Nov. 26, 1940. R. E. TAFEL 2,223,193

FOLDING TABLE HARDWARE

Filed Nov. 8, 1937

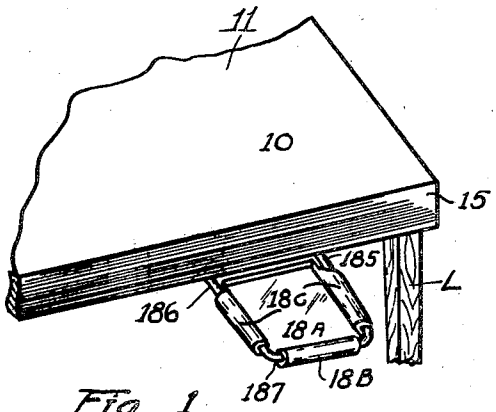

Fig. 1

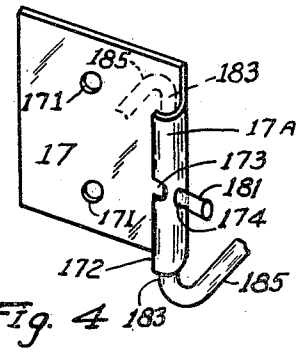

Fig. 4

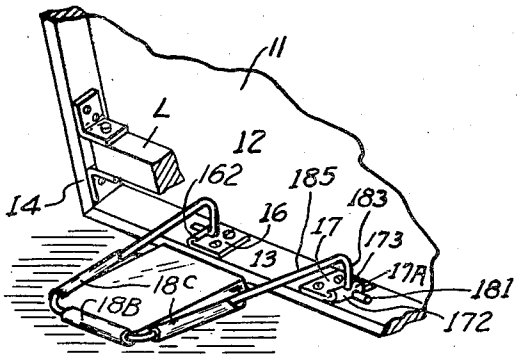

Fig. 2

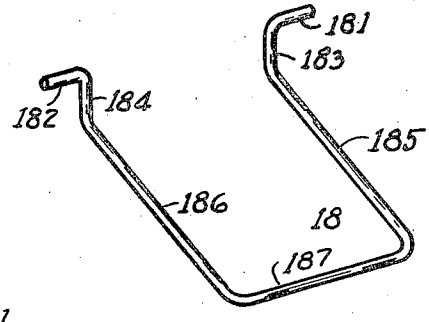

Fig 5

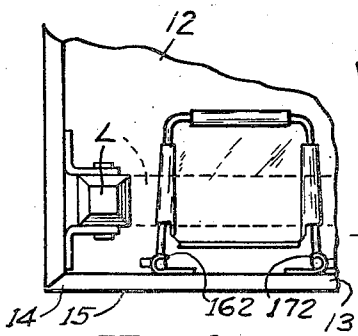

Fig. 3

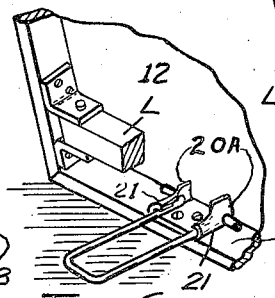

Fig 6

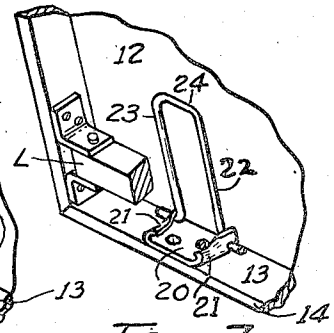

Fig. 7

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2,223,193

FOLDING TABLE HARDWARE

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Application November 8, 1937, Serial No. 173,335

2 Claims. (Cl. 311—3)

My invention relates to folding tables and analogous structures and particularly to folding card tables having ornamented or highly finished top surfaces.

The main object of the invention is to equip a folding table with an auxiliary pivoted arm, capable of cooperating with the table top so as to support it in the generally vertical position when resting on one side or edge with the legs folded so that the table top can be utilized for purposes other than a table, such as a screen thereby providing a novel means for storing the table, as well as organizing the table to render an additional service for the owner.

A further object is to construct an auxiliary arm and incorporate it into the table structure without interference with the legs of the table.

A still further object is to construct the auxiliary arm so that it can be used as, or to support an ash tray or other objects when the table is erected for normal use.

Other objects of the invention reside in the details of construction and combination of parts and in their mode of operation as will be described hereinafter.

In the accompanying drawing, Figure 1 is a perspective view of a fragment of a table erected for normal use equipped with an auxiliary folding arm adjusted to function as a tray support, the latter being sometimes referred to herein as "arm-tray."

Fig. 2 is a perspective view of a fragment of an under part of inside of the table top corner (minus the usual hinged leg) showing the foldable arm of the type shown in Figure 1.

Fig. 3 is an elevational view of a fragmentary portion of the under surface showing a corner of the table top and its border flange with the arm-tray hinged to said flange and folded adjacent the under surface of the table top.

Fig. 4 illustrates, in enlarged perspective view, one of the stationary bases to which is pivoted the swingable arm shown in Fig. 5, which is also a perspective view.

Fig. 6 is a perspective view of another embodiment of the incident invention with the supporting elements similarly organized to those shown in Fig. 2.

Fig. 7 is similar to Fig. 6 with the arm closed or rotated and lodged adjacent the under surface of the table and corresponding to Fig. 3.

Numeral 10 designates the upper surface of table top 11, 12 the under surface, 13 the inside of flange 14, while 15 designates the outside surface of the flange which contacts the floor when the table is being used as a screen.

A pair of bases 16, 17 are mounted onto surface 13 by means of conventional screws. The right hand base 17, as shown in Fig. 4, is fashioned with holes 171 to receive the screws. The outside end thereof is fashioned into a "keeper" with a curled locking lip or clip 172, which is also equipped with a locking notch 173 and bearing 174 to receive stub shaft 181 of looped arm designated generally as 18. The left hand base is a counterpart or companion to base 17 and reversely formed and located so that the holes for stub shaft 181—182 will be in substantial alignment. Each base similarly functions to carry and lock arm 18 in open, intermediate, or closed positions. These positions being attained by progressively orientating arm 18, through 90 degree stages as shown in Figs. 1, 2, and 3, respectively. The loop 18 is constructed of heavy spring wire or light rod material and formed so as to urge the shaft ends outwardly under spring tension, said spring tension being provided for forcing portions of loop 18 under the locking clips, and to permit disengagement when sprung inwardly.

Disposed substantially at right angles to the stub shafts are shanks 183, 184. Also, there are disposed reaches 185, 186, substantially at right angles to the shanks. The reaches are united by bar 187 which completes arm 18.

In Fig. 4, a fragment of shank 183 is shown in full lines and locked or secured under clip 172. In this locked position, when mounted on the table, the shanks of arm 18 will be disposed in a plane substantially parallel to top surface 10. Thus it will be perceived that arm 18 must be rotated 180 degrees from the position shown in Fig. 3 to attain the position shown in Fig. 1. The dash lines show shank 183 as disposed under lip 17A and indicate the position arm 18 occupies when the arm-tray is lodged adjacent the under surface of the table as in Fig. 3. Pressure, inwardly applied to reaches 185, 186, as by gripping, frees arm 18 for orientation, while release of this force restores the outward pressure for locking the arm in a selected position.

Figure 1 shows arm 18 equipped with tray 18A and illustrates the table erected for normal use. When the arm-tray is not functioning as a support for the table or as a tray per se, provision is made, as adverted to hereinbefore, to fold it under the table and adjacent surface 12 as shown in Fig. 3. Leg L can be folded over arm 18 or the arm-tray without conflict. Shanks 183, 184 are proportioned and disposed in terms of leg

L so that the latter can be folded when the arm tray has been adjusted for supporting the table for use as a screen.

When the table is to be utilized as a screen or stored with the top in a vertical position with arm functioning as a support, the arm **18** is oriented 90 degrees from the full open position as shown in Figure 1 to the position shown in Fig. 2, before the adjacent leg is swung to its closed position. To condition the arm so that it can be oriented, a squeezing force must be applied, this causes reaches **185** to move inwardly and thereby release the shanks from lips **162—172**, or **16A—17A**, depending upon the rest position of arm **18**. Relaxing the pressure of the grip allows the extremities of the arm to spring outwardly and the shanks to engage the notches in bases **16**, or the lips thereof, thereby securing the arm in the selected position.

It should be noted that rim **18B** of tray **18A** is curled over so as to grip bar **187** throughout its length while rims **18C** grip reaches **185—186**, respectively, only at the remote portions. This structure is employed to firmly secure the tray to arm **18** and at the same time permit reaches to flex, and to further provide means for reinforcing the arm, also when it is desired to augment the outward tension of the free ends of the arm with the notches or lips in plates **16—17**.

Unitary base **20** is employed when the lower cost embodiment of the invention is desired. It is equipped with locking lips **21** similar to the lips of plate **17**, to receive reaches **22**, **23** of arm **24**. The lateral parallel margins at right and left of the base are fashioned with lips **21** and wings **20A**. It will be noted that the lateral margins gradually merge from the vertical wings to a substantially horizontal plane to form the lips, with the result that cam faces are formed and are utilized as tracks for inner sections of reaches **22—23** when arm **24** is rotated 90 degrees, in a plane perpendicular to the top or flange on which it is mounted from lips **21** to engagement with wings **20A**. This provision is made for yieldingly retaining arm **24** adjacent the under surface **12** of the table top when said arm is not employed as a support for the table top. When the latter is to be used in the vertical position as a screen, as shown in Fig. 6, the arm is rotated and engaged by lips **21**. This position corresponds to Fig. 2, on which is mounted the arm-tray structure. The table leg is not shown in either Fig. 6 or Fig. 7, however, it must be understood that the leg is proportioned and pivotally mounted so that it can be folded when arm **24** is in the position shown in either of the latter mentioned figures.

In Figs. 2 and 6 the table top member is shown slightly tilted from the vertical plane and the table being braced by the auxiliary laterally disposed supporting arm **18B** or **24**, respectively, which prevents the table top from turning over, when used as a screen. Since the base member **20** is attached to the inside of the flange **13**, and arm **24** lies adjacent the inner surface thereof, the thickness of the flange and base **20** causes the arm to be removed from the plane in which the outer side of the flange is disposed. Although the arm and the outside of the flange lie in parallel planes, the end of the arm in contact with the floor is disposed at an angle less than 90° to the plane of the table top.

Obviously, gripping and applying inward pressure to reaches **22**, **23**, releases arm **24** for rotation from the extended or open position as shown in Figure 6 to the folded or closed position shown in Figure 7. However, arm **24** can be moved from the folded position, shown in Figure 7, to the extended position shown in Figure 6, merely by pulling the arm forward.

It must be understood that I have selected preferred embodiments for disclosure of my invention and that modifications such as attaching a modified base or bases to the top independently of or in combination with said flanges can be made without departing from the spirit of my invention, also that bases **16**, **17** can be unified, therefore, I wish to be limited only by the following claims.

I claim:

1. The combination with a table, having a rectangular top and legs pivotally mounted on the under surface of the top thereof and foldable within the perimeter thereof, and a flange section depending from each edge of said top, of an arm pivotally secured to the inner surface of one of said sections and extendable from a folded position within the perimeter of the said top to an operating position substantially perpendicular from said top for providing a support for said top, when all of said legs are in the folded position in proximity to the under surface of said top and out of operating position and the top is disposed substantially vertically with the outside face of the section carrying said arm resting on a horizontal body.

2. The combination with a table having a rectangular top and a flange depending from each edge thereof and legs pivotally mounted on the under surface of the top thereof and foldable within the perimeter thereof, of an auxiliary member secured to the inner face of one of said flanges for supporting the top in a substantially vertical position, said member comprising an arm having one end thereof pivotally secured to the inner face of one of the said flanges and disposed between the pivoted supports of adjacent legs and extendable from a folded position to an operating position substantially perpendicular from the under surface of said top, to a plane extending from the inner face of said flange.

ROBERT E. TAFEL.