Oct. 28, 1952 P. C. CURTIS 2,615,770

KNOCKDOWN TABLE

Filed July 10, 1951

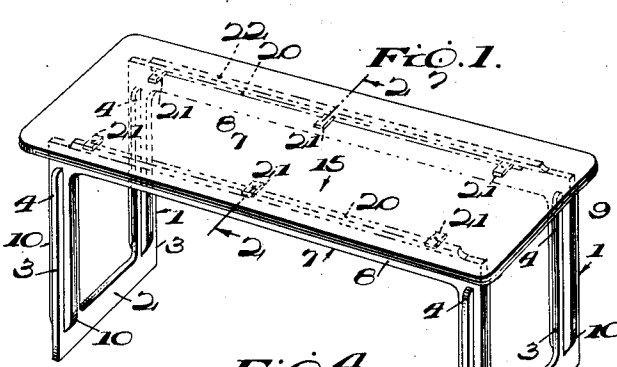


FIG. 1.

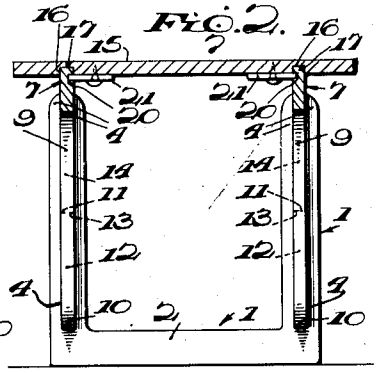


FIG. 2.
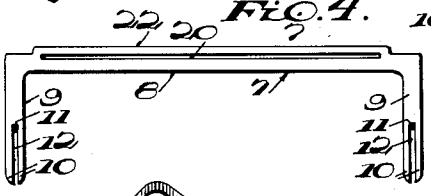


FIG. 4.

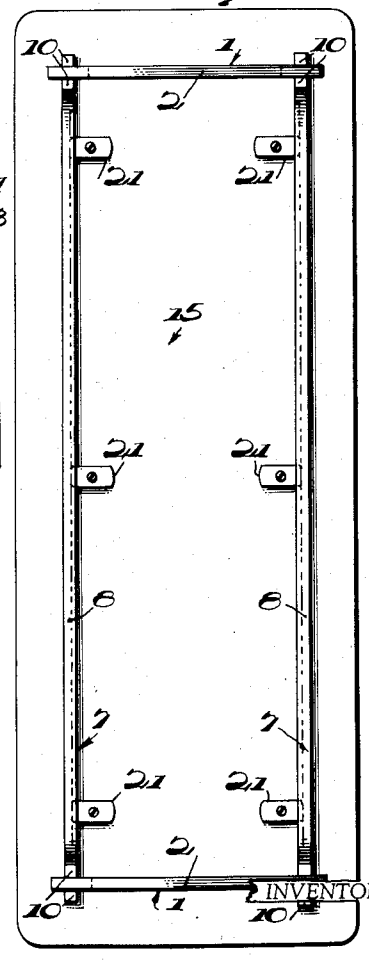


FIG. 3.

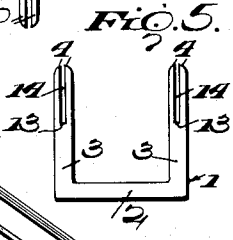


FIG. 5.

FIG. 6.

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KNOCKDOWN TABLE

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2 Claims. (Cl. 311—35)

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This invention relates to the construction of household furniture and the like. More particularly it is concerned with providing a novel knockdown table wherein the several component parts of the table can be quickly and cheaply manufactured and which are so fabricated that they can be quickly and easily interlocked and joined together without the use of external fastening elements such as nails, bolts, screws, glue or the like.

Past efforts that have been made to provide inexpensive, simply constructed knockdown tables, from materials readily available and without the use of external fastening elements such as bolts, nails, rivets, glue, etc., have not met with success for one or more reasons.

Whenever such table constructions were devised, they were usually comprised of parts having such an intricate and complex design that easy and cheap fabrication of the same was impossible. Instead expensive machinery had to be devised to fabricate the parts and assembly of the parts upon fabrication required more than ordinary skill.

Such tables were also usually made of metal, since other materials such as plywood and the like were not considered to have the inherent strength and rigidity required to provide satisfactory strong interlocking parts which could obviate the necessity of using external fastening elements, and yet provide a satisfactory table structure which could withstand normal wear and abuse.

These are but a few of the factors which made the manufacture and sale of knockdown tables assembled without the use of nails, screws and the like expensive and the commercial exploitation thereof unfeasible.

It has been found, however, that by properly designing the several parts of the table so that each part suitably interlocks with another part, a rigid and exceptionally sturdy table is provided, which can be readily and cheaply manufactured. In addition, the table of the instant invention contains parts which are so easy to assemble that even a child is capable of putting them together. The overall table design of the instant invention also possesses such inherent strength and rigidity that the several parts thereof can all be made of plywood or like materials without any sacrifice of structural strength.

The simple design of the parts provides for easy and quick assembly. The several parts before assembly of the table and after the dismantlement thereof can be conveniently placed

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in a small package or container which can then be stored while using but a minimum amount of space. Never at any time need one worry about nails, screws, glue, clamps, etc., which are small items that can easily be lost, and the use of which is critical in most table constructions.

Another advantage inherent in the design of the instant table is that no tools, not even a hammer or screw driver, are required to put the parts together.

It is a primary object of this invention therefore to provide a novel knockdown table assembly having interlocking parts, which supply their own fastening elements in and of themselves.

Another object of this invention is to provide a novel knockdown table assembly of exceptional strength and rigidity while being manufactured from a minimum amount of parts.

A further object of this invention is to provide a novel knockdown table assembly having parts which can be cheaply and readily manufactured.

A further object of this invention is to provide a novel knockdown table assembly which has such inherent strength and rigidity because of the design of the several parts that it can be fabricated from plywood.

Another object of this invention is to provide a novel table assembly having parts which can be easily assembled without the need for special tools, or special skill on the part of the person assembling the table.

A further object of this invention is to provide a novel table having parts which before assemblage or after dismantlement can be conveniently stored in a minimum amount of space or in a small package during shipment from one place to another.

A final object of this invention is to provide a novel table construction wherein the use of glue, nails, screws, rivets, bolts, etc., can be dispensed with.

These and other objects will become more apparent by reference to the following detailed description, when taken in conjunction with the appended drawings wherein:

Figure 1 is a perspective view of the table of the instant invention;

Figure 2 is a sectional view of the table disclosed in Figure 1 when taken along lines 2—2 of Figure 1;

Figure 3 is a bottom plan view of the table shown in Figure 1;

Figure 4 is a side elevational view of a disassembled side frame of the table;

Figure 5 is a side elevational view of a disassembled base member of the table; and

Figure 6 is an exploded view of the table showing the relationship of the several parts immediately prior to assembly.

By referring to the drawings it will be observed that the table is comprised of a plurality of spaced base members 1. Each base member in turn is so formed from a single piece of material such as plywood, so as to be provided with a floor engaging web portion 2 and leg elements 3, which project vertically upward at each end thereof. Each of the leg elements 3 reinforced through the medium of the joining web 2 are provided with a plurality of spaced fingers 4, at the free ends thereof. The function of these fingers will be described later.

The table is also provided with a pair of side frames 7, one for each longitudinal side of the table. Each side frame is so fabricated from a single piece of material as to be comprised of a web portion 8 and leg elements 9 projecting downwardly from each end thereof. Each leg 9 in turn is reinforced by the said web. Each of the leg elements 9 is also provided at the free ends thereof with a plurality of spaced fingers 10. These latter fingers 10 on the leg elements 9 of the side frames as shown in Figures 1, 2 and 4 are adapted to interlock at an angle with the upwardly projecting fingers 4 on the leg of a base member when fingers 10 are thrust downward between fingers 4 until the base 11 of the elongated slot 12 in each leg 9, of a side frame contacts and coacts with the base 13 of the elongated slot 14 in each leg 3 of the base member.

This interlocking of the base members and side frames at an angle to each other is easy to accomplish and when interlocked they form a strong foundation for a table top 15, without the use of any nails, glue, bolts, screws, etc.

It will be further observed by referring to Figures 1, 2 and 4 that the table top 15 is provided on the underside thereof, with a plurality of longitudinal slots or recessed portions 16, adjacent each longitudinal marginal edge thereof and the tops 17 of side frames 7 are adapted to be inserted within these slots 16, so as to anchor the table top to the side frames.

If desired and to further insure the anchorage of the table top 15 to the side frames 7, each inner face of a side frame 7 may also be provided with a longitudinal groove or recess 20, within which one or more latching lugs 21, pivotally attached to the underside of table 15 can be inserted as indicated in Figures 1, 2 and 3.

These lugs 21 may be advantageously made from plywood scraps or some other suitable material.

If desired also the top of each side frame 7 may be made in the form of an upwardly projecting shoulder 22 which is adapted to be inserted with a recess 16 in the underside of each table top adjacent the longitudinal marginal edge.

To disassemble the table it is simply necessary to turn lugs 21 so as to disengage them from side frames 7. Then the top 15 easily comes off of the side frames 7. Finally when the side frames 7 are lifted upward the legs thereon easily become disengaged from the legs of the base members. All the parts are now ready for convenient storage.

During assembly all of the parts fit firmly and neatly together, the various slots and openings in the several elements being only of sufficient width to snugly accommodate the member adapted to be inserted therein.

End and sideways movement of the table is effectively prevented during assembly by means of the interlocking fingers on the several leg elements, which act as stops or braces on all four sides of the table.

It will be noted that the use of the floor engaging webs 2 for the end members permits equal amounts of upward thrust to be placed on each leg element 3. The use of web 8 in the side frames allows an equal amount of downward thrust to be applied to each leg 9, all of which provide a sturdier table.

By using the above-described interlocking arrangement then as the means for joining the several members of the table together, each member serves to reinforce its adjacent member and a strong, sturdy knockdown table is provided.

Although the preferred embodiment of the invention contemplates that the several parts of the table be made from materials readily available such as plywood, which lends itself easily to mass production, since it can be cheaply and conveniently shaped, it is obvious that other materials could be used.

Furthermore, although plywood having a thickness of about ¾ of an inch is the usual size of plywood employed in the making of furniture of this kind, it has been found that because of the inherent strength and rigidity afforded the table because of the interlocking arrangement of the several parts or sections of the table of the instant invention, and the web portions provided for the end frames and side members, that plywood having a thickness within the range of ⅜ to ⅝ of an inch can also be used with excellent results for all of the parts. In practice plywood of ½ of an inch thickness has been found advantageous. This savings in material is obvious and can in turn be passed on to the consumer.

Various other changes and modifications can be made in the invention without departing from the spirit and scope thereof as defined by the appended claims.

What is claimed is:

1. A knockdown table of the type described comprising the combination of a plurality of spaced upright base members, each of said base members being comprised of a floor engaging web portion and leg elements projecting upwardly from each end of said web portion, each of said leg elements in turn being provided with a plurality of upwardly projecting spaced fingers at the free ends thereof, a pair of side frames, one for each longitudinal side of the said table, each of said side frames being comprised of a web portion and leg elements projecting downwardly from each end thereof and at a transverse angle to the upwardly projecting legs of the said base members, each of said downwardly projecting leg elements also being provided with a plurality of spaced fingers at the free ends thereof which are adapted to interlock at an angle with the upwardly projecting fingers on the legs of said base members, and a table top mounted upon said side frames, said table top having a longitudinal recess on the undersurface thereof adjacent its longitudinal marginal edge, within which the top portion of a side frame is adapted to be received.

2. A knockdown table of the type described comprising the combination of a plurality of spaced upright base members, each of said base members being comprised of a floor engaging web

portion and leg elements projecting upwardly from each end of said web portion, each of said leg elements in turn being provided with a plurality of spaced fingers at the free ends thereof, a pair of side frames, one for each longitudinal side of the said table, each of said side frames being comprised of a web portion and leg elements projecting downwardly from each end thereof and at a transverse angle to the upwardly projecting legs of the said base members, each of said downwardly projecting leg elements being also provided with a plurality of spaced fingers at the free ends thereof which are adapted to interlock at an angle with the upwardly projecting fingers on the legs of said base members, and at least one of said last-mentioned web portions having a longitudinal recess located on the inner face thereof, and a table top mounted upon said side frames, said table top having a longitudinal recess on its undersurface adjacent its longitudinal marginal edge and a plurality of latching lugs pivotally attached to the undersurface of the table and spaced inwardly from the said recess therein, said lugs being insertable within the recess on the inner face of the web of a side frame, so as to lock said top to said frame when the top portion of a side frame is inserted within the recess in the undersurface of said table top.

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