

[54] EXTENSION ARRANGEMENT FOR GLASS TOP TABLES

[76] Inventor: **Herbert E. Kaplan**, 6 Pickett Ct., Malverne, N.Y. 11535

[22] Filed: **May 10, 1973**

[21] Appl. No.: **359,172**

[52] U.S. Cl. **108/69, 108/27**

[51] Int. Cl. **A47b 1/04**

[58] Field of Search 108/69, 90, 152, 66, 65, 108/159, 78, 27, 11, 64

[56] **References Cited**
UNITED STATES PATENTS

387,040	7/1888	Blake	108/69
1,094,208	4/1914	Howe	108/152 X
1,575,954	3/1926	Walaschek	108/90 X
2,367,948	1/1945	Kirsch	108/90

2,955,888	10/1960	Graves	108/69
3,190,243	6/1965	Pira	108/152
3,398,636	8/1968	MacLachlan	108/65
3,432,134	3/1969	Forschmidt	108/152 X
3,494,307	2/1970	Kagan	108/69

Primary Examiner—Francis K. Zugel
Attorney, Agent, or Firm—Breitenfeld & Levine

[57] **ABSTRACT**

A frame independent of a table is adapted to be rested upon and surround the glass top of the table. An extension leaf is provided, as well as means for securing the leaf to an edge of the frame. The securing means may be rods carried by the frame and movable between extended and retracted positions. Alternatively, the securing means may be headed studs carried by one of the frame or extension leaf, and a cooperating hole formed in the other.

10 Claims, 6 Drawing Figures

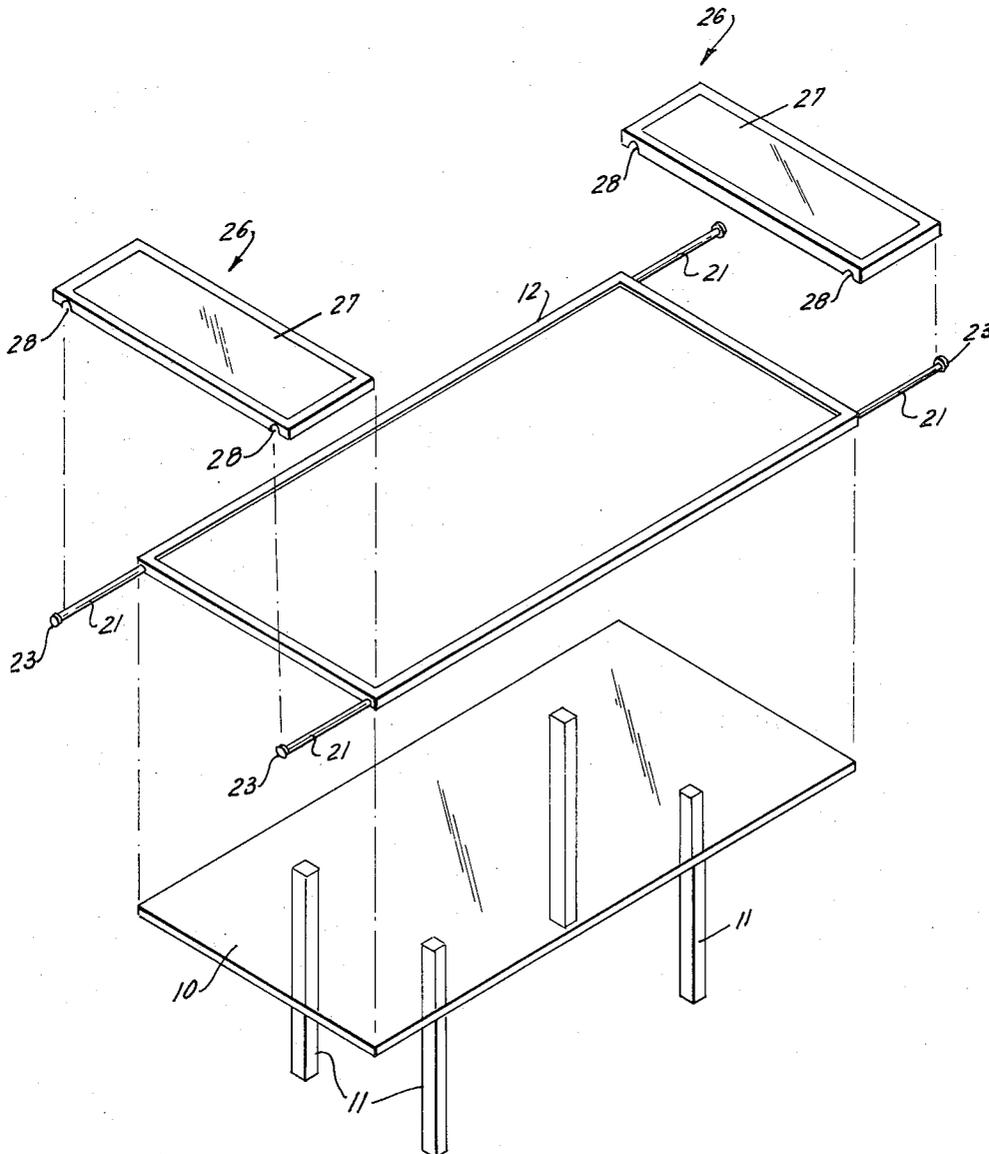


FIG. 2

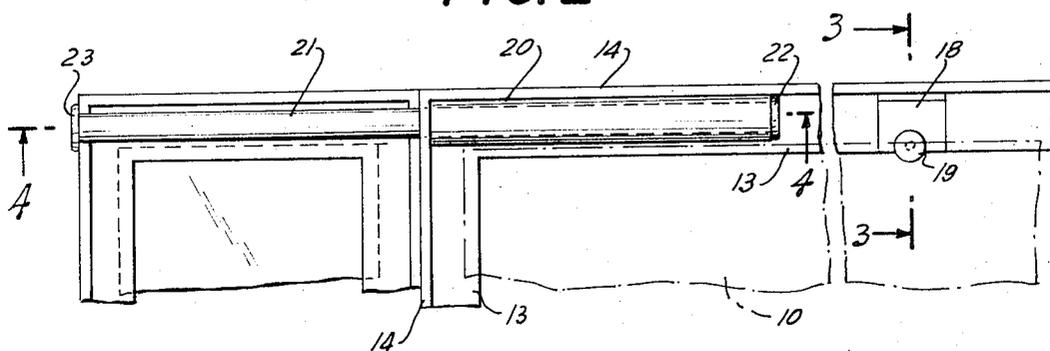


FIG. 4

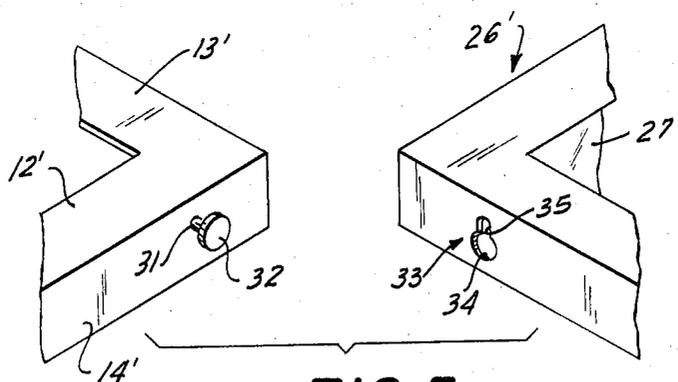
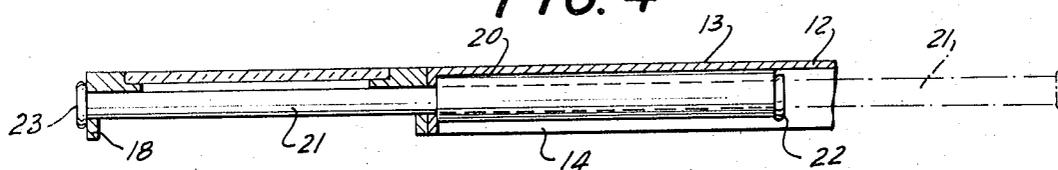


FIG. 5

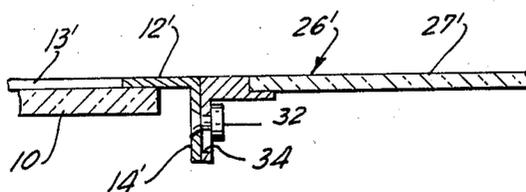


FIG. 6

EXTENSION ARRANGEMENT FOR GLASS TOP TABLES

This invention relates to the extension of tables, and more particularly to the extension of tables having glass tops.

Tables, particularly dining tables, which can be lengthened when desired, so as to accommodate seating for additional people, and then retracted to an original shorter condition are well known. Typically, these tables have tops made of wood, or other opaque material, so that concealing an extension mechanism beneath the table top is no problem. There are tables of the "Parsons" type having glass tops in which a rectangular metal frame permanently surrounds the glass top and a table leg is fixed to and extends from each corner of the frame. In such a table, it is possible to arrange some sort of mechanism in the permanent table frame for making the table extensible.

The present invention relates to a different type of table, i.e., one in which the top comprises solely a sheet of glass, the glass top being supported on a pedestal or legs spaced inwardly from the edges of the table top. In such a table, it is extremely difficult or impossible to conceal an extension mechanism of any kind beneath or around the table top since such a mechanism would mar the attractive appearance of the completely transparent glass top.

It is an object of the present invention to provide an arrangement for permitting a glass top table, of the type described in the immediately preceding paragraph, to be extended at will and thereafter returned to its original condition.

It is another object of the invention to provide such an extension arrangement which is completely independent of the table, but which can readily and firmly be applied to the table without the use of tools, and just as readily removed from the table.

Additional objects and features of the invention will be apparent from the following description, in which reference is made to the accompanying drawings.

In the drawings:

FIG. 1 is an exploded perspective view of a glass top table and an extension arrangement therefor according to the present invention;

FIG. 2 is a fragmentary bottom view of the table and extension arrangement;

FIG. 3 is a horizontal cross-sectional view taken along line 3—3 of FIG. 2;

FIG. 4 is a cross-sectional view taken along line 4—4 of FIG. 2, the arrangement being in right-side-up condition in FIG. 4;

FIG. 5 is a fragmentary perspective view showing an alternative embodiment of the present invention; and

FIG. 6 is a fragmentary cross-sectional view of the alternative embodiment.

FIG. 1 illustrates a table of the type to which the present invention is to be applied. The table comprises a top 10 formed of a single piece of transparent glass, resting upon a suitable support, in this case four legs 11. It is to be noted that the legs 11 are spaced inwardly from the edges of the glass top 10. As a result of this circumstance, and the fact that the top is completely transparent, there is no way of providing an extension mechanism for the table beneath the top or along the

sides of the top without marring the appearance of the table.

Referring to FIGS. 1-4, the extension arrangement chosen to illustrate the present invention includes a frame 12 completely independent of the table. The frame corresponds substantially in size and shape to the size and shape of the table top 10. Thus, in the present example, frame 12 is rectangular and is formed of four lengths of angle material, preferably a suitable metal, permanently joined at their ends.

As may be seen most clearly in FIG. 3, each length of angle material forming the frame includes a horizontal leg 13 and a vertical leg 14. The spacing between the opposed edges 15 of the two longer sides of frame 12 is a little less than the width of top 10, and similarly the spacing between the opposed edges 15 of the two shorter sides of frame 12 is a little less than the length of top 10. As a result, the opening defined by the frame is slightly smaller than the size of the table top so that the inner bottom margins of the horizontal legs 13 can rest on the outer upper margin of the table top when the frame is placed over the table top. Two locking means are carried by each of the longer sides of frame 12. Each locking means comprises an angle bracket 18 (FIGS. 2 and 3), the vertical leg of which is fixed to vertical leg 14 of the frame side, and the horizontal leg of which extends to a point about even with edge 15. A set screw 19 is carried by the horizontal leg of bracket 18. The purpose of this locking means will be explained more fully below.

At each corner of frame 12, a hollow metal tube 20 is fixed to the frame, such as by welding. Each of the four tubes 20 is fixed to, and extends longitudinally of, one of the longer sides of frame 12. One end of each tube abuts the vertical leg 14 of a shorter side of the frame, and a hole is provided in the shorter side 14 in alignment with the axis of each tube 20.

Slidably arranged within each tube 20 is a rod 21, the rod being about twice as long as the tube. Rod 21 also slidably extends through the hole in the frame aligned with its respective tube 20. Each rod has two extreme positions, one of which is a fully extended position shown in FIG. 1 and in solid lines in FIGS. 2 and 4. In this position, an enlarged head 22 on the inner end of rod 21 abuts the inner end of tube 20. The other extreme position of rod 21 is a retracted position, shown in broken lines in FIG. 4, in which a head 23 on the outer end of the rod abuts the outer face of the shorter side of frame 12 through which the rod extends.

Two extension leaves 26 are furnished, one for mounting adjacent to each of the shorter sides of frame 12 so as to extend the length of the table. In this example, each leaf comprises a frame, similar in construction to the frame 12, i.e., formed of four interconnected lengths of angle material. Within the frame of each leaf 26 a glass panel 27 is supported. The vertical legs of the longer sides of each leaf 26 are formed with upwardly extending notches 28 adapted to accommodate rods 21. When extension leaf 26 is placed upon a pair of extended rods 21, notches 28 fit over the rods 21 to prevent the leaf from sliding off the rods. The depth of the notches is chosen so that the upper surface of the leaf lies in substantially the same horizontal plane as the upper surface of frame 12. Preferably, the spacing between the head 23 of each rod and the opposed edge of frame 12, is about equal to the width of

leaf 26, so that the leaf fits snugly between the head and frame.

It will be seen that if a person sitting at the end of the extended table were to lean down upon the leaf 26, there would be a tendency for frame 12 to pivot about the closer edge of table top 10 thereby lifting the frame away from the table. This possibility is prevented by use of the locking means including bracket 18. After frame 12 is rested upon table top 10, set screw 19 is rotated so as to apply a slight pressure between the upper end of screw 19 and the inner margin of leg 13 directly above it. It may be mentioned that the dimensioning of frame 12 with respect to table top 10 is such that with proper manipulation the frame can be placed upon table top 10 and then shifted enough to bring a margin of the table top between each set screw 19 and the horizontal leg 13 above it. From the above description, it will be appreciated that when it is desired to extend the length of table top 10, frame 12 is simply placed over the table top and set screws 19 adjusted. Rods 21 are pulled out to their fully extended positions, and extension leaves 26 placed on the rods. When the lengthened table is no longer needed, leaves 26 are simply lifted off rods 21 and the rods pushed in to their retracted positions. If desired, the frame can be left in place and the leaves stored away. On the other hand, if the original appearance of the table is desired, the frame 12 can be removed and stored with the leaves.

In the illustration of the alternative embodiment of the present invention shown in FIGS. 5 and 6, parts corresponding to the parts of FIGS. 1-4 bear the same reference numerals followed by a prime. In this embodiment, there are no tubes 20 and rods 21. Instead, a different type of means are provided for securing each extension leaf 26' to the frame 12'.

Two spaced-apart studs 31 (only one being shown in the drawings) project from the vertical leg 14' of each of the shorter sides of frame 12'. At the free end of each stud 31, spaced from the outer surface of leg 14', is an enlarged head 32. The vertical leg of one of the longer sides of extension leaf 26' is provided with two keyhole-shaped openings 33 (only one being shown). The lower larger portion 34 of opening 33 is sized to accommodate head 32, and the upper smaller portion 35 of hole 33 is sized to accommodate stud 31.

Thus, it will be appreciated that to mount extension leaf 26' on frame 12', the leaf is held with the larger portions 34 in alignment with heads 32, and the leaf is then moved toward the frame so that the heads 32 pass through opening portions 34. Thereafter, extension leaf 26' is lowered so that the opening portion 35 fits around the stud 31.

It is to be understood that the description herein of a preferred embodiment according to the invention is set forth as an example thereof and is not to be construed or interpreted as a limitation on the claims which follow and define the invention.

What is claimed is:

1. An extension arrangement for a table having a one-piece glass top, comprising:

a. a frame independent of said table and having an opening slightly smaller than the size of the table

top so that the inner edge of said frame can be rested upon the outer margin of the table top and readily removed therefrom as desired, said frame having a size and shape substantially the same as that of the periphery of the table top so that when said frame is applied to the table it does not appreciably increase the size of the table top,

b. at least one extension leaf independent of said frame, and

c. means for temporarily securing said leaf to an edge of said frame so that the upper surfaces of said leaf and frame lie in substantially the same horizontal plane.

2. An extension arrangement as defined in claim 1 wherein said frame is formed of interconnected metal elements each having an angular cross-sectional configuration.

3. An extension arrangement as defined in claim 1 including locking means carried by said frame for engaging the lower surface of the table top to prevent said frame from accidentally lifting away from the table top.

4. An extension arrangement as defined in claim 3 wherein said frame is formed of elements having angular cross-sections, one leg of each angle lying in a horizontal plane and being adapted to rest upon the table top, the other leg of each angle being in a vertical plane, and each of said locking means being secured to a vertical leg of one of said angle elements and being spaced vertically from the horizontal leg of said element.

5. An extension arrangement as defined in claim 4 including a set screw forming part of said locking means, an end of said screw being adjustable toward and away from the horizontal leg of its respective angle element.

6. An extension arrangement as defined in claim 1 wherein each extension leaf comprises a frame surrounding a glass panel.

7. An extension arrangement as defined in claim 1 wherein said securing means comprises two horizontally spaced-apart rods extending from an edge of said frame, said rods being movable with respect to said frame between a retracted position and a position in which they extend from said frame for supporting an extension leaf.

8. An extension arrangement as defined in claim 7 wherein said rods are slidable longitudinally into an out of said frame, and means carried by said frame for guiding said sliding movements.

9. An extension arrangement as defined in claim 8 wherein said guide means includes a tube fixed to said frame, one of said rods being slidably arranged within said tube.

10. An extension arrangement as defined in claim 1 wherein said securing means is carried by edges of said frame and extension leaf which are brought into engagement when the extension leaf is secured to said frame, said securing means comprising a headed stud projecting from one of said edges and a hole in the other of said edges for accommodating said stud.

* * * * *