

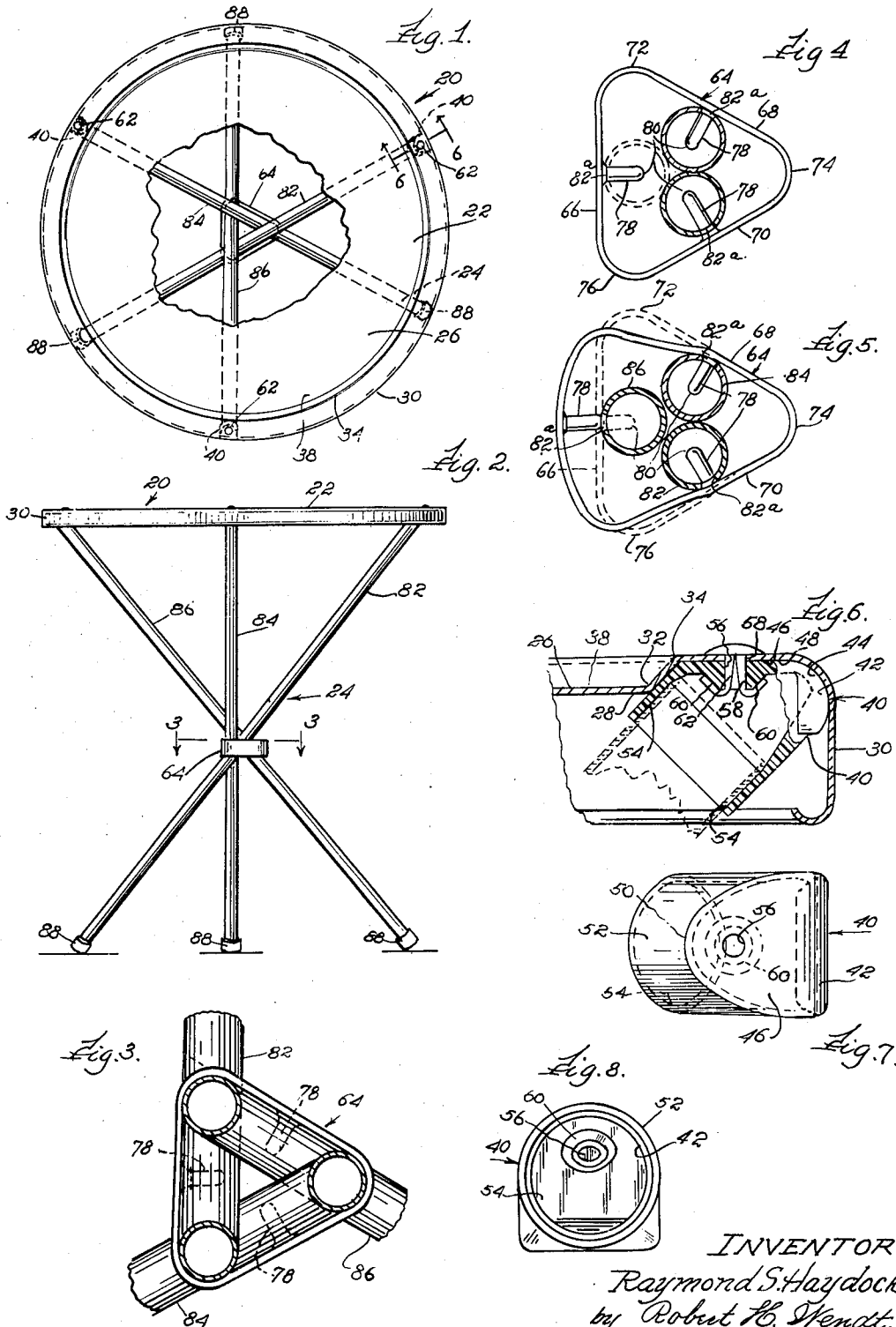
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R. S. HAYDOCK

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PATIO TRAY ASSEMBLY

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INVENTOR.
Raymond S. Haydock.
by Robert H. Wendt.
Attorney.

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PATIO TRAY ASSEMBLY

Raymond S. Haydock, Chicago, Ill., assignor of one-half each to Raymond Haydock, Jr., and Sandra Lynn Haydock, Chicago, Ill.

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The present invention relates to patio tray assemblies and is particularly concerned with patio trays which may be taken apart from their legs and stored in a minimum space.

One of the objects of the invention is the provision of a patio tray assembly which has a minimum number of parts, which has a simple and inexpensive structure, which is firm and stable, and the legs of which are removable as a unit so that the legs may be moved to a parallel position and stored conveniently.

Another object of the invention is the provision of an improved leg retainer adapted to permit movement of the legs to parallel position for storage, or to a diagonal position to fit in the leg sockets of the tray top where they are firmly held in tray top supporting position without necessity for added rivets or other parts to hold the legs in a unitary assembly.

Another object is the provision of an improved tray top structure with improved plastic leg sockets which are confined between a depending annular border flange, and a downwardly extending diagonal circular flange in the top of the tray, by means of which each leg socket may be secured in fixed position by a single rivet holding the socket in diagonal position for the legs so that the legs will be mounted in intersecting position, reinforced by the leg sockets and the leg retainer.

Another object is the provision of improved leg socket members adapted to hold the upper ends of the legs removably but firmly enough to permit the table assembly to be moved about by lifting the tray top without the legs falling out of their sockets.

Other objects and advantages of the invention will be apparent from the following description and the accompanying drawings in which similar characters of reference indicate similar parts throughout the several views.

Referring to the single sheet of drawings accompanying this specification:

FIG. 1 is a top plan view partially broken away to show the intersecting legs and leg retainer;

FIG. 2 is a side elevational view;

FIG. 3 is a sectional view taken on the plane of the line 3—3 of FIG. 2 looking in the direction of the arrows;

FIG. 4 is a top plan view of the leg retainer with the legs in section and arranged in parallel position;

FIG. 5 is a view similar to FIG. 4 showing the deformation of the plastic leg retainer for the purpose of inserting the integral pins in the holes in the legs;

FIG. 6 is an enlarged, fragmentary sectional view taken on the plane of the line 6—6 looking in the direction of the arrows in FIG. 1;

FIG. 7 is a top plan view of the plastic leg socket member;

FIG. 8 is an end elevational view of the socket member.

Referring to FIGS. 1 and 2, 20 indicates in its entirety the patio tray assembly in which 22 indicates the tray top, and 24 the leg unit which is removable from the tray top as a unit and stored separate from the tray top.

The tray top 22 may be constructed of any suitable sheet material such as sheet metal and preferably has a plane upper surface 26 and a plane bottom surface 28,

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and is provided with a depending cylindrical border flange 30 terminating at its lower edge in an upwardly turned curved edge for reinforcing the tray top 22. The tray top 22 is provided with a circular downwardly extending diagonal flange 32 by a bend along the circular line 34, and the tray top has a bend along the circular line 36 causing the main central part of the top surface at 38 to extend horizontally over the main central part of the tray top 22.

The tray top 22 supports a plurality of plastic leg socket members 40 on its bottom surface 28 between the depending cylindrical border flange 30, and the diagonal offset flange 32, both of which are engaged by the socket members 40 which are preferably equally spaced peripherally of the bottom of the tray top 22. One of the socket members 40 is illustrated in FIGS. 8 and 9, these being identical in structure.

Each socket member 40 comprises a molded plastic member of polyethylene and each socket member 40 has a curved substantially cylindrical surface at 42 fitting the inside of the circular curvature at 44 of the tray top 22, where it joins the border flange 30 to the top portion 26. The curved end surface 42 extends to a plane top surface 46 which is adapted to engage the bottom of the tray top at 48, and the top surface 46 extends to the curved line 50 which is the edge of the cylindrical surface 52 of the socket member 40. The cylindrical outer surface 52 extends about the lower end of the socket member 40 which has an open lower end 54 provided with a cylindrical bore 54.

The upper plane surface 46 of each socket member is provided with a single through bore 56 registering with the through bore 58 in the tray top at such a point that the socket members are confined between the depending border flange 30, and the diagonal flange 32 of the tray top 22. The through bore 58 of the socket members 40 is surrounded in each case by the outer frusto-conical surface 60 thickening the wall surrounding the through bore 58. Each socket member 40 is secured to the tray top 22 by a single tubular rivet 62, rivet over and outward and spun into engagement with the outer frusto-conical surface 60 firmly securing each socket member against any movement by its engagement with the surfaces 32 and 40.

The cylindrical bore 54 in each socket member 40 extends at an angle of approximately 45 degrees to the tray top 22 causing the legs to extend at this angle, and the cylindrical bore 54 has a tight sliding fit with the end of each leg, but at 62, the bore begins to be tapered about 15 degrees thus making the fit tighter so that there is no danger of the legs falling out when the tray top is lifted by its top. The legs comprise tubular members of metal such as steel, and the legs are inserted in the socket members 40 so that the legs pass diagonally, close to each other, and intersecting each other as shown in FIG. 3, where the legs are indicated at 82, 84, 86, surrounded by a plastic leg retainer 64.

Each leg 82, 84, 86, has a cylindrical plastic cap fitting tightly on its lower end to protect the floor against being marred. The leg retainer 64 comprises a closed endless plastic band of polyethylene of such width that its upper and lower edges engage the diagonally extending legs when they are spread as shown in FIG. 2. The leg retainer 64 has three flat sides 66, 68, 70 joined at the curved corners 72, 74, 76 forming a triangle in plan with rounded corners, and each side 66, 68, 70 has an inwardly extending integral pin 78 rounded at its end 80 and fitting in a punched hole 82 in the adjacent side of each leg 82, 84, 86. Referring to FIG. 5, the leg retainer 64 is made of resilient plastic so that it may be deformed by pressure as shown in FIG. 5 until the pins 78 are re-

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tracted sufficiently to be inserted in the holes 82; in the legs the retainer thereafter resuming its triangular shape and retaining the legs on the pins 78.

The operation of the assembly is as follows: When the legs are joined at their central portions by the retainer 64 the upper ends of the legs may be inserted in the socket members, and the legs extending diagonally are located to engage the floor and support the tray top horizontally. The legs engage the lower edge and the upper edge of the retainer, and the retainer resists spreading of the legs while the caps 88 at the lower ends of the legs engage the floor. When desired the legs may be withdrawn from their socket members and moved into parallel position for storage.

It will thus be observed that the present assemblies have a minimum number of parts and the socket members may be secured in fixed position by a single rivet in each case, and the rivets are so secured that they cannot be torn out of their holes in the sockets.

While I have illustrated and described a specific embodiment of the invention, many changes may be made without departing from the spirit of the invention, and I do not wish to be limited to the precise details of the construction set forth, but desire to avail myself of all changes within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

A patio tray assembly comprising three tubular legs, the said legs extending transversely to each other and supporting a tray top centrally located over the said legs, the legs being held together at their intersections by a surrounding triangular closed plastic band, each leg having an outwardly facing cylindrical bore, and said plastic band having an integral plastic inwardly projecting cylindrical pin, extending into each of said outwardly facing

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bore in the legs, and retaining said legs in intersecting position, the plastic band defining a limiting spread of the legs in that position and the integral pins permitting the folding of the legs into parallel position for storage, the said tray top comprising a rigid member of sheet material having an upper horizontal plane surface, bordered by a depending peripheral flange, and a plurality of leg socket members each having a cylindrical bore forming the socket and extending diagonally into the lower end of each said member, each socket member having an upper diagonally plane surface engaging the bottom of the tray top, and each having a curved surface engaging inside the depending peripheral flange, and a single securing member for each leg and socket member, and extending through the table top and adjacent surface of each socket member, the legs being removable from the sockets when in intersecting position supporting the tray top, to be folded into parallel position.

References Cited by the Examiner

UNITED STATES PATENTS

668,826	2/1901	Wade	248—164 X
747,204	12/1903	Mock	108—118
1,940,565	12/1933	Schott	108—159
2,352,090	6/1944	Faller	108—118
2,471,740	5/1949	Hamilton	248—188
2,722,973	11/1955	Murcott	108—118
2,803,419	8/1957	Phillips	108—157
2,859,080	11/1958	Botnick	108—159 X
3,032,375	5/1962	Lalandre	248—188 X
3,105,976	10/1963	Roche	108—159 X
3,106,295	10/1963	Berlin	108—118
3,160,121	12/1964	Bedol	108—118

FRANK B. SHERRY, *Primary Examiner.*