Aug. 29, 1967 W. K. HARE ETAL 3,338,466

STACKING RECEPTACLE

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FIG. 1

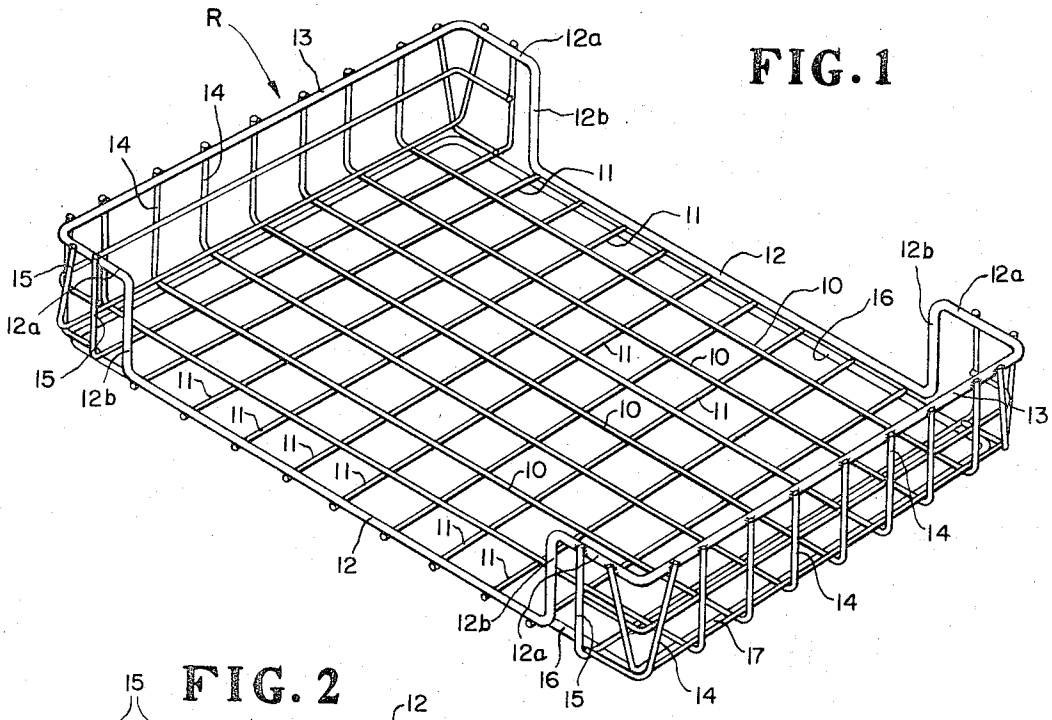


FIG. 2

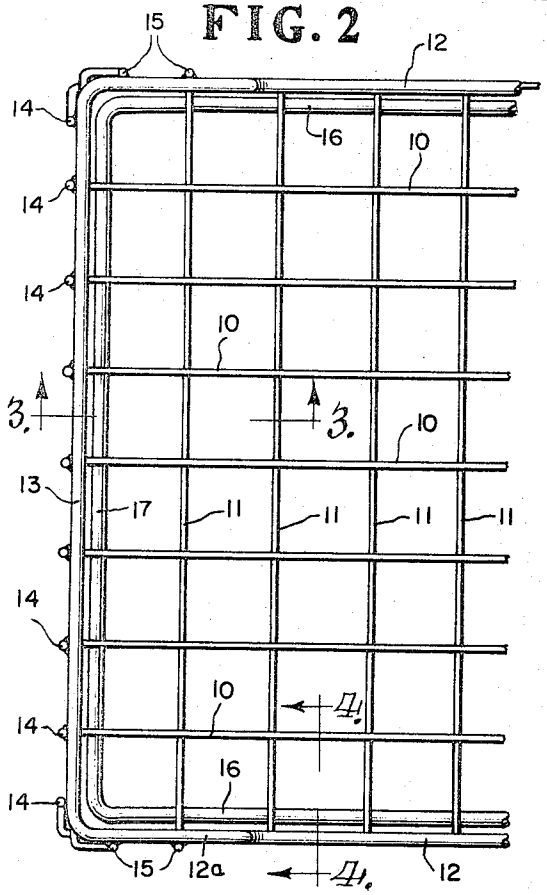
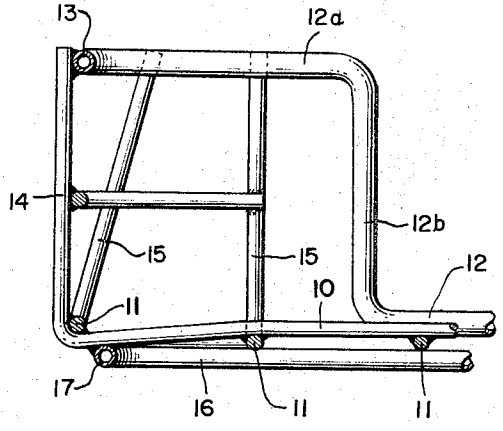


FIG. 3



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FIG. 4

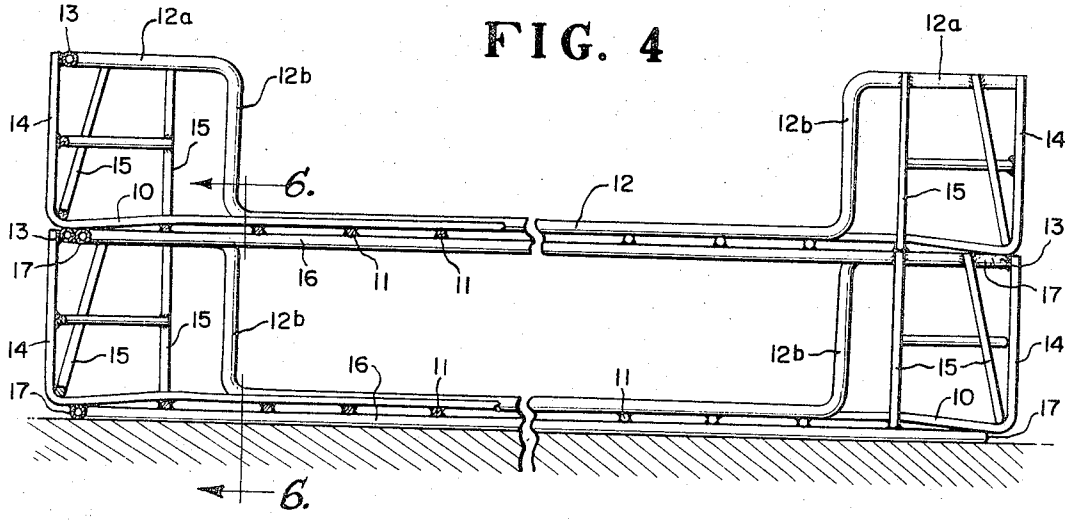


FIG. 5

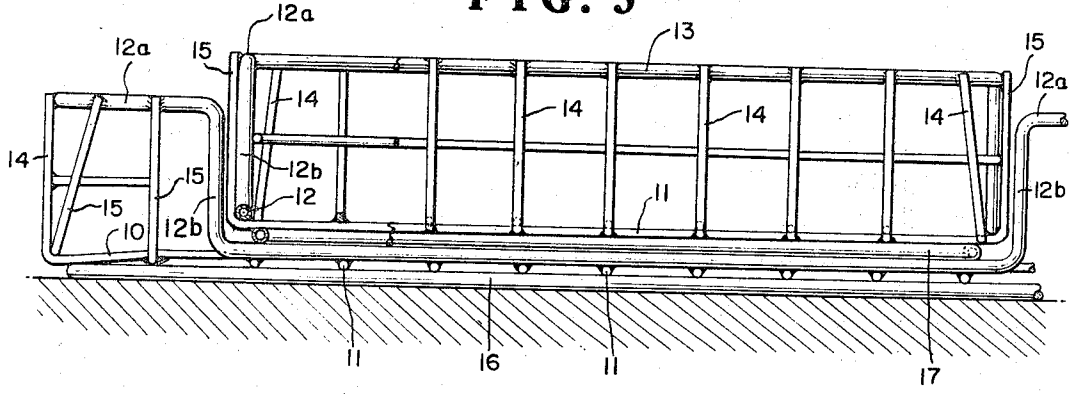


FIG. 6

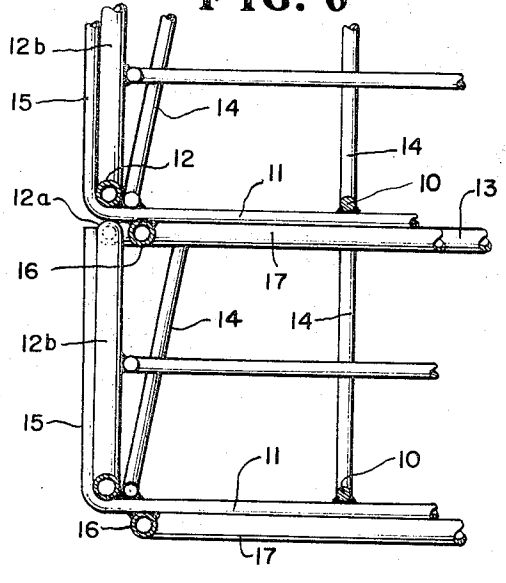
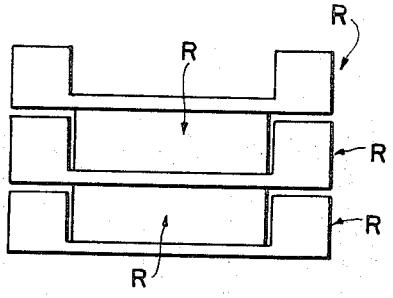


FIG. 7



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United States Patent Office 3,338,466 Patented Aug. 29, 1967

3,338,466

STACKING RECEPTACLE

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Filed Nov. 12, 1964, Ser. No. 410,668
9 Claims. (Cl. 220—97)

ABSTRACT OF THE DISCLOSURE

A container of wire rod construction having end wall sections of uniform height with means for stacking with like containers and having a central section of uniform lesser height to permit nesting with a like second container when in centered criss-cross relation to said second container.

This invention relates to receptacles and has particular reference to receptacles which may be stacked vertically without impairing the load carrying capacity of said receptacles while in such stacked relation.

This invention also contemplates a receptacle which provides access to the interior thereof while in such stacked relation as to enable a third like receptacle to occupy a position in criss-cross interleaved relation to a first and second like receptacle while the latter are in stacked relation.

With the foregoing and other objects in view which will appear and be understood in the course of the following description and claims, the invention consists in the novel construction and in the adaptation and combination of parts hereinafter described and claimed.

FIG. 1 is a perspective view of a receptacle in accordance with a preferred embodiment of the present invention.

FIG. 2 is an enlarged fragmentary top plan view thereof.

FIG. 3 is a fragmentary vertical section taken along line 3—3 of FIG. 2.

FIG. 4 is a side elevational view of a pair of receptacles according to this invention as they appear when in stacked relation.

FIG. 5 is a similar view illustrating a receptacle in criss-cross relation to an underlying receptacle.

FIG. 6 is a fragmentary enlarged vertical section taken along line 6—6 of FIG. 4.

FIG. 7 is a diagrammatic illustration of the manner in which receptacles embodying the present invention are adapted to occupy a position in criss-cross interleaved relation to a pair of similar receptacles in stacked relation.

Referring to the drawings and particularly FIG. 1, a receptacle R representing an embodiment of the present invention is shown as having a bottom wall defined by a series of spaced apart parallel wires **10** and a series of wires **11** arranged along spaced apart parallel lines in criss-cross relation to wires **10** within the borders of an endless generally rectangular open framework of rod-like construction so as to provide a pair of side frame members **12** in parallel relation to wires **10** and a pair of end frame members **13** in parallel relation to wires **11**. The end frame members **13** provide an upper rim to which uniformly dimensioned upturned ends **14** of the wires **10** have welded connection. The side frame members **12** are offset downwardly to define a depressed or lower rim portion having a dimension measured lengthwise of the distance between said end frame members **13** slightly greater than the dimension of the receptacle

measured lengthwise of the distance between said lower rim portions and centrally of the distance between said end frame members **13**. Upper rim portions **12***a* are defined by end portions of the frame members **12** flanking said lower rim portion **12** to occupy positions in horizontal alignment with the end frame members **13** while upwardly extending strut portions **12***b* are defined by the frame members **12** at the junction between each lower rim portion **12** and the upper rim portions **12***a* in flanking relation thereto. Opposite ends of bottom wall wires **11** within the area bordered by the lower rim portions of the side frame members **12** are welded to the underside of said lower rim portions **12** while uniformly dimensioned upturned extensions **15** of the bottom wall wire **11** within the area bordered by the upper rim portions **12***a* of the side frame members are welded to the outer surface of rim portions **12***a*. The lower limits of the receptacle are defined by a sub-frame of endless generally rectangular outline so as to provide opposed side members **16** secured in underlying relation to the bottom wall wires **11** along lines in inwardly offset parallel relation to an upright plane containing the upper rim portions **12***a* of the side frame members **12** and the upturned extensions **15** of the bottom wall wires **11** connected thereto, and to provide opposed end members **17** in horizontally aligned relation to said side members **16** which are secured in underlying relation to the bottom wall wires **10** in inwardly offset parallel relation to an upright plane containing the end frame members **13** and the upturned end portions **14** of the end wires **10** connected to said members **13**. The side members **16** of the sub-frame accordingly occupy positions at such lesser distance apart than the distance between the side frame members **12** while the end members **17** of the sub-frame are spaced apart at such lesser distance than the distance between the end frame members **13** as to allow said sub-frame of the receptacle to be positioned within the confines of the end frame members **13** and the rim portions **12***a* of a like receptacle subjacent thereto when said receptacles are in vertically aligned relation and downwardly facing surfaces of the upper receptacle outside the confines of the sub-frame member of said upper receptacle have vertically aligned downward engagement with the end frame members **13** and rim portions **12***a* of the lower receptacle as shown in FIGS. 5 and 6. While the upper and lower receptacles are thus in stacked relation, the sub-frame of the upper receptacle is so embraced by the end frame members **13** and rim portions **12***a* of the lower receptacle as to control relative horizontal movement of the receptacles. The maximum vertical dimension of the receptacle thus established by the end frame members **13** and rim portions **12***a* and the sub-frame underlying the area of the receptacle bordered by such end frame members and said rim portions **12***a* is sufficiently greater than the vertical dimension of the receptacle established by the lower rim portions **12** and the sub-frame underlying the area of the receptacle bordered by said central lower rim portions **12** as to permit the corresponding central portion of a third like receptacle bordered by said lower rim portions **12** of the third like receptacle to occupy an interleaved position in relation to said central portions of the upper and lower receptacles of a stacked receptacle arrangement as in FIG. 6.

It will be noted from FIGS. 6 and 7 that the receptacle R while occupying such interleaved position in relation to the central portions of an underlying receptacle R projects above the upper limits of said underlying receptacle. As a result the struts **12***b* of the interleaved receptacle R are in such confronting relation to the lower rim **12** of the upper receptacle R as to prevent shifting

of the interleaved unit relative to said stacked receptacles in a path lengthwise of the frame members **12** of said interleaved unit. Likewise the struts **12***b* of the lower receptacle are in such confronting relation to the rim portions **12** of the interleaved unit as to prevent movement of the latter relative to said stacked receptacles in a path lengthwise of the frame members **12** of the stacked units.

The present invention accordingly provides a receptacle of such construction and design as to provide for the stacking of said receptacle with like receptacles as a built-up unit while permitting access to the central area of said receptacle from opposite sides thereof to such extent that a like receptacle may occupy a criss-cross interleaved position in relation to a pair of stacked receptacles.

What is claimed is:

1. An upwardly open receptacle having a bottom wall, a framework defining the borders of said bottom wall including a pair of spaced apart parallel side frame members, said receptacle having a central section fully occupied by an area of the bottom wall within the confines of said side frame members and extending lengthwise of said side frame members a distance substantially matching the distance between said side frame members, and having like end sections flanking said central section which form a continuation of the area of the bottom wall of the central section, means defining upright walls along the borders of said bottom wall except for said central section, said upright walls providing seats with which a second like receptacle has downward engagement when said framework of each receptacle is in vertical alignment with the framework of the other receptacle to establish a stacked relationship of said upper and lower receptacles, said central section of said receptacle having a vertical dimension sufficiently less than the vertical dimension of said end sections of the receptacle to allow the central section of a third like receptacle to occupy a position in interleaved relation to the corresponding central section of said first and second receptacles while the latter are in stacked relation, said walls having terminal portions which serve to fix the position of the tihrd receptacle lengthwise of the side frame members of the first receptacle and to fix the position of the third receptacle lengthwise of the distance between the side frame members of the second receptacle, while said first and second receptacles are in said stacked relation and said third receptacle is in said interleaved position.

2. A receptacle according to claim **1**, wherein said upright walls have upper rim portions thereof defined by a pair of end frame members and end portions of said side frame members and upper rim portions of the receptacle along said central section are defined by intermediate portions of said side frame members spanning the distance between said end portions.

3. A receptacle according to claim **1**, wherein said upright walls have upper rim portions thereof defined by a pair of end frame members and end portions of said side frame members and upper rim portions of the receptacle along said central section are defined by intermediate portions of said side frame members spanning the distance between said end portions and said intermediate portions of said side frame members are joined to said end portions by an upwardly extending strut.

4. A receptacle according to claim **1**, wherein said side frame members have end portions forming upwardly offset extensions of the portions of said side frame members along the area of said central bottom section, and said upright walls have upper rim portions thereof defined by said end portions of said side frame members as well as a pair of end frame members to which said side frame members are joined via said end portions of said side frame members.

5. A receptacle according to claim **1**, wherein said bottom wall is defined by a first series of wire rods arranged in spaced apart parallel relation lengthwise of said side frame members and a second series of wire rods arranged in spaced apart parallel relation along lines intersecting said first series of rods, and said means defining said upright walls include upwardly bent end portions of said first series of rods and upwardly bent end portions of said second series of rods within the confines of said end sections of said bottom wall.

6. A receptacle according to claim **1**, wherein said bottom wall is defined by a first series of wire rods arranged in spaced apart parallel relation lengthwise of said side frame members and a second series of wire rods arranged in spaced apart parallel relation along lines intersecting said first series of rods, and said means defining said upright walls include upwardly bent end portions of said first series of rods and upwardly bent end portions of said second series of rods within the confines of said end sections of said bottom wall, and said upright walls have upper rim portions thereof defined by end portions of said side frame members to which said upwardly bent end portions of said second series of rods within the confines of said end sections of said bottom wall are secured and by end frame members to which said upwardly bent end portions of said first series of rods are secured.

7. A receptacle according to claim **1**, wherein said side frame members along the boundaries of said central section occupy a first common horizontal plane, and said upper limits of said side walls occupy a second common horizontal plane.

8. A receptacle according to claim **1**, wherein said framework includes a pair of end frame members to which said side frame members are integrally joined via end portions of said side frame members opposite said end sections of said bottom wall.

9. A receptacle according to claim **1**, wherein the lower limits of said receptacle include a framework in underlying relation to said bottom wall and cooperating with the upright walls of a subjacent like receptacle in stacked relation thereto to prevent relative horizontal movement of said stacked receptacles.

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