

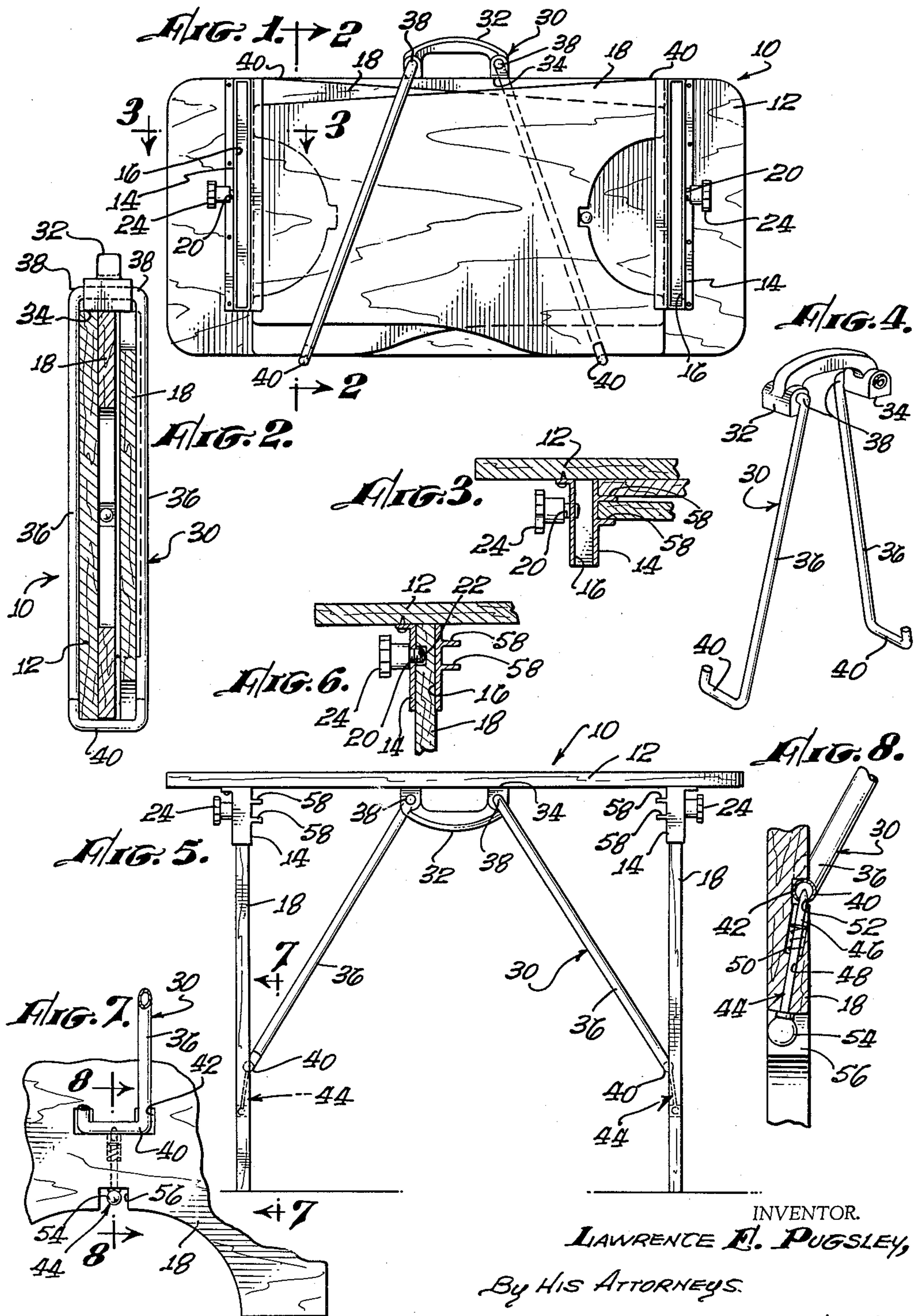
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PORTABLE TABLE OR BENCH

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## PORTABLE TABLE OR BENCH

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The present invention relates in general to a table, bench, or the like, capable of being collapsed quickly and easily from an erected position or condition into a very compact, collapsed position or condition for portability or storage. Since the invention is particularly applicable to a so-called work bench for use in home work shops, or the like, it will be referred to as such hereinafter for convenience. However, it will be understood that the invention may be used for other purposes without departing from the spirit thereof.

In general, the invention contemplates a portable work bench which includes a top, two legs positionable flat adjacent the lower side of the top when the bench is in its collapsed condition and connectible to the top in upright positions to support the top when the bench is in its erected condition, and means for securing the legs to the top when the bench is in its erected condition, such means preferably being releasable so that the legs may be disengaged from the top.

The primary object of the invention is to provide combined carrying and bracing means engageable with the top and the legs in carrying relation when the bench is in its collapsed condition for carrying the top and the legs, and engageable with the top and the legs in bracing relation when the bench is in its erected condition for bracing the legs relative to the top.

A more specific, and important, object of the invention is to provide a combined carrying and bracing means which includes: a handle having a surface engageable with an edge of the top in the collapsed condition of the bench and engageable with the lower side of the top in the erected condition of the bench; two links respectively having ends respectively pivotally connected to opposite ends of the handle, the other ends of the links comprising oppositely oriented hooks engageable in hooked relation with the opposite edge of the top and with the legs in the collapsed condition of the bench, and respectively engageable with the legs in the erected condition of the bench; and latch means carried by the legs and engageable with the hooks, respectively, for connecting the hooks to the legs, respectively, in the erected condition of the bench.

Another object of the invention is to provide a portable work bench of the foregoing nature wherein the securing means for connecting the legs to the top includes two leg brackets mounted on the lower side of the top, and includes releasable means for disengageably connecting the upper ends of the legs to the leg brackets, respectively, when the bench is in its erected condition, the leg brackets having two pairs of opposed recesses therein parallel to the top, and the recesses of each of said pairs respectively receiving the upper and lower ends of one of the legs therein when the bench is in its collapsed condition.

Another object is to provide leg brackets having downwardly facing, socket-like recesses therein receiving the upper ends of the legs when the bench is in its erected condition.

The foregoing objects, advantages, features and results of the present invention, together with various other objects, advantages, features and results thereof which will be evident to those skilled in the collapsible table or bench art in the light of this disclosure, may be achieved with the exemplary embodiment of the invention described in detail hereinafter and illustrated in the accompanying drawing, in which:

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FIG. 1 is a side elevational view of the portable work bench of the invention in its collapsible condition, FIG. 1 showing the lower or under side of the top of the bench and showing the legs of the bench in their carrying positions wherein they are disposed flat adjacent the lower side of the top;

FIG. 2 is an enlarged, sectional view taken along the arrowed line 2-2 of FIG. 1;

FIG. 3 is an enlarged, fragmentary sectional view taken along the arrowed line 3-3 of FIG. 1;

FIG. 4 is a perspective view of a combined carrying and bracing means of the invention;

FIG. 5 is a side elevational view of the portable work bench of the invention in its erected condition;

FIG. 6 is an enlarged, fragmentary sectional view similar to FIG. 3, but showing the corresponding parts in the erected condition of the work bench;

FIG. 7 is an enlarged, fragmentary view, partially in section and partially in elevation, taken as indicated by the arrowed line 7-7 of FIG. 5; and

FIG. 8 is an enlarged, fragmentary sectional view taken along the arrowed line 8-8 of FIG. 7.

Referring to the drawing, the portable work bench of the invention which is illustrated therein is designated generally by the numeral 10 and includes a top 12 having two leg brackets 14 secured to its under side adjacent its ends, as by means of screws, or the like. The leg brackets 14 are provided with downwardly facing, socket-like recesses 16 therein for the upper ends of flat legs 18. The upper ends of the legs 18 are retained within the recesses 16 in the erected condition of the bench 10 by means of screws 20 threaded into the leg brackets 14 and extending into sockets 22 in the legs, the screws 20 being provided with knobs 24.

When the bench 10 is in its erected condition, as shown in FIGS. 5 to 8 of the drawing, the legs 18 are braced relative to the top 12 by a combined carrying and bracing means designated generally by the numeral 30. As best shown in FIG. 4 of the drawing, the carrying and bracing means 30 includes a handle 32 having a flat surface 34 which is seated against the underside of the top 12, as best shown in FIG. 5, when the carrying and bracing means is used as a bracing means. The carrying and bracing means 30 includes two links 36 having ends 38 respectively pivotally connected to the ends of the handle 32. Preferably, the ends 38 of the links 36 are merely bent at right angles to the links and extend into and are journaled in openings in the ends of the handle.

The other ends of the links 36 comprise oppositely oriented hooks 40 which are connectible to the legs 18, adjacent the lower ends thereof, in the erected condition of the bench 10. As best shown in FIGS. 7 and 8 of the drawing, the inner surfaces of the legs 18 are provided with recesses 42 receiving the hooks 40 therein when the bench 10 is in its erected condition. The invention provides two readily releasable latch means 44 respectively carried by the legs 18 and respectively engageable with the hooks 40 to connect the carrying and bracing means 30 to the legs 18 in the erected condition of the bench 10. Each latch means 44 is shown as comprising simply a bolt 46 reciprocable in an opening 48 in the corresponding leg 18 and biased by means of a compression spring 50 into a bolt opening 52 in the corresponding hook 40. The bolt 46 of each latch means 44 is provided with a manually graspable head 54 disposed in a notch 56 in the corresponding leg.

As will be apparent, when the hooks 40 are connected to the legs 18 by the latch means 44, and when the flat surface 34 of the handle 32 is seated against the under side of the top 12, the legs 18 are firmly braced relative to the top. The combined carrying and bracing means 30 may be detached readily by withdrawing the bolts 46



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of the two latch means 44 from the bolt openings 52 in the hooks 40.

The leg brackets 14 are provided adjacent the under side of the top 12 with two pairs of opposed recesses 53 parallel to the top, the two recesses of each pair respectively receiving therein the upper and lower ends of one of the legs 18. The legs 18 are slidable laterally of the top 12 into and out of the recesses 53 of the respective pairs. When the legs 18 are in place in the recesses 53, one of the legs lies flat against the under side of the top 12, and the other is parallel to the first leg, and to the top, but is spaced slightly from such first leg.

In order to utilize the combined carrying and bracing means 30 as a carrying means, the links 36 are slipped over the top 12 and the legs 18, after the legs have been placed in the recesses 53, with one of the links 36 adjacent the upper surface of the top, and with the other of the links adjacent the leg 18 farthest from the top. In other words, the links 36 embrace the top 12 and the two legs 18 therebetween. Also, as shown in FIGS. 1 and 2 of the drawing, the oppositely oriented hooks 40 are hooked over one edge of the top 12 and over the adjacent edges of the legs 18. At the same time, the flat surface 34 of the handle 32 is in engagement with the opposite edge of the top 12. With this construction, the top 12 and the two legs 18 are firmly supported by the carrying and bracing means 30 in a stable manner for easy manual transportation of the bench 10.

In order to collapse the bench 10 into its portable condition, it is merely necessary to release the two latch means 44, loosen the screws 20 to permit disengagement of the legs 18 from the leg brackets 14, insert the legs 18 into the recesses 53, and slip the combined carrying and bracing means 30 over the top 12 and the legs 18 into the position shown in FIGS. 1 and 2 of the drawings. In order to set the bench 10 up at the desired location, the foregoing steps are merely reversed.

Thus, the invention provides a portable work bench which is readily collapsed and set up, which occupies a minimum of space when collapsed, which is extremely steady in its erected condition, and which requires a minimum number of parts due to the dual function performed by the combined carrying and bracing means 30.

Although an exemplary embodiment of the invention has been described herein for purposes of illustration, it will be understood that various changes, modifications and substitutions may be incorporated in such embodiment without departing from the spirit of the invention as defined by the claims which follow.

I claim:

1. In a collapsible, portable table, the combination of:
  - (a) a top;
  - (b) legs positionable adjacent the lower side of said top when said table is in a collapsed condition, and connectible to the lower side of said top in upright positions to support said top when said table is in an erected condition;
  - (c) means for securing said legs to the lower side of said top when said table is in said erected condition;
  - (d) combined carrying and bracing means engageable with and embracing said top and said legs in carrying relation when said table is in said collapsed condition for carrying said top and said legs, and engageable with said top and said legs in bracing relation when said table is in said erected condition for bracing said legs relative to said top;
  - (e) said combined carrying and bracing means including a handle having a surface engageable with an edge of said top in said collapsed condition of said table and engageable with the lower side of said top in said erected condition of said table;
  - (f) said combined carrying and bracing means including two links respectively having ends respectively pivotally connected to opposite ends of said handle, the other ends of said links comprising oppositely

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oriented hooks engageable in hooked relation with the opposite edge of said top and with said legs in said collapsed condition of said table, and respectively engageable with said legs in said erected condition of said table; and

(g) means for connecting said hooks to said legs, respectively, in said erected condition of said table.

2. In a collapsible, portable table, the combination of:

(a) a top;

(b) legs positionable adjacent the lower side of said top when said table is in a collapsed condition, and connectible to the lower side of said top in upright positions to support said top when said table is in an erected condition;

(c) means for securing said legs to the lower side of said top when said table is in said erected condition;

(d) combined carrying and bracing means engageable with and embracing said top and said legs in carrying relation when said table is in said collapsed condition for carrying said top and said legs, and engageable with said top and said legs in bracing relation when said table is in said erected condition for bracing said legs relative to said top;

(e) said combined carrying and bracing means including a handle having a surface engageable with an edge of said top in said collapsed condition of said table and engageable with the lower side of said top in said erected condition of said table;

(f) said combined carrying and bracing means including two links respectively having ends respectively pivotally connected to opposite ends of said handle, the other ends of said links comprising oppositely oriented hooks engageable in hooked relation with the opposite edge of said top and with said legs in said collapsed condition of said table, and respectively engageable with said legs in said erected condition of said table; and

(g) latch means carried by said legs and engageable with said hooks, respectively, for connecting said hooks to said legs, respectively, in said erected condition of said table.

3. In a collapsible, portable table, the combination of:

(a) a top;

(b) two flat legs positionable flat adjacent the lower side of said top when said table is in a collapsed condition, and connectible to the lower side of said top in upright positions to support said top when said table is in an erected condition;

(c) means for securing upper ends of said legs to the lower side of said top when said table is in said erected condition;

(d) said securing means including two leg brackets mounted on the lower side of said top, and including releasable means for disengageably connecting the upper ends of said legs to said leg brackets, respectively, when said table is in said erected condition;

(e) said leg brackets having two pairs of opposed recesses therein parallel to said top, the recesses of each of said pairs respectively receiving the upper and lower ends of one of said legs therein when said table is in said collapsed condition; and

(f) combined carrying and bracing means engageable with said top and said legs in carrying relation when said table is in said collapsed condition for carrying said top and said legs, and engageable with said top and said legs in bracing relation when said table is in said erected condition for bracing said legs relative to said top.

4. In a collapsible, portable table, the combination of:

(a) a top;

(b) two flat legs positionable flat adjacent the lower side of said top when said table is in a collapsed condition, and connectible to the lower side of said top in upright positions to support said top when said table is in an erected condition;



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- (c) means for securing upper ends of said legs to the lower side of said top when said table is in said erected condition;
- (d) said securing means including two leg brackets mounted on the lower side of said top and respectively having downwardly facing recesses receiving the upper ends of said legs therein when said table is in said erected condition, and including releasable means for disengageably connecting the upper ends of said legs to said leg brackets, respectively, when said table is in said erected condition;
- (e) said leg brackets having two pairs of opposed recesses therein parallel to said top, the recesses of each of said pairs respectively receiving the upper and lower ends of one of said legs therein when said table is in said collapsed condition; and
- (f) combined carrying and bracing means engageable with said top and said legs in carrying relation when said table is in said collapsed condition for carrying said top and said legs, and engageable with said top and said legs in bracing relation when said table is in said erected condition for bracing said legs relative to said top.
5. In a collapsible, portable table, the combination of:
- (a) a top;
- (b) legs connected to said top in upright positions to support said top when said table is in an erected condition;
- (c) said legs being positionable against said top when said table is in a collapsed condition;

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- (d) combined carrying and bracing means for carrying said top and said legs when said table is in said collapsed condition, and for bracing said legs when said table is in said erected condition;
- (e) said combined carrying and bracing means including a handle and including two carrying and bracing links which have ends connected to said handle and which are of lengths to extend across said top and said legs when said table is in said collapsed condition, so as to locate said handle adjacent one edge of said top and the other ends of said links adjacent the opposite edge of said top;
- (f) said links having means at their other ends for supporting said top and said legs when said table is in said collapsed condition;
- (g) said other ends of said links respectively being engageable with said legs in said erected condition of said table; and
- (h) means for connecting said other ends of said links to said legs, respectively, in said erected condition of said table so as to brace said legs.

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