Nov. 18, 1930. F. L. CASPER 1,782,059

TABLE LEAF SUPPORT

Original Filed Sept. 12, 1927

Fig. 1.

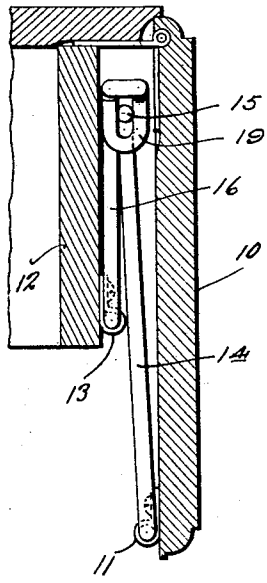


Fig. 2.

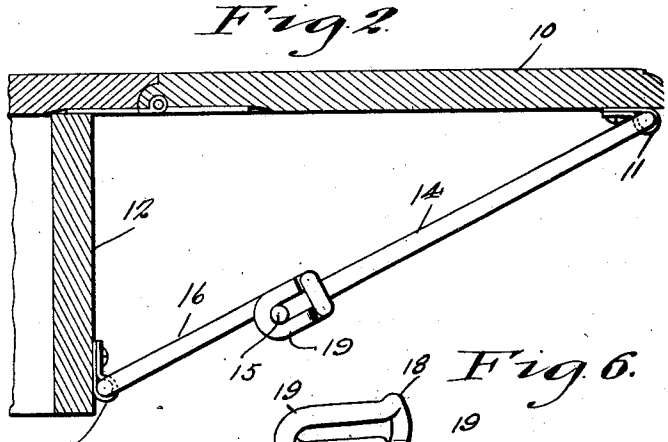


Fig. 6.

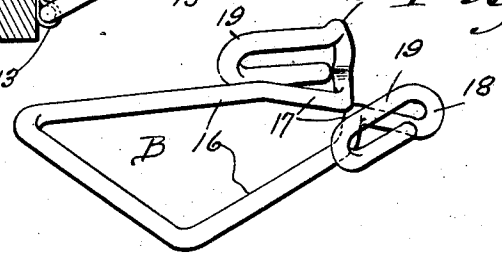


Fig. 3.

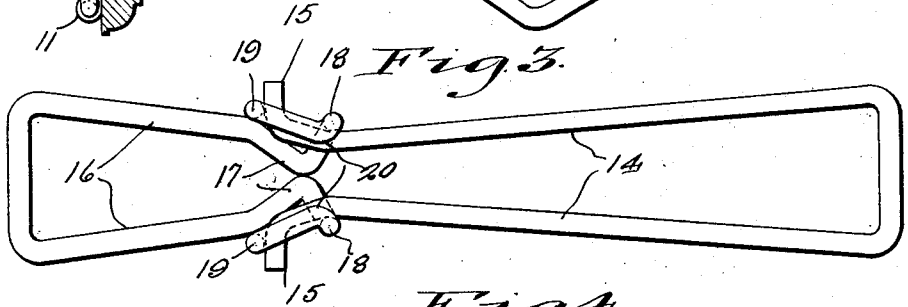


Fig. 4.

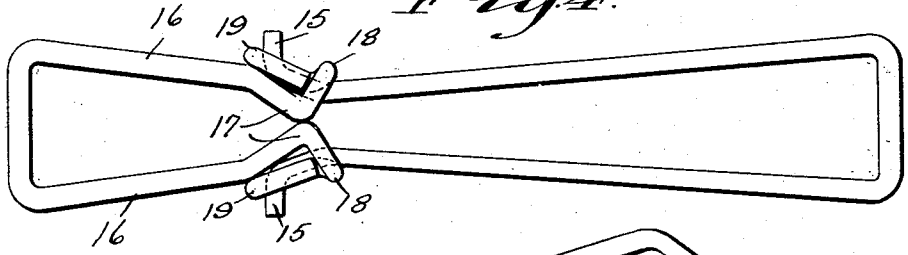
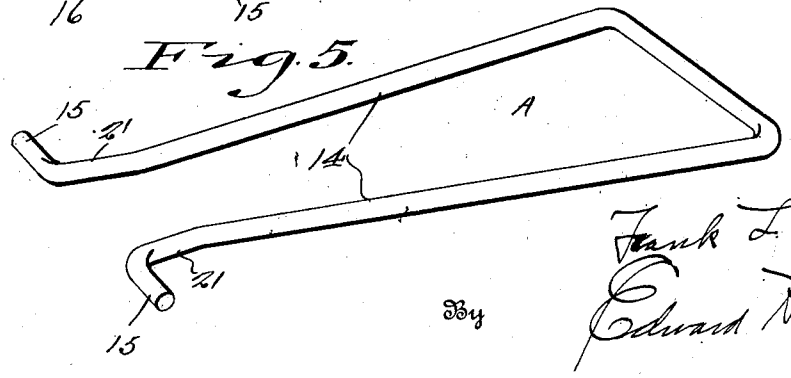


Fig. 5.



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UNITED STATES PATENT OFFICE

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TABLE-LEAF SUPPORT

Application filed September 12, 1927, Serial No. 219,149. Renewed November 22, 1929.

This invention relates to a collapsible brace or support primarily intended for use in conjunction with hinged table leaves, but susceptible for use as a support for other hingedly mounted members, and its general application wherever found desirable, is contemplated by the claims.

One of the chief characteristics of the invention resides in the construction of a brace or support possessing the desired strength and rigidity when in use, and thereby prevent accidental displacement of the support under any and all circumstances, and one which can be quickly and conveniently collapsed to permit folding of the hinged member with which it is used.

In carrying out the invention I contemplate a brace or support including companion members, designed and associated in a novel manner to assure collapsing of the brace in but one and the right direction, the said sections being effectively latched when arranged in end to end relation for use.

Another object of the invention resides in constructing a brace for the purposes mentioned, wherein the companion sections while effectively latched in end to end relation for use, are so associated to permit the brace to be easily and quickly unlatched by an upward force.

Other objects and advantages of the invention will be better understood when the following detail description is read in connection with the accompanying drawing, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawing forming part of this application like numerals of reference indicate similar parts in the several views and wherein:

Figure 1 is a fragmentary sectional view of a table showing the hinged member folded in a vertical position with the brace collapsed.

Figure 2 is a similar view showing the hinged member of the table extended and the companion sections of the brace arranged in end to end relation.

Figure 3 is a bottom plan view of the brace.

Figure 4 is a top plan view thereof.

Figure 5 is a view of one of the companion sections.

Figure 6 is a view of the other companion section.

The collapsible brace forming the subject matter of the present invention, is preferably constructed of wire possessing the desired strength for the purpose for which it is intended, and also the desired resiliency to function in accordance with the contemplated operation thereof. The brace embodies companion sections indicated at A and B respectively, and these sections are adapted to be swingingly mounted on the hinged member and its support respectively. In accordance with the specific embodiment of the invention herein illustrated, the section A is swingingly mounted on the hinged member 10, constituting a table leaf, the member being mounted in a suitable bracket 11 secured to the under side of the leaf. The other section B is mounted on the table 12 by a similar bracket 13, the companion sections being designed and associated in a manner to be presently described, so that the brace or support in its entirety can be easily and quickly collapsed by an upward force, and also provide a rigid support for the hinged member when in use.

The member A is formed from a single length of wire into the configuration illustrated in Figure 5 and includes the spaced limbs 14, the corresponding extremities of which are offset in opposite directions as at 15.

The section B is also formed from a single length of wire and includes the limbs 16 which are bent at an appropriate point in their length to provide inwardly directed projections 17. As clearly illustrated in Figures 3 and 4 these projections are substantially V-shaped and extend toward each other with their apexes in contacting engagement or substantially so. Each of these projections is curved downwardly as at 18 and then extended to provide loops 19, each of which is arranged vertically and to one side of the adjacent limb 16 of the section. The terminal of each loop contacts the curved portion 18 as shown.

When the companion sections of the brace are operatively associated, the limbs 14 of

the section A pass through the curved portions 18 and have their offset extremities 15 received by the adjacent loops 19. It will be noted upon inspection of Figure 3, that each loop has a portion curved inwardly to provide oppositely disposed cam-like surface 20, which cooperates with the substantially parallel portions 21 of the limbs 14 of the section A, in carrying out the contemplated operation of the support.

When the parts are assembled in the manner above described, the companion sections are effectively latched when they are arranged in end to end relation for use as illustrated in Figure 2, and can not be accidentally unlatched by weight or pressure exerted upon the hinged member 10. The limbs 14 of the section A pass through the loops 19 beneath the projections 17 and above the cam-like surfaces 20, and this prevents the brace or support from collapsing by weight or pressure exerted upon the hinged member 10. In other words the brace can not close or collapse in the wrong direction, and requires an upward force against the under side of the brace to unlatch the companion sections, and thereby allow said sections and hinged member 10 to be folded as illustrated in Figure 1. The brace or support is thus afforded maximum strength and rigidity when the sections are arranged in end to end relation for use, but at the same time allows the brace to be conveniently and quickly unlatched in the manner just stated. When force is applied to the under side of the brace, the limbs 14 of the section A ride over the cam-like surfaces 20, thereby slightly forcing the limbs 14 together until said limbs pass from said cam-like surfaces between the loops 18. Then by simply pressing upon the hinged member 10, the section A moves upwardly to its folded position against the table 12 while said section A also assumes its folded position substantially parallel with the hinged member 10 and the section B. During this operation, it is obvious that the offset extremities 15 of the section A move from the ends of the loops which they engage when the sections are arranged in end to end relation, toward the opposite ends of said loops. When the hinged member 10 is swung outwardly and upwardly to a position for use, the section A moves the section B away from the table, and as the hinged member assumes its final position the limbs 14 of the section A pass over the cam-like surfaces 20 and snap into the curved portions 18 of the respective loops, and are then effectively latched against casual displacement.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood, that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What is claimed is:

1. The combination with a hingedly mounted member and a support therefor, of a brace comprising companion sections, and pivotally mounted on said member and support, loops formed on the limbs of one section, and adapted to slidably receive the limbs of the other section, offset extremities formed on the limbs of the last mentioned section and both slidably and pivotally received by said loops, whereby said sections can be arranged in end to end relation or folded substantially parallel, and each loop having a portion curved inwardly to provide oppositely disposed cam surfaces cooperating with the limbs of the second mentioned section, whereby said sections are effectively latched when swung into end to end relation, and adapted to be unlatched by force in a direction perpendicularly to said offset extremity.

2. The combination with a hingedly mounted member and its support, of a brace comprising companion sections pivotally mounted on said member and support, each section including spaced limbs, inwardly directed projections formed on the limbs of one section and arranged in contacting engagement, loops formed on said limbs by the continuity of said projections and adapted to slidably receive the limbs of the other section, offset extremities formed on the limbs of the last mentioned section and received by said loops for both pivotal and sliding movements, each loop having a portion curved inwardly to provide oppositely disposed cam surfaces whereby said sections can be arranged in end to end relation or folded substantially parallel, and said limbs of the second mentioned section having parallel portions cooperating with said projections to prevent folding of the sections in but one direction.

3. The combination with a hinged member and its support, of a brace comprising companion sections formed from wire and pivotally mounted on said member and support, each section including spaced limbs, projections formed on the limbs of one section and projecting inwardly toward each other in contacting engagement, loops formed on said limbs and forming a continuity of said projections, each loop being curved at its point of juncture with its respective projection to slidably receive the adjacent limb of the other section, offset extremities formed on the limbs of the last mentioned section and received by said loops for both pivotal and sliding movements, to permit said sections to be arranged in end to end relation or folded substantially parallel, the limbs of said last mentioned section cooperating with said projections to prevent folding of said section in but one direction, and each loop having a portion curved

inwardly to provide oppositely disposed cam surfaces cooperating with the limbs of said last mentioned section, whereby said sections are effectively latched when swung into end to end relation, and adapted to be unlatched by force applied perpendicularly to said offset extremities.

In testimony whereof I affix my signature.

FRANK L. CASPER.