April 1, 1958 A. C. HOVEN ET AL 2,829,019

FOLDING PAIRED LEG TABLE WITH LOCK

Filed Dec. 31, 1956 3 Sheets-Sheet 1

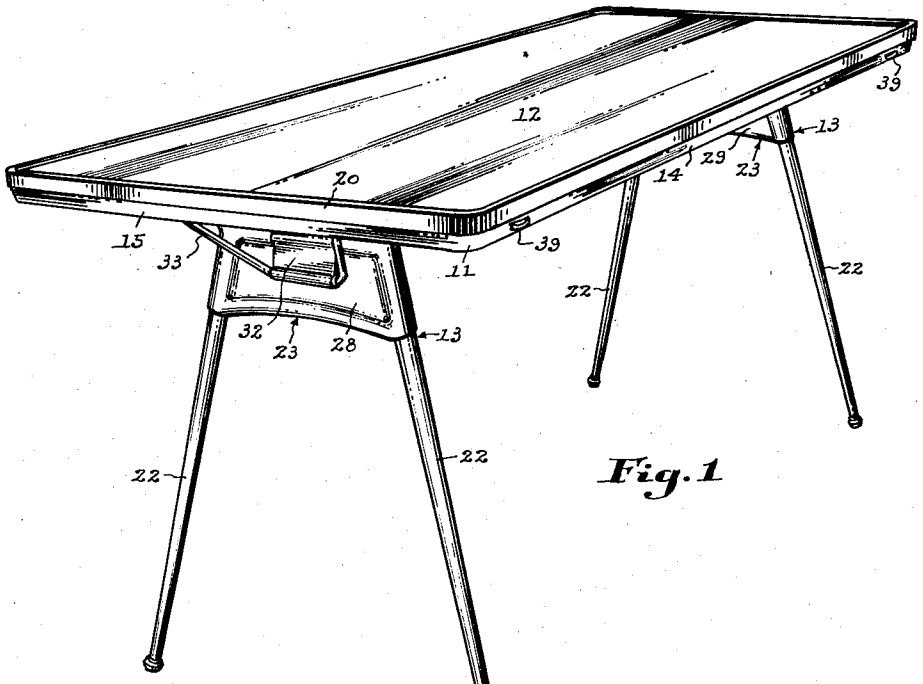



Fig. 1

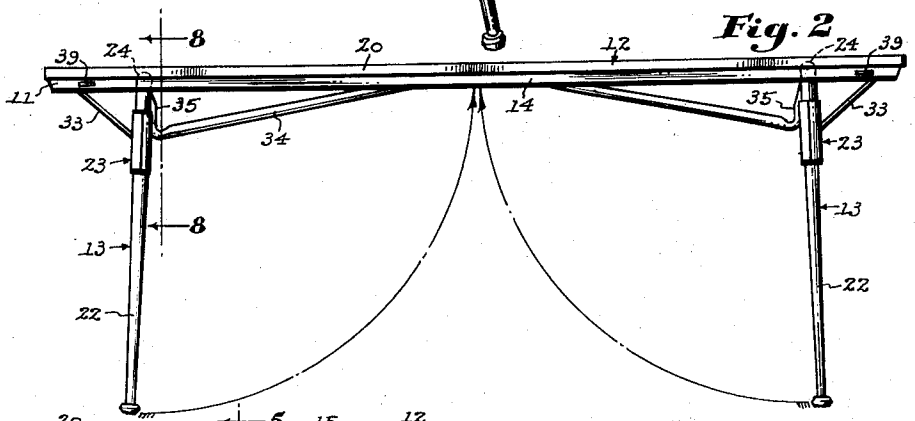



Fig. 2

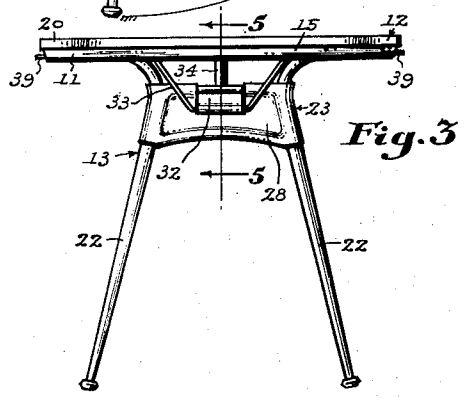



Fig. 3

INVENTORS

Alfred C. Hoven
Douglas N. Humphries
Walter E. Nordmark

BY

John S. Braddock

ATTORNEY

April 1, 1958 A. C. HOVEN ET AL 2,829,019

FOLDING PAIRED LEG TABLE WITH LOCK

Filed Dec. 31, 1956 3 Sheets-Sheet 2

Fig. 4

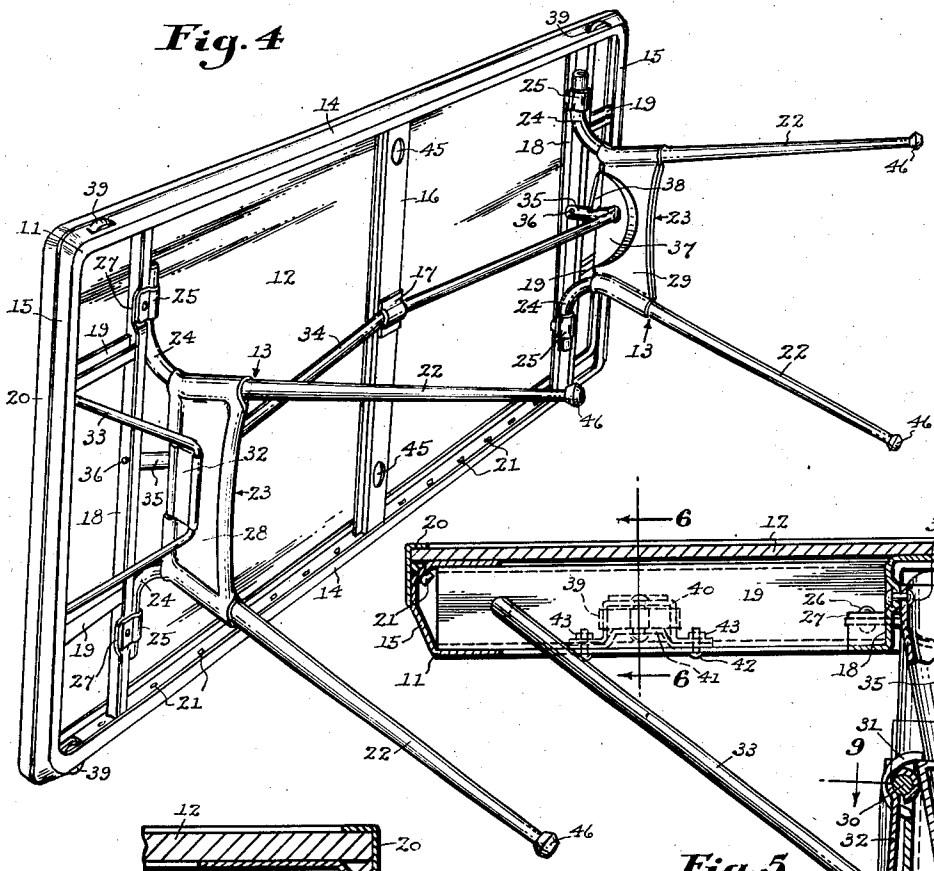


Fig. 5

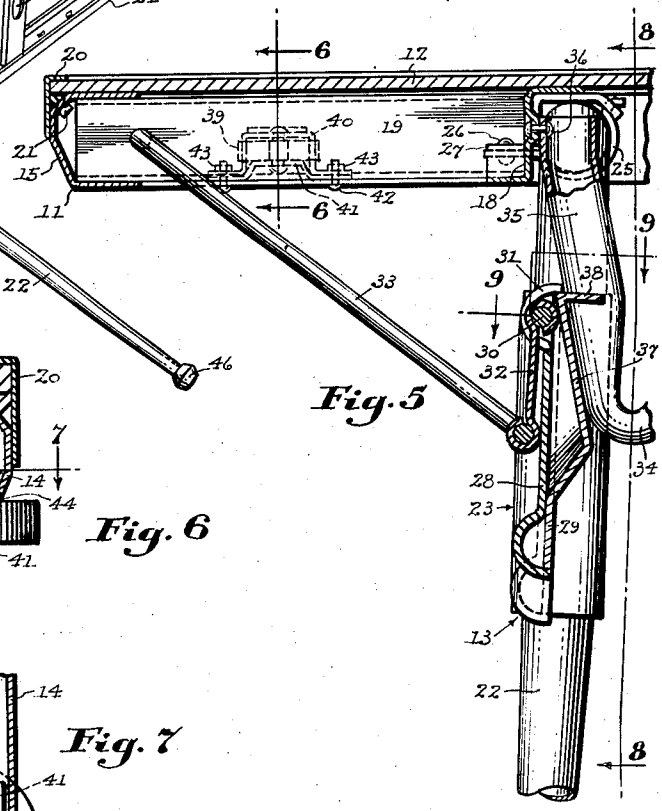


Fig. 6

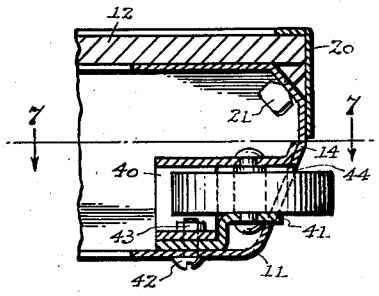
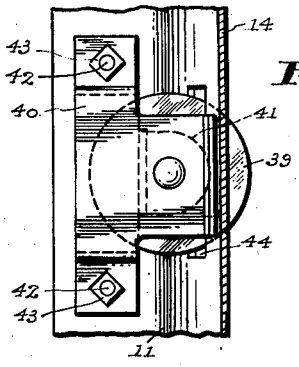


Fig. 7



INVENTORS

Alfred C. Hoven
Douglas N. Humphries
Walter E. Nordmark

BY John S. Braddock

ATTORNEY

April 1, 1958 A. C. HOVEN ET AL 2,829,019

FOLDING PAIRED LEG TABLE WITH LOCK

Filed Dec. 31, 1956 3 Sheets-Sheet 3

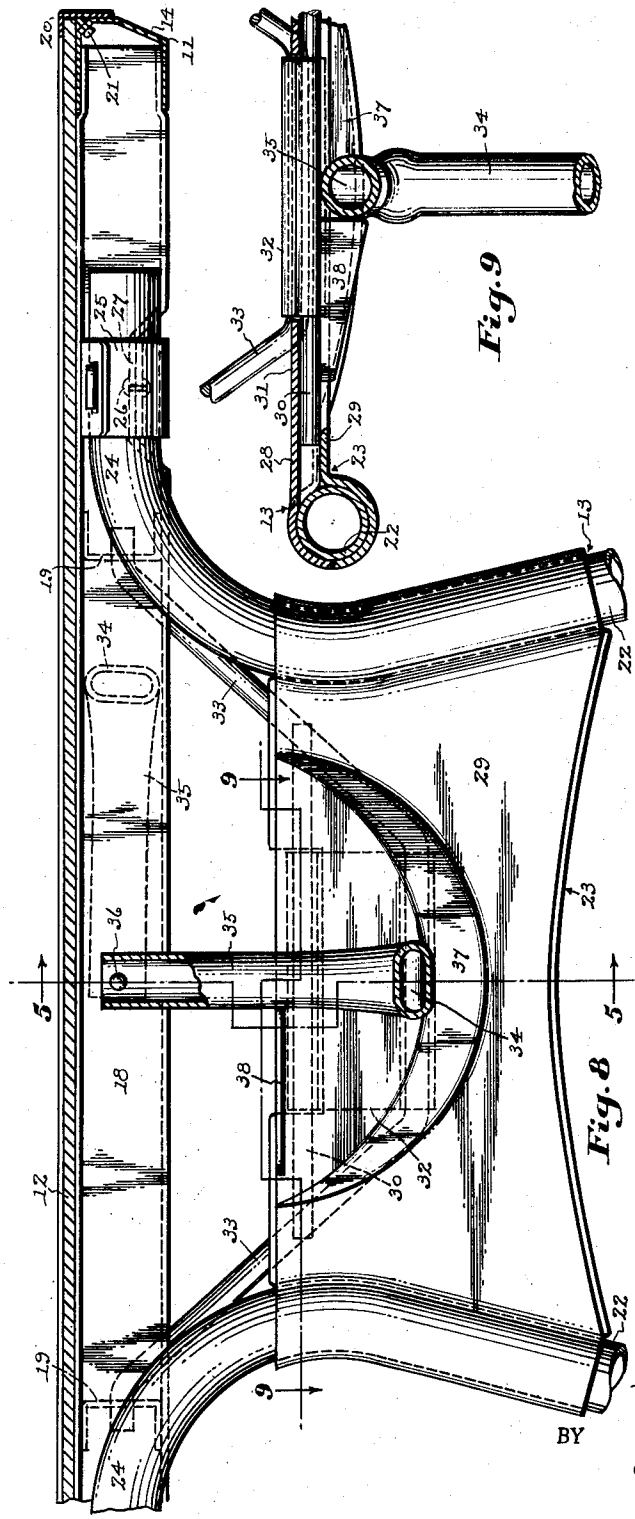


Fig. 8



Fig. 9

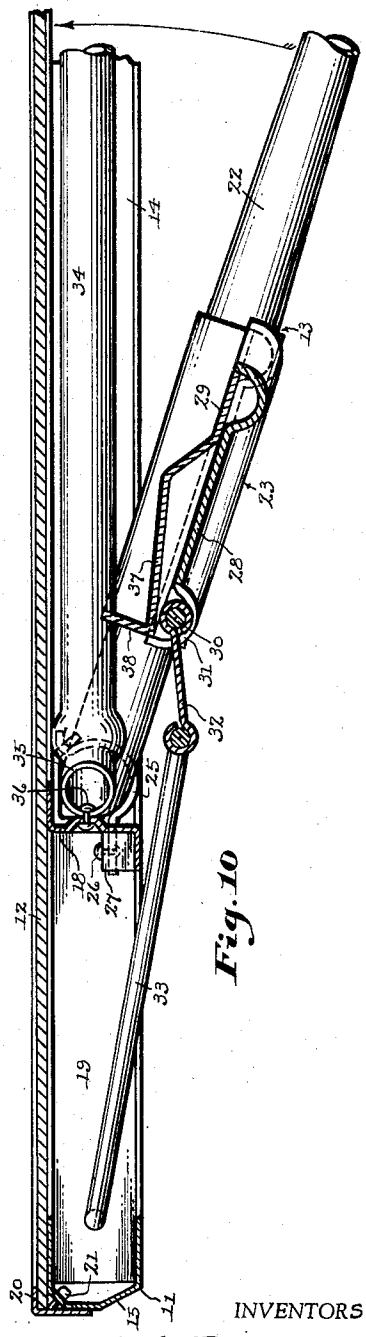


Fig. 10

INVENTORS

Alfred C. Hoven

Douglas N. Humphries

Walter E. Nordmark

BY John S. Braddock

ATTORNEY

United States Patent Office 2,829,019 Patented Apr. 1, 1958



2,829,019

# FOLDING PAIRED LEG TABLE WITH LOCK

Alfred C. Hoven, Douglas N. Humphries, and Walter E. Nordmark, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey

Application December 31, 1956, Serial No. 631,733

5 Claims. (Cl. 311—86)

The present invention relates to folding tables and more particularly to folding tables of the banquet type for use in cafeterias or wherever else found suitable.

The primary objects of the invention are to provide an improved folding table the opposite ends of which are supported on standards when in use, and which standards can be swung to folded positions alongside the table top when not in use; to provide such a folding table which, when extended for use, is especially sturdy; to provide improved means for pivotally mounting the standards on the underside of the table top; to provide such a folding table which, when folded for transport or storage, can be rolled from place to place with a minimum of effort on rollers set into a side edge of the table top's frame; and in general to provide such a folding table which is efficient in use, reasonably economical in manufacture and attractive in appearance.

An illustrative embodiment of the invention is shown in the accompanying drawings, wherein:

Figure 1 is a perspective view of the new table unfolded for use;

Figure 2 is a side elevational view of the same;

Figure 3 is an end elevational view of the same;

Figure 4 is a perspective view of the unfolded table turned on its side so as to better reveal the construction thereof;

Figure 5 is an enlarged, fragmentary, vertical sectional view of parts of the table, in their unfolded—or extended—positions, the plane of section being indicated by the lines 5—5 of Figures 3 and 8;

Figure 6 is a further enlarged, fragmentary vertical sectional view of parts thereof taken on line 6—6 of Figure 5;

Figure 7 is a horizontal sectional view of the same parts, taken on line 7—7 of Figure 6;

Figure 8 is a fragmentary vertical sectional view taken on lines 8—8 of Figures 2 and 5;

Figure 9 is a fragmentary horizontal sectional view taken on lines 9—9 of Figures 5 and 8; and

Figure 10 is a fragmentary vertical sectional view similar to Figure 5 and showing a supporting standard of the table in partially folded condition.

Referring now in detail to these drawings, wherein like parts are designated by the same numerals in the several views, the folding table there shown comprises a generally rectangular frame **11** on which is mounted a top panel **12** of suitable material and from which depend the supporting standards **13** of the structure.

The generally rectangular frame **11** has side rails **14** and end rails **15** of continuous, inwardly-opening channel construction, the outer walls of which have vertical upper parts and downwardly-inwardly sloping lower parts. A center strut **16** (see Figure 4) of inverted hat-section spans the frame from side to side and has a longitudinally extending bearing in the center thereof formed by a metal strap **17** secured to the center strut as by welding. A pair of intermediate struts **18** of Z-section span the frame



from side to side and are spaced inwardly from the end rails **15** of the frame. Spanning the space between each intermediate strut **18** and the adjacent end rail **15** are a pair of end struts **19** of outwardly opening channel construction which are spaced inwardly from the side rails **14** of the frame. The intermediate struts **18** and end struts **19** are desirably secured to the frame and to each other as by welding. The top panel **12** of the table is secured to the upper surface of the frame by means of a decorative molding **20** having tabs **21** which pass through apertures in shoulders of the frame and are turned to secure these parts in assembly.

Each supporting standard **13** comprises a pair of spaced tubular metal legs **22** connected near their upper ends by a web **23** and having their upper end portions **24** above the web **23** turned outwardly and pivotally disposed in bearing straps **25** secured as by rivets **26** to upwardly offset portions **27** of the intermediate struts **18**. The standards are thus swingable to extended top-supporting positions and to inwardly swung folded positions lying adjacent the underside of the table top. The web **23** of each standard **13** comprises an outer plate **28** and an inner plate **29** having complementary semi-cylindrical sockets embracing the legs **22** therebetween. The plates **28** and **29** are secured together and to the legs **22** as by welding. A horizontal pintle **30** is secured as by welding between the upper edges of the plates **28** and **29**. The upper edge of the outer plate **28** is curled outwardly at **31** to accommodate the pintle and has its middle portion cut away to receive a leaf **32** hingedly mounted on the pintle **30**. The leaves **32** at opposite ends of the table are thus hingedly connected to the upper edges of the webs **23** and are swingable outwardly therefrom.

A pair of U-shaped end braces **33** fabricated of rod stock each has an inner bight portion hingedly connected to the outer end of one of the leaves **32** and leg portions extending outwardly from the bight portion and pivotally connected at their outer ends to the adjacent end struts **19**. It will be seen that each end brace **33** and its adjacent leaf **32** are in approximate alignment when the adjacent supporting standard **13** is fully folded (see Figure 10). During unfolding movement of the standard, the hinge connection between each end brace's bight portion and the adjacent leaf is projected downwardly and into ultimate contact with the adjacent web **23** thus to limit the unfolding movement of the standard (see Figure 5).

A longitudinal center brace **34** of metal tubing is journalled at its middle to the center strut's bearing **17**. As seen in Figure 4, the outer portions of the center brace **34** extend slightly downwardly and the extreme end portions of this center brace are turned upwardly to form arms **35** which are pivotally connected as by rivets **36** to the intermediate struts **18**. The center brace **34** is thus turnable to a position wherein the arms **35** abut crescent-shaped embossings **37** on the inner plates **29** of webs **23** when the standards are unfolded thus to brace said standards against folding movement. Stops **38**, flanged inwardly from the upper edges of the webs' inner plates **29**, limit the turning movement of the center brace **34** to its bracing position. The center brace **34** is also turnable, as indicated in dotted lines in Figure 8 and in full lines in Figure 10, to a position of disengagement from the standards' webs **23** to permit folding movements of the standards.

A pair of rollers **39** (see Figures 5, 6 and 7) is turnably mounted between brackets **40**, **41** secured to each of the side rails **14** of the frame **11**, as by means of bolts **32** having nuts **43**. The axes of the rollers **39** are normal to the table top and the rollers extend outwardly through openings **44** in the side rails slightly beyond the side edge of the table top, so that when the table is in folded

condition it can be stood on edge and rolled from place to place.

As shown in Figure 4, the center strut **16** of the frame **11** is provided with a pair of depressions **45** which are adapted to accommodate the rubber feet **46** at the ends of the table legs **22** so that the standards **13** can be folded perfectly flat against the frme **11**.

It will thus be seen that the invention provides a sturdy and durable folding table of the banquet type, and while but one specific embodiment of the invention has been herein shown and described it will be understood that numerous details thereof may be altered or omitted without departing from the spirit of the invention as the same is defined by the following claims.

We claim:

1. In a folding table: a table top; a pair of supporting standards pivotally mounted on the underside of the table top near the opposite ends thereof and swingable to extended top-supporting positions and to inwardly swung folded positions lying adjacent the underside of the table top; a pair of leaves each hingedly connected to one of said standards and swingable outwardly from said standard; a pair of end braces each hingedly connected to the outer end of one of said leaves and extending outwardly therefrom and pivotally connected at its outer end to the table top, whereby each end brace and the adjacent leaf are in approximate alignment when the adjacent supporting standard is fully folded, and whereby the hinge connection between each end brace and the adjacent leaf is projected downwardly during unfolding movement of the adjacent standard and into ultimate contact with said standard to limit the unfolding movement thereof.

2. A folding table according to claim 1 characterized by including releasable means for bracing the standards against folding movement when in their extended top-supporting positions.

3. A folding table according to claim 1 in which each standard comprises a pair of spaced legs connected near their upper ends by a web against which the hinge connection between the adjacent end brace and leaf is adapted to abut.

4. A folding table according to claim 1 in which each end brace comprises a U-shaped rod having an inner bight portion hingedly connected to the outer end of the adjacent leaf and having leg portions extending outwardly therefrom and pivotally connected at their outer ends to the underside of the table top.

5. In a folding table: a frame of generally rectangular form having side rails and end rails, a center strut spanning the frame from side to side and having a longitudinally extending bearing in the center thereof, a pair of intermediate struts spanning the frame from side to side and spaced inwardly from the opposite end rails respectively, and a pair of end struts spanning the space between each intermediate strut and its adjacent end rail, said end struts being spaced inwardly from the side rails of the frame; a table top mounted on the upper surface of the frame; a pair of supporting standards pivotally mounted on the intermediate struts respectively and swingable to extended top-supporting positions and to inwardly swung folded positions lying adjacent the underside of the table top, said standards each comprising a pair of spaced legs connected near their upper ends by a web; a pair of leaves each hingedly connected to the upper edge of one of said webs and swingable outwardly from said web; a pair of U-shaped end braces each having an inner bight portion hingedly connected to the outer end of one of said leaves and having leg portions extending outwardly therefrom and pivotally connected at their outer ends to the adjacent end struts, whereby each end brace and the adjacent leaf are in approximate alignment when the adjacent supporting standard is fully folded, and whereby the hinge connection between each end brace and the adjacent leaf is projected downwardly during unfolding movement of the adjacent standard and into ultimate contact with the adjacent web to limit the unfolding movement of said standard; and a longitudinal center brace journalled at its middle in the center strut's bearing and having arms at its outer ends pivotally connected to said intermediate struts, said center brace being turnable to a position wherein said arm abut the inner surfaces of said webs when the standards are unfolded to brace said standards against folding movement and turnable to another position of disengagement from the standards' webs to permit folding movement of the standards.




**References Cited** in the file of this patent

UNITED STATES PATENTS

| | | |
|---|---|---|
| 320,413 | Thayer | June 16, 1885 |
| 540,971 | Fulghum | June 11, 1895 |
| 992,758 | Deming | May 23, 1911 |
| 2,240,301 | Johnson | Apr. 29, 1941 |
| 2,490,318 | Padon | Dec. 6, 1949 |
| 2,508,627 | Spiegel | May 23, 1950 |
| 2,656,231 | Mahr | Oct. 20, 1953 |
| 2,690,210 | Holick | Sept. 28, 1954 |