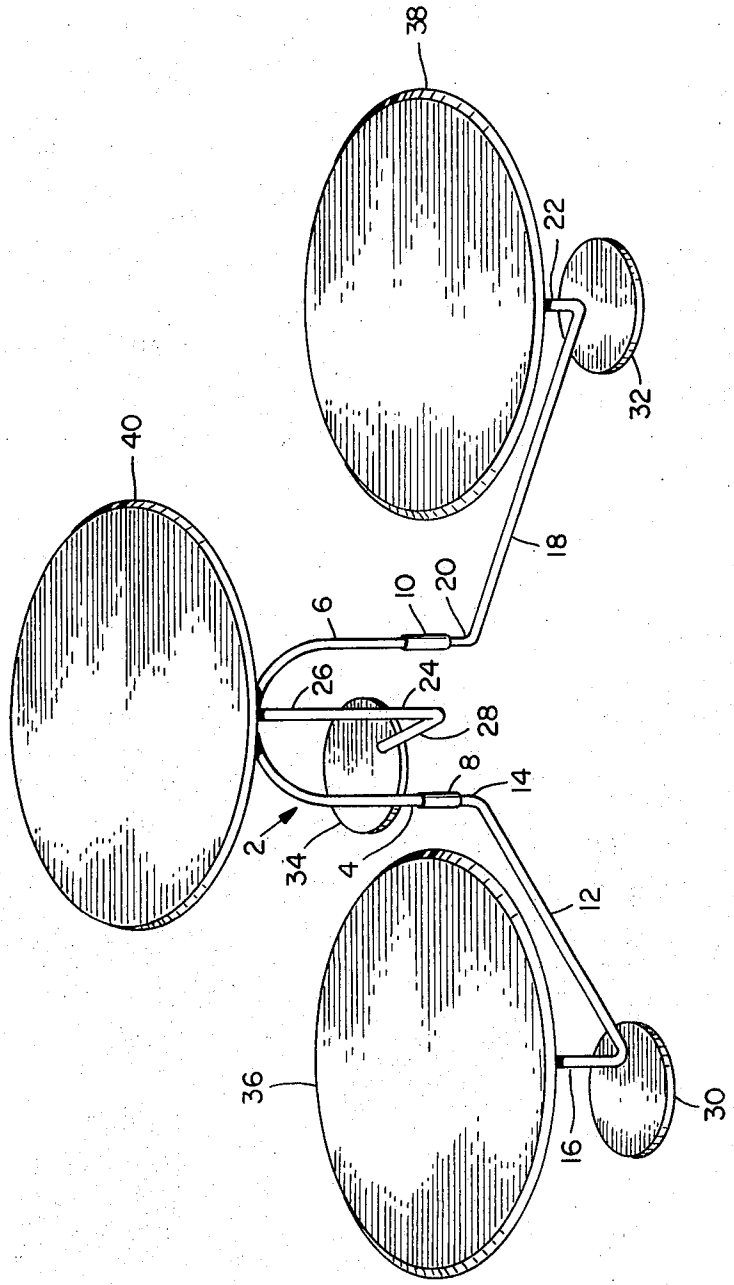


FIG. 2

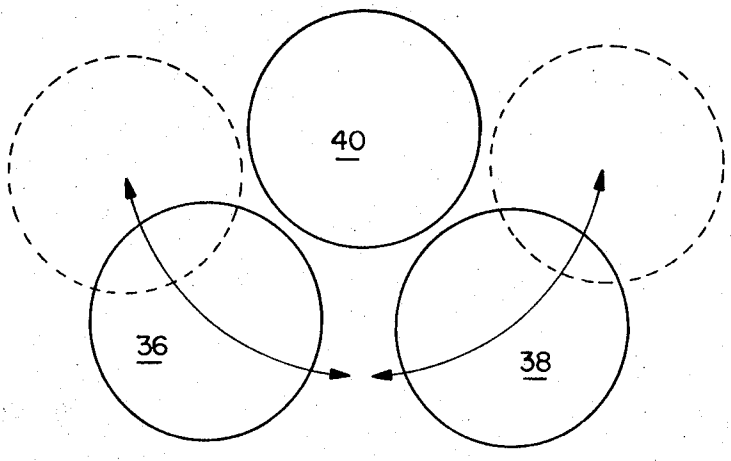


FIG. 4

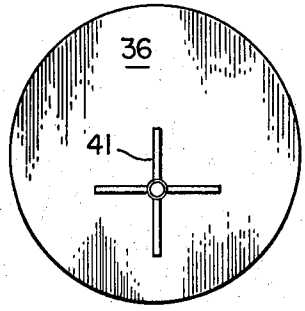


FIG. 5

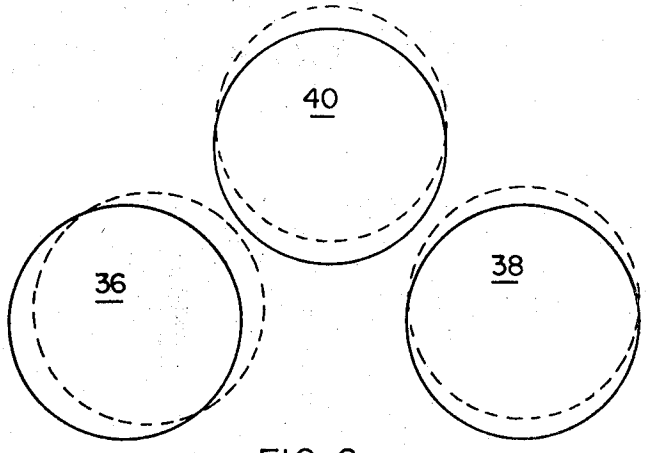


FIG. 6

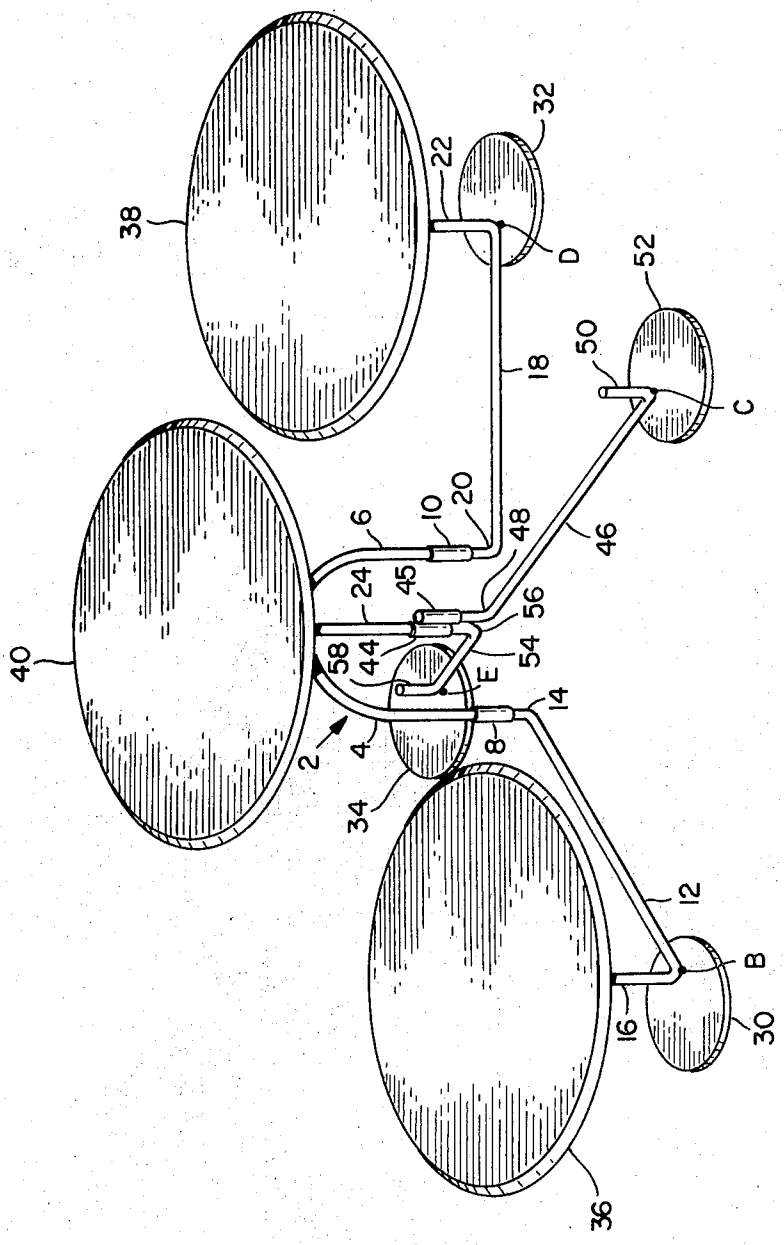

38
22
32
D
52
50
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C
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48
46
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58
44
54
E
14
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34
12
B
16
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36

FIG. 7

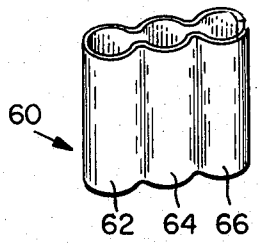


FIG. 10

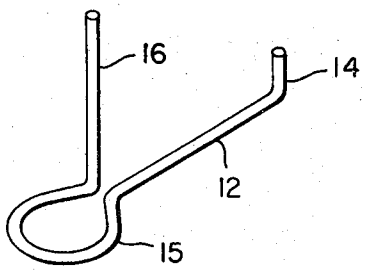


FIG. 8

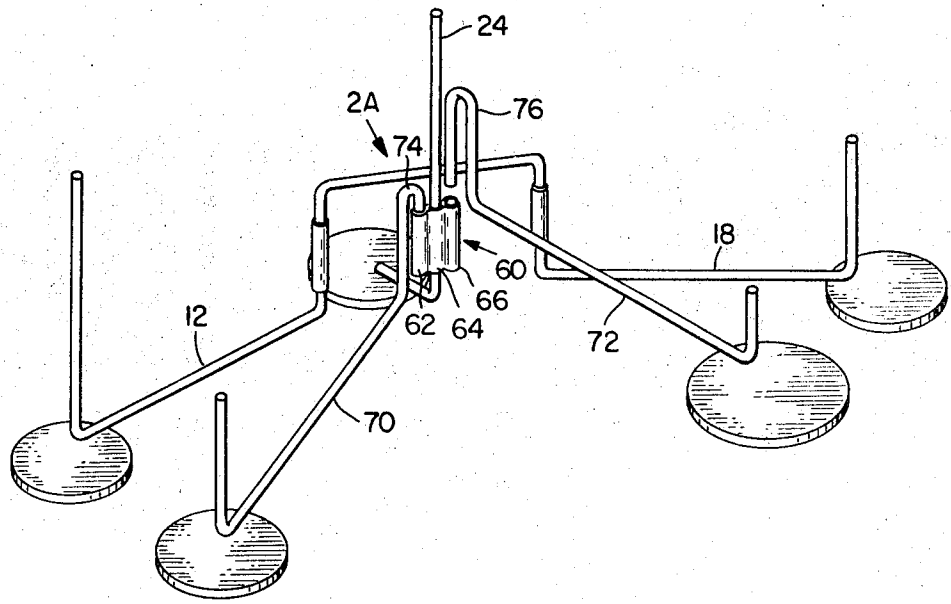


FIG. 9

MODULAR DISPLAY STAND

BACKGROUND OF THE INVENTION

This invention relates generally to stands such as may be used in retail establishments for displaying merchandise and the like and, particularly, to display stands of modular construction. More particularly, this invention relates to display stands of the type described which have a high degree of spacing flexibility.

DESCRIPTION OF THE PRIOR ART

Stands of the type including trays for displaying merchandise and the like are well known in the art. Prior to the present invention, however, there has not been a stand having the degree of spacing flexibility required for accomodating various display requirements and a wide variety of articles to be displayed. Moreover, the modular feature of the present invention makes it adaptable to a variety of display and/or floor areas and it is thus advantageous over display stands heretofore availabe.

SUMMARY OF THE INVENTION

This invention contemplates a modular display stand including a centrally disposed bracket and a plurality of arms extending radially from the bracket and supported thereby so as to be arcuately displaceable. The arms and bracket support eccentrically rotatable trays and carry means for supporting the stand on the floor or counter.

One object of this invention is to provide a merchandise display stand which has a high degree of spacing flexibility.

Another object of this invention is to support display trays on the stand so that they are eccentrically rotatable for increasing spacing flexibility.

Another object of this invention is to support the eccentrically rotatable display trays so that they are arcuately displaceable for further increasing spacing flexibility.

Another object of this invention is to provide a display stand of the type described which is of a modular nature and thereby adaptable to a variety of display requirements and/or floor and counter areas.

These and other objects and features of the invention will become more apparent from the following detailed description thereof with reference to the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view showing one embodiment of the invention.

FIG. 2 is a pictorial representation of a display stand assembled according to the exploded view of FIG. 1.

FIG. 3 is a side view of the display stand shown pictorially in FIG. 2.

FIG. 4 is a diagrammatic representation illustrating a feature of the invention whereby display trays are arcuately displaceable.

FIG. 5 is a bottom view of a display tray according to the invention and showing an eccentric hub whereby the tray is eccentrically rotatable.

FIG. 6 is a diagrammatic representation illustrating typical positions assumed by the trays which are eccentrically rotatable according to FIG. 5.

FIG. 7 is a pictorial representation of another embodiment of the invention and best showing the modular feature of thereof.

FIG. 8 is a pictorial representation showing alternate stand supporting means which may be used with the invention.

FIG. 9 is a pictorial representation of still another embodiment of the invention.

FIG. 10 is a pictorial representation of an arm supporting clip used in the embodiment of the invention shown in FIG. 9.

DESCRIPTION OF THE INVENTION

FIG. 1 shows a centrally disposed inverted U-shaped bracket 2 which may be a bent, metallic rod, wire or tube having a pair of downwardly extending substantially vertical legs 4 and 6. Leg 4 terminates in a sleeve 8 and leg 6 terminates in a sleeve 10.

A substantially horizontally disposed arm 12, which may be a bent metallic rod, wire or tube, has an upwardly extending end 14 and a longer upwardly extending end 16. Another like substantially horizontally disposed arm 18 has an upwardly extending end 20 and a longer upwardly extending end 22. While ends 14 and 20 arems 12 and 18, respectively, may be of the same length, ends 16 and 22 are best of different lengths to support display trays at different levels as shown in FIGS. 2 and 3. Ends 14, 16 and 20, 22 are substantially normal to the respective arms.

When the display stand of the invention is assembled (FIG. 2), arms 12 and 18 extend radially from bracket 2. End 14 of arm 12 is, in effect, hournaled in sleeve 8 and end 20 of arm 18 is journaled in sleeve 10 so that trays 36 and 38 carried by arm ends 16 and 22, respectively, are arcuately displaceable as will be hereinafter referred to.

A leg 24 which may be a bent metallic rod, wire, or tube, is secured to bracket 2 by suitable means which may be, for example, a weld at a point A (FIG. 1). Leg 24 is disposed so as to extend intermediate bracket legs 4 and 6 and substantially parallel thereto. In the embodiment of the invention shown in FIGS. 1, 2 and 3, leg 24 has an end 26 which extends substantially above legs 4 and 6 and another end 28 which is normal to the leg and hence substantially horizontal.

A disc or pad 30 which may be, for purposes of illustration, of metal is secured to arm 12 by suitable means such as a weld at a point B (FIG. 1) where the arm is bent to form end 16. Similarly, a pad 32 is welded to arm 18 at a point C where the arm is bent to form end 22. A pad 34 is welded to end 28 of leg 24 at a point D. The pads are eccentrically secured to the respective arms and leg as shown in FIGS. 1, 2 and 3 and support the display stand on the floor or on a counter top as will now be understood.

While pads 30, 32 and 34 impart stability to the display stand of the invention, this function can be achieved by other means as well. Thus, with reference to FIG. 8, arm 12 having end 14 may be suitably bent to form a loop 15, and which loop terminates at end 16. Loop 15 substantially normal to ends 14 and 16 for supporting the stand on the floor or countertop. Although, for purposes of illustration, this feature of the invention has been described with reference to arm 12, it will now be understood that the other arms may have the same configuration as well.

As shown in FIG. 2, end 16 of arm 12 supports display tray 36, which may be of a suitable plastic. End 22 of arm 18 supports tray 38 and end 26 of leg 24 supports a tray 40. All of the trays are alike and supported at different levels, with tray 36 being shown for purposes of illustration in FIG. 5.

Thus, the trays each carry on the bottom thereof a hub such as the hub 41 in FIG. 5, with the arm and leg ends 16, 22 and 26 (FIGS., 1, 2, 3) being journaled in the respective tray hubs. The hubs are eccentrically disposed so that the rotation of the trays to positions such as indicated by the broken lines in FIG. 6 imparts the advantageous feature of tray spacing flexibility to the invention.

As heretofore noted with reference to FIGS. 1, 2 and 3, end 16 of arm 12 is journaled in sleeve 8 and end 20 of arm 18 is journaled in sleeve 10. Additional spacing flexibility is thus provided since the arms are arcuately displaceable and the trays carried thereby may assume positions such as indicated by the arrows and broken lines in FIG. 4.

It will be seen that arms 12 and 18 are identical, except for the lengths of ends 16 and 22. Thus, the arms are readily interchangeable, with end 20 of arm 18 fitting into sleeve 8 and end 14 of arm 12 fitting into sleeve 10. In marketing the invention, sets of interchangeable arms may be provided. The arms will have one end the length of ends 14 and 20 and the other ends of the arms will vary in length to support trays as heretofore noted to impart additional spacing flexibility to the invention.

The modular feature of the invention is best illustrated in the embodiment of the invention shown in FIG. 7. Thus, leg 24, rather than terminating in end 28 may terminate in sleeve 44 similar to sleeves 8 and 10 and another like sleeve 45 may be affixed to the side of sleeve 44. A substantially horizontally disposed arm 46, which may be a bent metallic rod, wire or tube, has a substantially normal upwardly extending end 48 which may be the same length as ends 14 and 20 of arms 12 and 18, respectively. Arm 46 has another like end 50 which may be a different length than the corresponding ends of arms 12 and 18 so as to support an eccentrically rotatable tray (not shown) such as the trays 36, 38 and 40, but at a different level than said trays. End 48 of arm 46 is journaled in sleeve 45 so that arm 46 extends radially from bracket 2 and is arcuately displaceable as are arms 12 and 18. Arm 46 similarly carries a supporting pad 52 such as the pads 30, 32 and 34, and which pad 52 may be welded at a point D.

As further shown in FIG. 7, another like horizontally disposed arm 54 has substantially normal upwardly extending ends 56 and 58. End 56 is journaled in sleeve 44 so that arm 54 extends radially from bracket 2 and is arcuately displaceable and end 58 supports another eccentrically rotatable tray (not shown), but at a different level than the other trays. In this event, pad 34 is welded to arm 54 at a point E as are the other pads welded to the other arms. It will now be seen that arms and trays may be easily added to or removed from the stand to accomodate varying space and display requirements, as the case may be.

Another embodiment of the invention is shown in FIG. 9. Thus, the figure shows the basic three tier display stand including a bracket 2A, leg 24 and arms 12 and 18 as described with reference to FIG. 2. Bracket 2A is similar to bracket 2 heretofore described with reference to FIG. 2, except that its legs are formed at right angles for manufacturing purposes.

A clip 60 has a configuration as shown in FIG. 10. Clip 60 may be of metal which has been crimped to form three sleeves 62, 64 and 66 which are open at both ends. Clip 60 is snapped on leg 24 so that sleeve 64 embraces the leg after which the sleeve is suitably welded to said leg.

Sleeves 62 and 66 are the same as sleeves 8 and 10 except that they are open at both the top and bottom ends and can effectively receive arms in the bottom ends such as arms 12 and 18. However to facilitate handling of the assembled stand so that the arms do not fall loose when the stand is lifted, arms of a different configuration may be provided. Thus, arms 70 and 72 are provided with hooked ends 74 and 76, respectively. Hooked end 74 of arm 70 is journaled in the top end of sleeve 62 and hooked end 76 of arm 72 is journaled in the top end of sleeve 66 as shown in the figure. Arms 70 and 72 may carry eccentrically rotatable trays such as the trays 36, 38 and 40 as shown in FIG. 2.

Although clip 60 has been described as having two arm journaling sleeves, it will be understood that the clip may have more or less sleeves, the same being within the scope of the invention.

It will be seen from the aforegoing description of the invention that the objects heretofore set forth have been met. The display stand has a high degree of spacing flexibility in that the plurality of trays are eccentrically rotatable and may be arcuately displaceable.

The modular feature of the display stand, whereby arms and trays are conveniently added or removed, adds to its commercial value and utility. In this connection it is to be noted that a display stand according to the invention may be easily disassembled to facilitate shipping and storage with attendant cost savings being thereupon realized.

Although several embodiments of the invention have been illustrated and described in detail, it is to be expressly understood that the invention is not limited thereto. Various changes may be made in the design and arrangement of the parts without departing from the spirit and scope of the invention as the same will now be understood by those skilled in the art.

What is claimed is:

1. A display stand comprising:
a centrally disposed bracket extending substantially vertically and having a plurality of legs;
a plurality of substantially horizontally disposed arms extending radially from the bracket;
means associated with the bracket and supporting the arms, said means including sleeves at the ends of the legs and each of the arms having an end substantially normal thereto and journaled in a sleeve so that the arm is arcuately displaceable;
a plurality of trays;
means associated with each of the trays for supporting a tray on an arm; and
means arranged with the arms for supporting the stand.

2. A display stand comprising:
a centrally disposed bracket extending substantially vertically and having first and second substantially parallel legs disposed in spaced relation;
a plurality of substantially horizontal arms extending radially from the bracket;

means associated with the bracket and supporting the arms including sleeves at the ends of the first and second legs;

a plurality of trays;

means associated with each of the trays for supporting a tray on an arm so that the tray is eccentrically rotatable;

a first of the plurality of arms having an end substantially normal thereto which is journaled in the sleeve of the first leg so that said arm is arcuately displaceable and another substantially normal end for supporting a first eccentrically rotatable tray at one level;

a second of the plurality of arms having an end substantially normal thereto which is journaled the sleeve of the second leg so that said arm is arcuately displaceable and another substantially normal end for supporting another eccentrically rotatable tray at another level; and

means arranged with the arms for supporting the stand.

3. A display stand as described by claim **2**, wherein:

the bracket having a third leg supported between the first and second legs and having one end extending above said legs; and

the one end of the third leg supporting a third eccentrically rotatable tray at yet another level.

4. A display stand as described by claim **3**, wherein:

the other end of the third leg has means arranged therewith for supporting the stand.

5. A display stand as described by claim **3**, wherein:

the other end of the third leg terminates in a sleeve;

a third of the plurality of arms has a substantially normal end journaled in the sleeve of the third leg so that said arm is arcuately displaceable and another substantially normal end for supporting a fourth eccentrically rotatable tray at still another level.

6. A display stand as described by claim **5**, including:

a sleeve affixed to the side of the sleeve of the third leg;

a fourth of the plurality of arms having a substantially normal end journaled in the affixed sleeve so that said arm is arcuately displaceable and another substantially normal end for supporting a fifth eccentrically rotatable tray at a level other than the levels of the trays supported by the first, second and third arms and the third leg.

7. A display stand comprising:

a centrally disposed bracket;

the bracket extends substantially vertically and includes first, second and third legs;

a plurality of arms extending radially from the bracket;

the arms are substantially horizontal;

means associated with the bracket for supporting the arms so that the arms are arcuately displaceable;

the first and second legs supporting arcuately displaceable arms;

a plurality of trays;

means associated with each of the trays for supporting a tray on an arm;

the trays supported on said arms are supported at different levels;

the third leg has an end extending above the first and second legs and supports a tray at a level other than the levels of the trays supported by said arms; and

means arranged with the arms for supporting the stand.

8. A display stand as described by claim **4**, including:

a clip secured to the third leg and having a centrally disposed sleeve which surrounds said leg and at least first and second sleeves adjacent the centrally disposed sleeve;

a third arm of the plurality of arms having a substantially normal end journaled in the first sleeve so that said arm is arcuately displaceable and another substantially normal end for supporting a fourth eccentrically rotatable tray at still another level; and

a fourth arm of the plurality of arms having a substantially normal end journaled in the second sleeve so that said arm is arcuately displaceable and another substantially normal end for supporting a fifth eccentrically rotatable tray at a level different than the other levels.

9. A display stand as described by claim **8**, wherein:

the sleeves at the ends of the first and second legs and the first and second sleeves have open bottom ends; and

the ends of the first, second, third and fourth arms which are journaled in the sleeves are journaled in the open bottom ends.

10. A display stand as described by claim **8**, wherein:

the first and second sleeves have open top ends; and

the ends of the third and fourth arms which are journaled in the first and second sleeves are hook-shaped and hook into said top ends.

11. A display stand as described by claim **4**, wherein:

the means arranged with the other end of the third leg and the means arranged with the arms for supporting the stand include pads secured to said leg and arms.

12. A display stand as described by claim **4**, wherein:

the means arranged with the other end of the third leg and the means arranged with the arms for supporting the stand include loops at the other end of the third leg and at the ends of said arms and integral therewith.

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