

April 8, 1958

H. N. ANDERSON
VARIABLE HEIGHT TABLE

2,829,936

Filed Feb. 21, 1957

2 Sheets-Sheet 1

Fig. 1

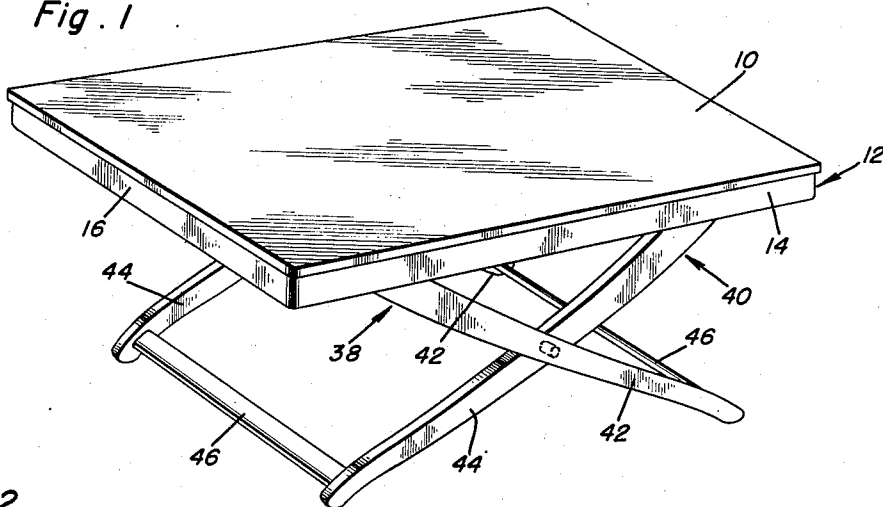


Fig. 2

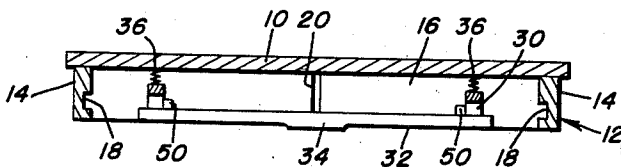
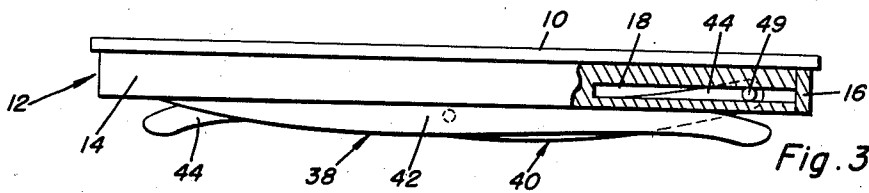
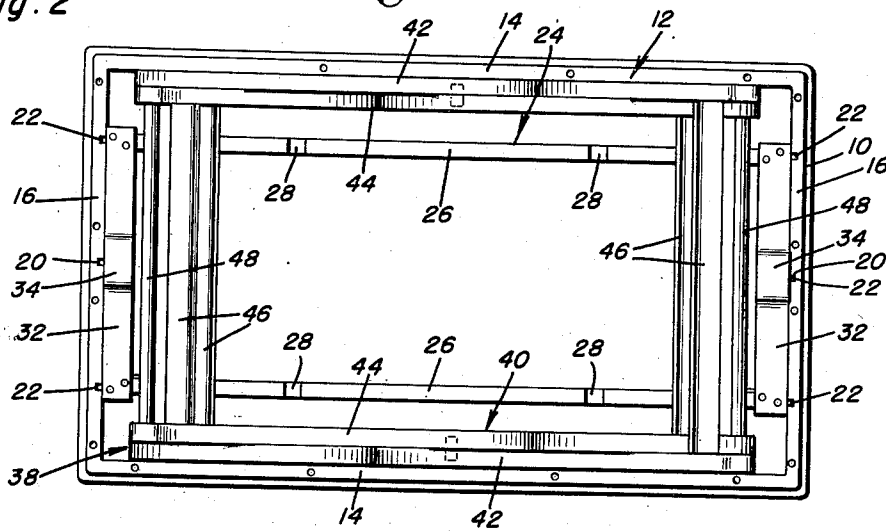


Fig. 5

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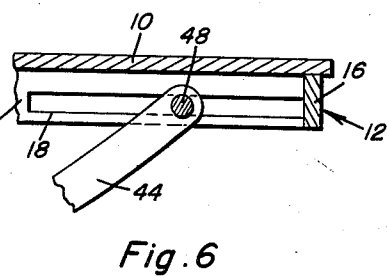
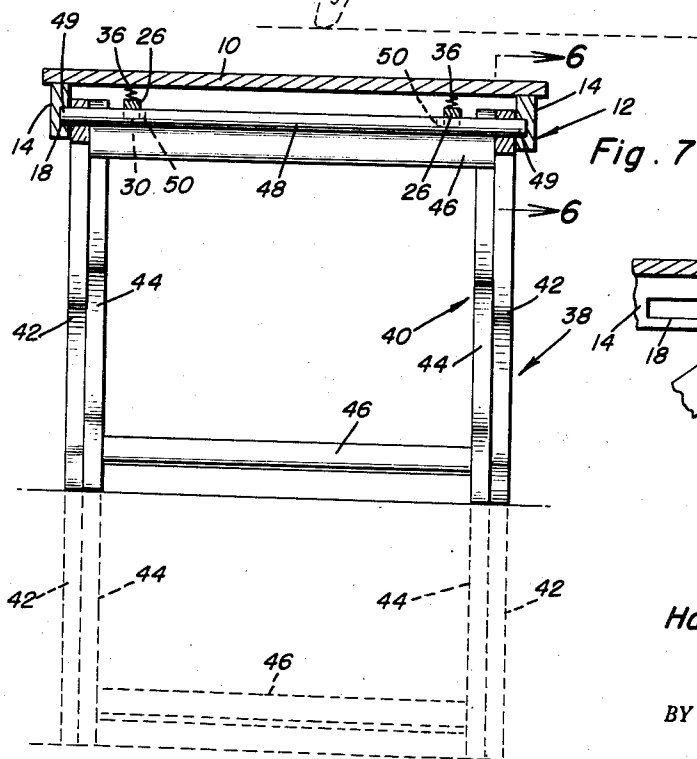
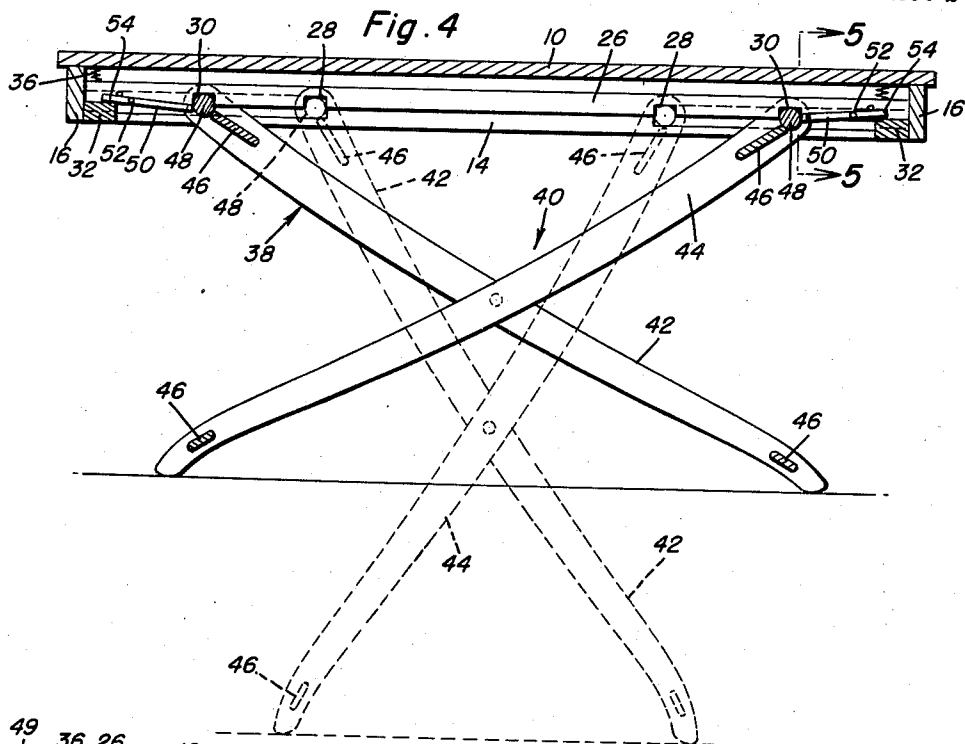
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2 Sheets-Sheet 2



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1

2,829,936

VARIABLE HEIGHT TABLE

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3 Claims. (Cl. 311-95)

The present invention relates to folding and convertible tables, generally speaking, and has reference in particular to a novel and structurally distinct table for cottage, home and efficiency apartment use, where for example, available space is often at a premium.

More specifically, the concept has to do with a so-called high-low table which when it is down serves as a cocktail or coffee table, which when needed raises up to a higher level for dining, does so with finger-tip pressure, fulfills the recognized need and growing trend for a multipurpose table which adapts itself to the comfort of users seated on a sofa or lounging height chair and, consequently, makes guests and others feel comfortable and at home.

The invention also contemplates the provision of a convertible multipurpose table which is adaptable for acceptable use in one's dining room, kitchen, living room or elsewhere by reason of the fact that it solves some of the home problems involving economical usefulness and which is equally desirable in that it may be designed and constructed in keeping with the mode of the moment and may be beautifully finished to harmonize with any given room furniture arrangement.

Not only is the table such in construction as to comply with manufacturing and economics of manufacturers and suitability for varying design requirements, it is sturdy, simple in construction, easy to raise and lower and, what is highly important, the leg frames thereof are foldably mounted and are capable of being nested into compact relationship for practical shipping, handling and storage in the house or elsewhere. A preferred embodiment of the invention is that which is characterized by a top provided on its bottom side with a fixed frame embodying longitudinal frame members and transverse frame members, and a pair of leg-frames each having a pair of spaced parallel legs and means at the upper end portions of the leg-frames slidably and hingedly connecting the respective leg-frames to the longitudinal frame members in such a manner that the legs of the frames are hinged in crossed or X-shaped relationship, means being provided to aptly and satisfactorily lock the leg-frames in their respectively usable high and low positions.

Features and advantages not touched upon above will become more readily apparent from the following description of the details taken in conjunction with the views appearing in the accompanying sheet of drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a perspective view of the improved convertible or variable height table showing the same in its low or "coffee table" position.

Figure 2 is a bottom plan view of the same with the legs folded and the table ready for shipping or storage as the case may be.

Figure 3 is an edge or side elevation with a portion of one of the frame members broken through and shown in section to reveal one of the grooves and how the cooperating leg-frame is connected therewith.

2

Figure 4 is a view in section and elevation which may be said to be a central longitudinal section taken through the structure seen in Figure 1 and which, in addition, shows in phantom lines, the extended or elevating positions of the leg frames.

Figure 5 is a cross-section on the vertical line 5-5 of Figure 4 looking in the direction of the arrows.

Figure 6 is a fragmentary sectional view showing certain of the details, taken on the plane of the line 6-6 of Figure 7.

Figure 7 is a transverse section with parts appearing in elevation.

Referring now to the drawings with reference numerals the table top, which may be said to be more or less conventional in form, is denoted by the numeral 10. As before mentioned, there is a frame 12 mounted on the underside thereof providing a skirt and this embodies spaced parallel longitudinal frame members 14 and transverse end members 16. As seen in Figures 4, 5, 6 and 7 the inward vertical surfaces of the longitudinal frame members are provided at their respective ends with relatively short horizontal or lengthwise grooves 18 which provide channel-like keyways. These grooves range inwardly from the transverse outer frame members 16 and are limited in length as is evident from Figs. 3 and 6. As shown in Figures 2 and 5 the inner vertical surfaces of the transverse frame members 16 are provided with short vertical grooves or auxiliary keyways 20 to accommodate slidably keyed portions 22 (Figure 2) of the retainer means. This means is preferably an inner frame, that is, a frame 24 which is located beneath the table top and within the confines of the outer fixed frame. It is characterized by a pair of spaced parallel rails 26 the underneath sides of which are provided with inward pairs of keeper notches 28 and outward pairs of longitudinally spaced keeper notches 30. As is necessary in this construction the frame 24 also has transverse frame members 32 and on the underneath side of the intermediate portion of each there is a boss 34 providing a finger "button." The frame 24, as a unit, being slidably keyed, as already explained is forced downwardly by way of appropriately arranged expansion type coil springs 36 interposed between the bottom of the top and the rails 26 (see Figure 5). Thus the top embodies inner and outer frames with the outer frame fixed and the inner frame slidably mounted and spring biased to function as a retainer for the pairs of leg frames 38 and 40 respectively. Each leg frame is the same in construction except that the inner leg frame 40 is smaller than the outer leg frame 38 so that the legs thereof may fold together. In this connection the outer legs are denoted by the numeral 42 and the inner ones by the numeral 44. They are connected together by transverse braces 46. It will be noticed that the pivoted legs of the respective leg frames are adapted to provide the crossed or X-shaped relationship illustrated in the drawings. The upper ends of the respective legs are connected together by a horizontal round or dowel 48. In fact, the legs are fixed thereto and the dowel forms a sliding and rocker connection. The end portions 49 of the dowel extend outwardly beyond the legs and are slidably and hingedly keyed in their respective keying grooves 18, as shown in Fig. 7.

As is obvious this mode of slidably keying and hinging the leg frames with the legs in crossed relation makes it possible to adjust and shift the legs so that they may occupy the spread position seen in full lines in the drawings or they may be brought together or contracted to occupy the erected or upright position seen in phantom lines in Figure 4. It follows, therefore, that the leg frames may be adjusted to high and low positions and they may also be collapsed and nested and folded together in compact relationship as shown in Figures 2 and

3 for easy handling, shipping and storage as the case may be.

When the legs are adjusted to take the phantom line position seen in Figure 4, the dowels 48 are seated in the inner keeper notches 28 and the spring pressed frame 24 serves to firmly press and bind the dowels in place and consequently the leg-frames are sustained in the given position. By the same token the leg-frames may be spread apart as shown for instance in Figure 4 wherein the dowels are then lodged and firmly held in the outwardly disposed keeper notches 30.

Pivotally mounted on the inner end portion of the longitudinal frame members are gravity type latches 50. There are four of these latches and they are pivoted so that the pivot point 52 is between the center and outer end. The outer end portion is free as at 54 and located above the top surface of the manually depressed or operable frame member 32. These latches serve as stops and limit the outward movement of the dowel so that they are easily seated in the keeper notches 30 and therefore do not move outwardly and beyond said keeper notches.

It will be evident that when and by lifting the table, the table legs are freed from the locking bar notches and move inward to the high position notches and are held rigidly in position by the retentive and locking action of the spring pressed rails. It is to be stated in this connection that it is within the purview of the invention to use, instead of a pair of rails 26 a single spring pressed slidably mounted rail (not shown). It follows that the invention is susceptible of being carried out in various table constructions whether small or large and whether in the so-called low price or high priced category.

The table is made in various styles if desired. In fact, the table can be used plus a drop leaf (not shown) for the purpose of providing a larger but nevertheless compact type table. It lends itself to use as a card table, dinette table, console table or even an end table.

To fold flat for storage and other purposes by a simple operation fold the table with the hands, one on each end, then turn the table upside down, and at the same time press the lock bar ends and the table will fold flat. The construction allows the low position latches 50 to fall clearing movement of the dowels to pass by the low position notches 30. It follows that the purpose of the latches 50 is to stop the leg-frames at the low position by preventing the dowels from passing the low table position keeper notches 30. These latches drop clear of the dowels when the table is in the upside-down position so that the legs can fold flat.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A variable high-low folding table comprising a rigid top having a bottom side provided with a rigidly attached frame having side and end frame members, said side members having opposed lengthwise keying grooves situated adjacent the respective end portions on said side members, a pair of companion leg-frames having crossed X-type pivotally connected legs, the upper end portions

of said leg-frames having dowels with their ends slidably and hingedly keyed in their respective grooves, and manually depressible spring-biased frame structure operatively mounted within the encompassing limits of said first named frame, said spring-biased frame structure being rectangular in form and comprising a pair of longitudinal rails having longitudinally spaced selectively usable keeper notches therein, also having transverse frame members adjacent to the transverse ends of the table top and accessible for easy manual usage.

2. A variable high-low folding table comprising a rigid top having a bottom side provided with a rigidly attached depending skirt-like frame embodying side members connected together by end members, the interior surfaces of said side members being provided adjacent the respective end portion of the side members with longitudinally extending keying grooves, each groove extending from the transverse member toward the median portion of the companion side member and terminating at a predetermined place, a pair of leg frames, each leg frame having a pair of spaced parallel legs and the adjacent and co-operating legs having median portions crossed and pivotally connected together in requisite companion relationship, the upper end portions of the legs of the respective leg frames being connected together by dowels and the end portions of the dowels projecting beyond the adjacent ends of the respective legs and being slidably and hingedly keyed in their respective grooves, and a second frame arranged within the encompassing marginal limits of said first named frame and also having side members arranged in spaced parallelism in respect to the side members of the first named frame, the outer end portions of said second named side members being connected by transverse members having abutting and sliding contact with the interior surfaces of the transverse member of the first named frame, coil springs interposed between the underneath surface of said table top and longitudinal members of said inner frame, the coil springs serving to normally press the transverse end members of the second frame into flush relationship with the transverse members of the first named frame and being adapted to be manually pressed to bodily move the second named frame toward and from the table top, and the longitudinal members of the second named frame being provided with longitudinally spaced selectively usable keeper notches for retentive reception of cooperating portions of the dowels.

3. The structure defined in claim 2 and wherein the end portions of the longitudinal members of the inner frame having an inner pair of keeper notches cooperable with each other and located approximately opposite adjacent end portions of the inner ends of said keying grooves, and an outer pair of keeper notches, the notches in the outer pair being located opposite each other and also opposite the outward end portions of said grooves.

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