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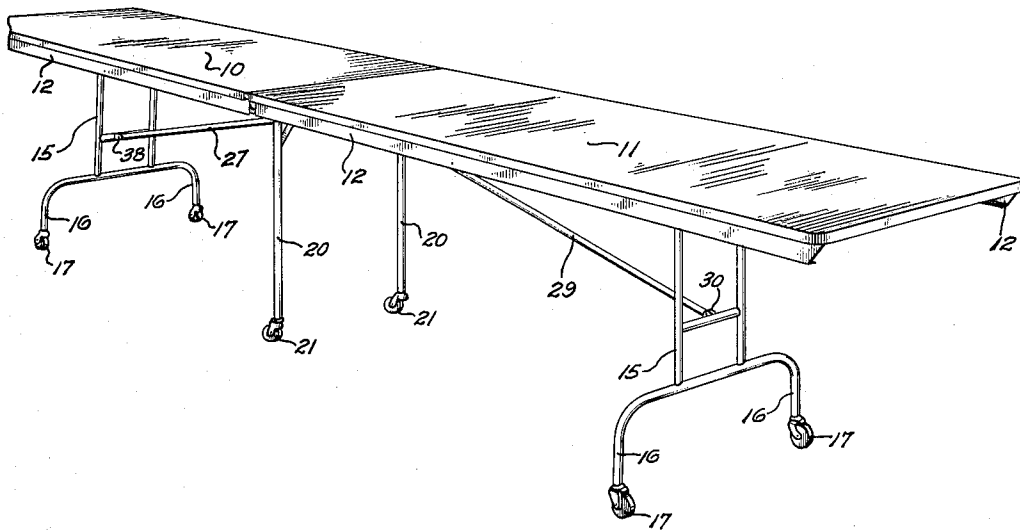
P. BLINK  
IMPROVEMENTS IN COLLAPSIBLE LEG AND BRACE  
MECHANISM FOR FOLDING TABLES

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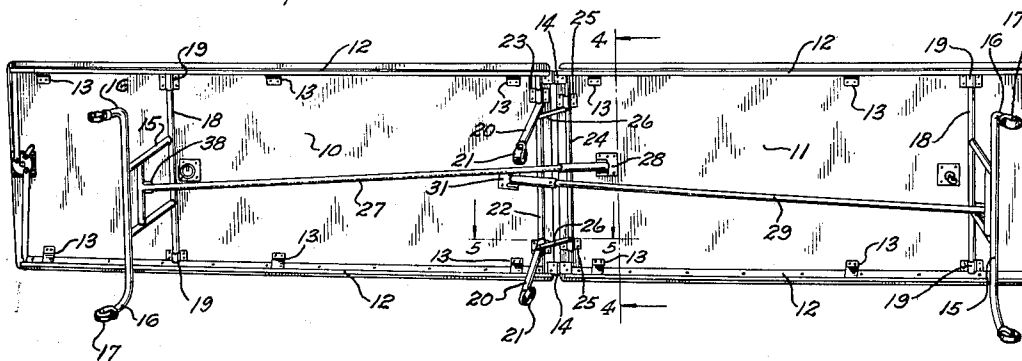
Filed Nov. 18, 1953

2 Sheets-Sheet 1

*Fig. 1.*



*Fig. 2.*



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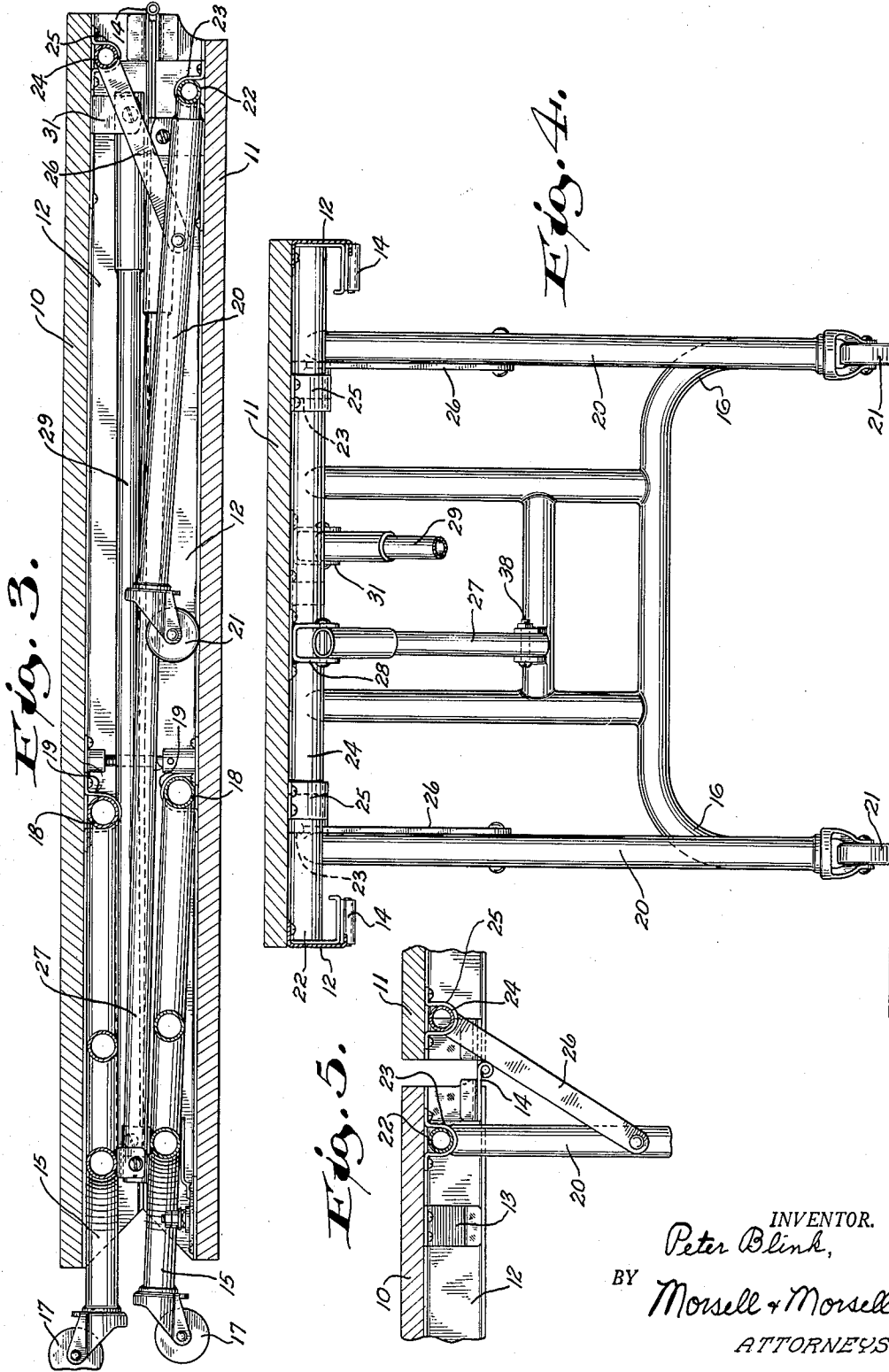
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1

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**IMPROVEMENTS IN COLLAPSIBLE LEG AND BRACE MECHANISM FOR FOLDING TABLES**

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1 Claim. (Cl. 311-92)

This invention relates to improvements in collapsible leg and brace mechanism for folding tables.

There are in common use elongated sectional folding tables, benches, platforms, and like articles of furniture adapted to be used by large groups and these articles of furniture customarily include a pair of elongated endwise adjacent and foldably connected top or board members, each of which is supported by a foldably associated leg structure mounted near its outer end portion with an additional foldable leg structure positioned adjacent the transverse median of the extended top or board at the junction of the inner ends of the foldably associated sections thereof.

To collapse or fold a table or like article of furniture of the aforementioned type, it is customary to fold one of the board or top sections flatly lengthwise upon the inner face of the other top or board section and this operation simultaneously serves to collapse or fold all of the supporting leg structures against the inner faces of the board sections with the result that the folding legs and associated brace members are compactly confined between the folded-over top or board sections.

With the above in mind, it is, therefore, a primary object of the present invention to provide a folding table or the like in which the folding leg structure for each top section is so associated with the other top section through elongated brace means that the action of folding one top section onto the other will simultaneously cause, through the brace members extended to the legs, the flat collapse of the leg structures, and the intermediate leg structure is similarly collapsed.

In the type of folding table or the like under consideration, the longitudinal side margins of the table top sections are reinforced by metallic angle or channel members applied along the side marginal undersurface portions of the top sections. The hinge members connecting the adjacent inner ends of the endwise adjacent top or board sections are mounted on and secured to said metallic angle or channel members thereby materially enhancing the rigidity of mounting of said hinges and taking the strain from the softer material of the board or sections proper.

A further object of the invention is to provide a folding table or the like which, when in its outstretched condition for use, is firmly supported and braced by separated leg and brace members and which can be manipulated to and from its collapsed condition very easily and quickly with a minimum of manual manipulation and effort.

With the above and other objects in view, the invention consists of the improved collapsible leg and brace mechanism for folding tables or the like, and its parts and combinations as set forth in the claim, and all equivalents thereof.

In the accompanying drawings in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a side and end perspective view of a fold-

2

ing table having the improved leg and brace mechanism in its outstretched condition for use;

Fig. 2 is a fragmentary view, slightly in perspective, of the underside of the table in its outstretched or unfolded condition;

Fig. 3 is a longitudinal sectional view through the table in its folded or collapsed condition and on a larger scale;

Fig. 4 is an enlarged transverse vertical sectional view taken approximately along the line 4-4 of Fig. 2; and

Fig. 5 is an enlarged fragmentary detail sectional view taken approximately along the line 5-5 of Fig. 2.

Where the term "table" is used herein it is intended to include not only an elongated table of the type illustrated but a bench, platform, stand or other like structure or article of furniture wherein there are board or top sections foldably joined together in end to end relationship and which are supported in open position by foldable leg structures and braces.

With particular reference to the drawings it will appear that the article of furniture includes a pair of endwise adjacent similar flat rectangular board elements 10 and 11. Applied to the under surface of each board section along the longitudinal margins thereof and anchored thereto are rectilinear flanged metallic angle or channel reinforcing members 12 which at various positions along their lengths are additionally anchored and braced by angular straps 13. Also, the lower flanged portions of the innermost ends of the longitudinal reinforcing members 12 have secured thereto the plate portions of hinges 14; said hinges 14 providing the means by which the inner end portion of one board section 10 is foldably connected to its companion board section 11 to permit the collapse or folding of one board section upon the inner face of the other, as in Fig. 3. By mounting the hinges 14 on the metallic longitudinal reinforcing members 12 danger of the hinge securing means becoming loosened is eliminated and the hinges, being anchored to the metallic members 12, are more secure than if they were mounted on the relatively softer material of the board sections 10 and 11.

Applied transversely to the underside of the board sections 10 and 11 toward the outer ends thereof are supporting leg structures designated generally by the numerals 15 and which are of integral construction and include normally upright members, each carrying at its lower or outer ends a transverse bar having downturned laterally spaced leg elements 16 with rollers or casters 17 journalled in their free extremities. With respect to each of the leg structures 15, it will be observed from Fig. 2 that the inner ends of the upright portions thereof are integral with a transverse shaft portion 18 which is pivotally mounted at its outer ends in brackets 19 secured to the underside of the board section to which the leg structure in question is applied, the brackets 19 being adjacent the open sides of the reinforcing members 12.

For the support of the intermediate portion of the table top when the board sections 10 and 11 are in their outstretched condition of Fig. 1, there are a pair of transversely spaced apart intermediate legs 20 carrying rollers or casters 21 at their outer ends. The inner ends of said intermediate legs 20 are integral with a transverse shaft 22 which is applied transversely to the inner end portion of the undersurface of one of the board sections, as the section 10, with the end portions of said shaft 20 being journalled in bearing brackets 23. Another transverse shaft 24 is applied to the undersurface of the inner end of the other board section 11, having its end portions journalled in bearing brackets 25. In order that the intermediate legs 20 may be moved from outstretched supporting position to the collapsed position of Fig. 3 and vice versa, upon the folding or unfolding

of one of the board sections relative to the other, straps 26 are extended between the shafts 22 and 24, as is best shown in Figs. 4 and 5.

The leg structure 15 applied to the board section 10 is similarly adapted to be folded and unfolded relative to the inner surface of its board section upon folding movement of one board section relative to the other by an elongated rod 27 having its outer end portion pivotally connected to an intermediate portion of said leg structure 15, as at 38, and having its inner end portion pivotally mounted in a bracket 28 secured to an under-surface portion of the inner end of the board section 11. For the leg structure 15 applied to the outer end portion of the board section 11 there is a similar elongated rod 29 having one end portion pivotally mounted in a bracket 30 on an intermediate portion of said leg structure 15 and having its other end portion pivotally carried by a bracket 31 mounted on the undersurface of the board section 10 adjacent its inner end.

The operation of collapsing the table or article of furniture from its outstretched operative position of Fig. 1 to the completely folded condition of Fig. 2 is extremely simple. It is only necessary to fold one top or board section toward the inner face of the other and through the movement thereby imparted to the elongated rods 27 and 29 and to the links 26, the leg structures 15 and intermediate legs 20 will be automatically swung to positions substantially parallel with the board sections and will be confined in the space between the folded over board sections, as in Fig. 3. A reverse operation automatically effects the projection of all of the legs until the completely unfolded condition of Fig. 1 is attained.

Not only do the elongated rods 27 and 29 and the links 26 transmit folding and unfolding movement to the legs served thereby, but the same provide bracing means for the legs when they are in their supporting positions of Fig. 1. The entire folding table is extremely rigid as the board sections 10 and 11 are reinforced by the metallic members 12 and the latter have the hinges 14 securely anchored thereto.

The folding table with the improved collapsible leg and brace mechanism employs a minimum of operating parts, is very simple and easy to manipulate, and is well adapted for the purposes set forth.

What is claimed as the invention is:

In an article of folding furniture, a flat top formed of first and second aligned endwise adjacent sections, depending metallic rails carried by the longitudinal margins of the undersurfaces thereof, hinges joining the adjacent ends of said sections and anchored to said metallic rails, supporting legs foldably connected with said first section, an elongated rod interposed between said legs and a portion of only said second section and pivotally connected at its at its opposite ends with both of the same, supporting legs foldably connected with said second section, an elongated rod interposed between said last-mentioned legs and said first section and pivotally connected at its opposite ends to both of the same, a third set of supporting legs foldably connected with an inner undersurface portion of said first section offset from the hinges connecting said sections, and a strap pivotally attached to an under surface portion of the second section and to said third set of legs, the inner surface of one of said sections being foldable adjacent the inner surface of the other section, the movement of the sections relative to each other positively transmitting movement to all sets of supporting legs whereby all of the legs, rods and strap are foldably confined against the inner surfaces of the sections within the area bounded by said rails.

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