United States Patent

Manning

[15] **3,687,092**

[45] **Aug. 29, 1972**

[54] **MOLDED FURNITURE**

[72] Inventor: **James P. Manning,** Deerfield, Ill.

[73] Assignee: **Republic Molding Corporation**

[22] Filed: **Oct. 12, 1970**

[21] Appl. No.: **79,882**

[52] **U.S. Cl.** **108/156,** 108/158, 248/188, 297/DIG. 2

[51] **Int. Cl.** **A47b 3/06**

[58] **Field of Search**.....108/156, 158; 297/DIG. 2; 248/163, 165, 188

[56] **References Cited**

UNITED STATES PATENTS

3,032,375	5/1962	Lalandre	108/156 UX
3,034,830	5/1962	Avedon	297/DIG. 2

FOREIGN PATENTS OR APPLICATIONS

1,215,296	4/1960	France	248/188
614,517	12/1960	Italy	248/188

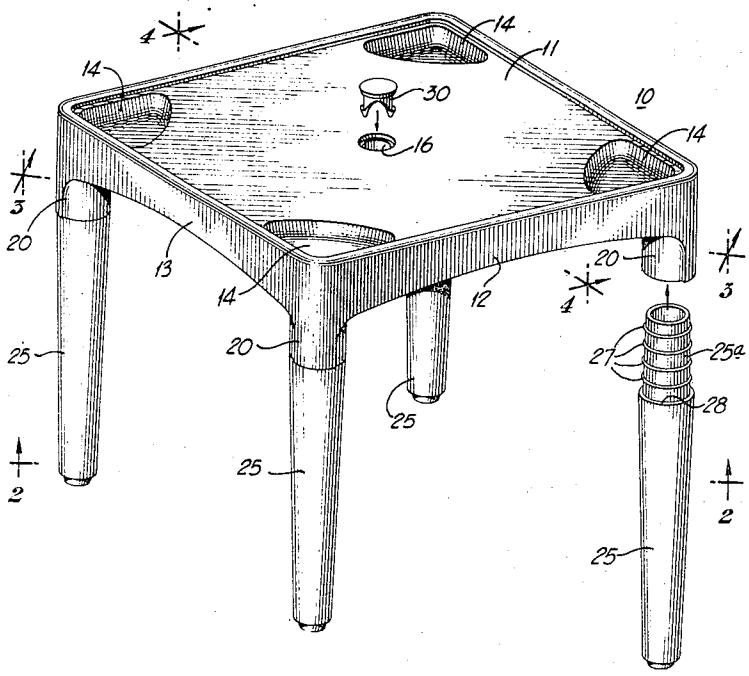
Primary Examiner—James C. Mitchell

Attorney—Mason, Kolehmainen, Rathburn & Wyss

[57] **ABSTRACT**

There is provided improved molded furniture of plastic or other suitable material. The improved furniture is provided with an improved leg structure wherein a leg is assembled within a leg-receiving socket of the furniture. The leg is provided with a plurality of circumferentially spaced ribs, retaining the leg firmly in assembly position while providing easy assembly and disassembly thereof. Moreover, generally large molded surfaces of furniture are provided with integrally formed reinforcing ribs. Such reinforcing ribs terminate short of integrally formed edge flanges generally normal to the molded surface and against an additional rib integrally formed with said surface, generally parallel and closely spaced apart from the flange. Advantageously such rib construction prevents pulling or buckling of the furniture flange.

6 Claims, 6 Drawing Figures



PATENTED AUG 29 1972

3,687,092

SHEET 1 OF 2

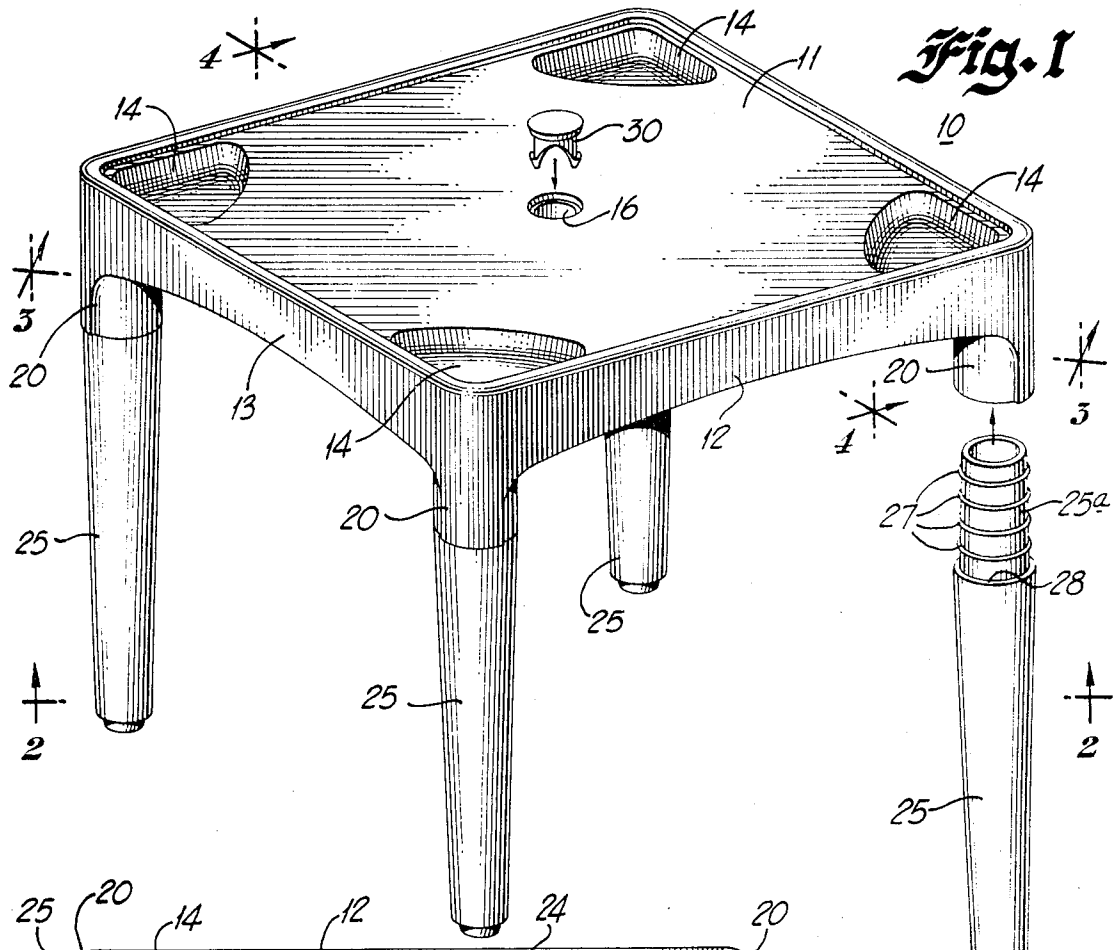


Fig. 1

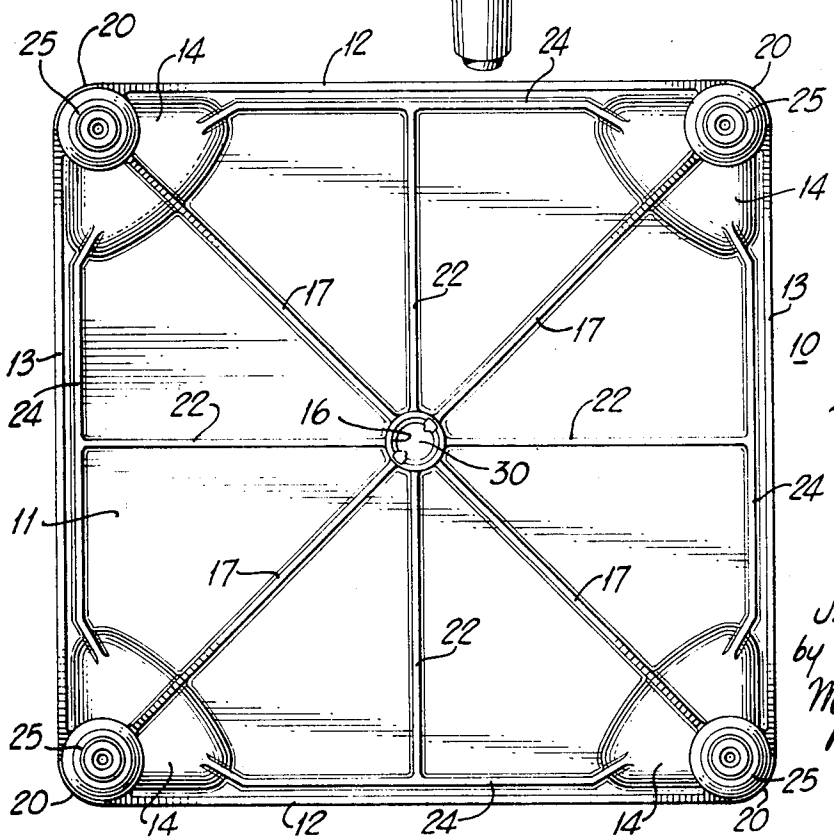


Fig. 2

INVENTOR
JAMES P. MANNING
by
Mason, Kolehmainen, Rathburn and Wyss,
ATTORNEYS.

PATENTED AUG 29 1972

3,687,092

SHEET 2 OF 2

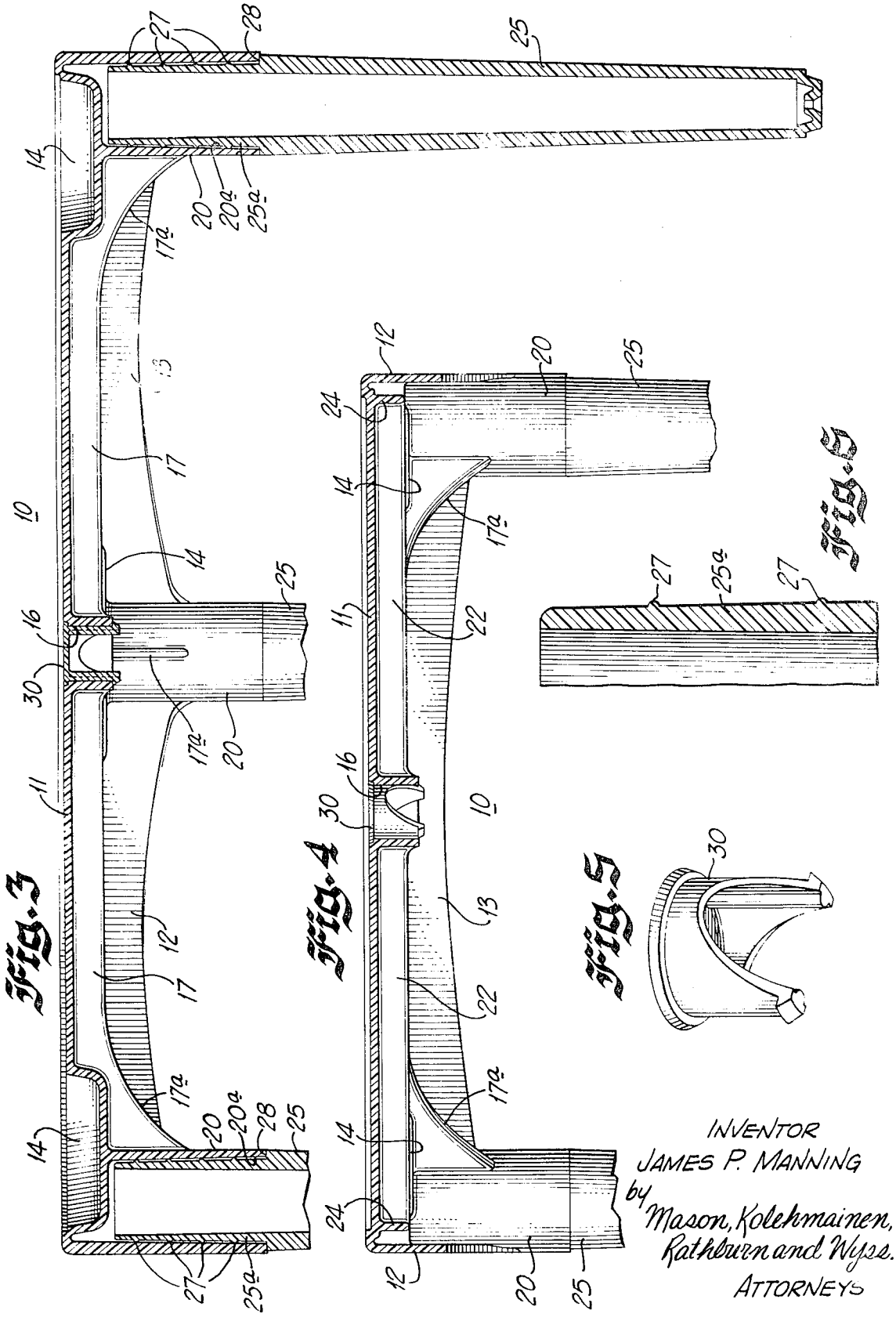


Fig. 3

Fig. 4

Fig. 5

Fig. 6

INVENTOR
JAMES P. MANNING
by
Mason, Kolehmainen, Rathburn and Wyss.
ATTORNEYS

MOLDED FURNITURE

The present invention relates to improved molded furniture, and particularly to furniture formed of plastic and similar materials.

Plastic molding has today developed to a place where generally large products, such as, childrens' furniture, can be molded of plastic and other suitable materials. However, certain problems arise with the pulling and drawing of the parts where large surfaces are formed, and in the assembly of legs and the like.

Accordingly, it is an object of the present invention to provide a new and improved piece of molded furniture.

Another object of the present invention is to provide a new and improved furniture construction which overcomes the above mentioned difficulties.

Yet another object of the present invention is the provision of a new and improved piece of furniture which is neat in appearance and void of noticable pulling and drawing as a result of shrinkage of the molded components.

Still another object of the present invention is the provision of a new and improved leg assembly which is firmly retained in assembled position with the furniture, but which is readily and easily assembled and disassembled therewith.

Further objects and advantages of the present invention will become apparent as the following description proceeds and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

In accordance with these and other objects there is provided an improved piece of molded furniture such as a table, chair and the like including a generally large molded surface terminating in an integrally formed edge flange generally normal thereto. Such a large molded surface will commonly include a plurality of reinforcing ribs integrally formed on the underside of the surface and extending toward the flange. In accordance with the present invention an additional rib is provided integrally formed on the surface generally parallel and closely spaced apart from the edge flange, and the reinforcing ribs terminate integrally with the additional rib whereby the reinforcing rib does not pull or buckle the flange.

Advantageously the reinforcing ribs may be molded radially outwardly for a generally centrally located molding hole providing for molding of the reinforcing ribs radially and preventing drawing of the ribs and surface at the point of the mold injection.

In accordance with another feature of the present invention there is provided a leg-receiving socket in the furniture having a generally inwardly tapered surface, and an improved leg is provided assembled therewith including a mating portion received within the socket. The mating portion has an outer tapered surface generally complimentary to the first mentioned surface and provided with a plurality of circumferrentially spaced ribs. The circumferrentially spaced ribs serve to retain the leg formally in assembled position while providing easy and ready assembly and disassembly thereof.

For a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the drawings, in which;

FIG. 1 is a perspective view of a piece of molded furniture here shown as a table according to the present invention.

FIG. 2 is a bottom view of the table of FIG. 1.

FIG. 3 is a fragmentary sectional view of the table of FIG. 1 taken along the line 3—3 of FIG. 1.

FIG. 4 is a fragmentary sectional view of the table of FIG. 1 taken along the line 4—4 of FIG. 1.

FIG. 5 is a perspective view of a molding hole plug of the table of FIG. 1.

FIG. 6 is a fragmentary sectional view of a leg of the table of FIG. 1.

Referring now to the drawings, there is illustrated a piece of molded furniture **10**, here shown as a table, but which may be a chair or other suitable structure. The furniture **10** includes a generally large molded surface or table top **11** terminating in integrally formed downwardly projecting edge flanges **12**, **13**, extending normal to the table top **11**. Depressions **14** formed at the corners of the table top **11** provide rigidity and strength to the table top and further form a structure for the termination of the ribs on the under side of the table top **11**.

Referring to the reinforcing rib construction on the underside of the table top **11**, as best illustrated in FIG. **2**, all the reinforcing ribs radiate outwardly from a central molding hole **16**, and include diagonally extending reinforcing ribs **17** with their outer ends **17***a*, FIG. **3** terminating against the under surfaces of the depressions **14** and at suitable leg-receiving sockets **20**. There is also provided a plurality of additional reinforcing ribs **22** radiating outwardly from the molding hole **16** toward the flanges **12** and **13**. To provide for termination of the outer ends of the reinforcing ribs **22** there is provided additional ribs **24**, FIGS. **2** and **4**, parallel to and closely spaced apart from the flanges **12** and **13** and integrally formed on the under surface of the table top **11**. The reinforcing ribs **22** terminate integrally on the additional ribs **24**, thus preventing pulling or buckling of the flanges **12** and **13** at the location of the ribs **22**. The additional ribs **24** conventiently terminate into the depressions **14**.

The generally centrally located molding hole **16** permits forming of the radially extending ribs radially outward therefrom, thereby preventing drawing of the table surface **11** upon shrinkage of the ribs at the point of the mold injection.

In accordance with another feature of the present invention there is provided an improved leg construction for the furniture **10**. More specifically each of the leg-receiving sockets **20** is provided with a inwardly tapered inner surface **20***a*, FIG. **3**, having inward taper to permit withdrawal from the mold. A plurality of legs **25** are provided for assembly with the furniture **10**, and each of the legs **25** include a mating portion **25***a* having an outer tapered surface generally complimentary to the inwardly tapered inner surface of the leg socket and provided with a plurality of circumferrentially spaced ribs **27**. The circumferrentially spaced ribs retain the legs **25** firmly in assembled position within the leg receiving sockets **20**, and permit ready and easy assembly and disassembly of the legs **25** within the leg-receiving sockets.

The outer tapered surface **25a** of the legs **25** terminates at a shoulder **28** defining a stop, and the stop

28 engages against the lower end of the leg-receiving sockets 20 to accurately position the legs 25 within the sockets 20.

A suitable plug 30 may be provided to snap within the molding hole 16 thereby closing the hole 16.

Although the present invention has been described by reference to only a single embodiment thereof as applied to a table, it would be apparent that numerous other modifications and embodiments may be devised by those skilled in the art. The principals of the invention, for example, are equally applicable to other pieces of molded furniture, such as a chair. Accordingly, it is intended by the appended claims to cover all modifications and embodiments which will fall within the true spirit and scope of the present invention.

What is claimed as new and desired to be secured by Letters Patent of The United States is;

I claim;

1. Improved molded furniture of plastic or other suitable material comprising a generally large molded surface provided with integrally formed edge flanges, integrally formed ribs generally parallel to and closely spaced apart from said flanges, and reinforcing ribs terminating against the first mentioned ribs whereby pulling or buckling of the furniture flange is prevented.

2. Improved molded furniture as set forth in claim 1 wherein there is provided a central molding hole toward the center of said surface, said reinforcing ribs extending radially outwardly therefrom, to provide for radial extruding of said reinforcing ribs thereby preventing drawing of said surface at the point of the mold injection.

3. Improved molded furniture as set forth in claim 1 and having depressions defined in the surface from which leg-receiving sockets extend, said flanges terminating against said depressions.

4. Improved molded furniture as set forth in claim 2 wherein said sockets are provided with an inwardly tapered inner surface, and including legs having an outer tapered surface generally complementary to the inwardly tapered inner surface of the leg socket and provided with circumferrentially spaced ribs whereby said legs are retained firmly in assembled position within the respective leg-receiving sockets and may be readily and easily assembled and disassembled therefrom.

5. Improved molded furniture of plastic or other suitable material including a body portion and removable legs, said body portion having a plurality of integrally formed leg-receiving sockets each provided, with an inwardly tapered inner surface, and respective legs each having an outer tapered surface complimentary to the inwardly tapered inner surfaces, one of said tapered surfaces being provided with circumferentially spaced ribs whereby said legs are retained firmly in assembled position within respective leg-receiving sockets and may be readily and easily assembled and disassembled therefrom.

6. Improved molded furniture as set forth in claim 5 wherein said circumferentially spaced ribs are integrally formed on said legs.

* * * * *