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FOLDING TABLE

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UNITED STATES PATENT OFFICE.

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FOLDING TABLE.

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This invention relates to improvements in portable folding tables, and the object of the invention is to provide such a table which will be inexpensive, light in weight, which can be quickly set up and folded, and which folds into a compact form.

In carrying out the invention, I construct the table top of two relatively wide end sections and two relatively narrow intermediate sections which are hinged together so that the intermediate sections will fold between the end sections. When the top is folded, the end sections are spaced apart by the intermediate sections and as the latter are narrower than the end sections, a space is left between the end sections for the table legs and parts attached thereto. The legs are hinged to the end sections so as to fold longitudinally thereof, and locking bars for locking the table top in its unfolded position are pivotally connected to diagonally opposite legs of the table and adapted to fold substantially parallel with the legs. When the table is unfolded, these parts are swung about their pivotal points to horizontal positions and interlock with clips or fastening devices on the undersides of the end sections. Each leg is braced in two directions by braces, one of which is hinged to the table top and swings with the leg, and the other of which is adapted to fold with the leg when the table is folded.

In the accompanying drawing,

Fig. 1 is a perspective view of the table, set up, showing the underside of the table;

Fig. 2 is a similar view of the table, folded;

Fig. 3 is a similar view, showing the table partly folded;

Fig. 4 is a section on the line 4—4 of Fig. 1;

Fig. 5 is a section on the line 5—5 of Fig. 2;

Fig. 6 is a detail view, showing a modification of the means for locking the table legs in open position;

Fig. 7 is a detail view showing a modified form of hinge for connecting the table top sections together; and,

Fig. 8 is a detail view showing the parts of the hinge illustrated in Fig. 6, separated.

Referring to Figs. 1-5, inclusive, of the drawing, A represents a table comprising a top composed of two end sections a , and two

intermediate sections a' , the latter sections being relatively narrow as compared with the width of the end sections. The intermediate sections are connected to the end sections by hinges 1, and the intermediate sections are connected together by hinges 2, the arrangement being such that the intermediate sections may fold between the end sections, as illustrated in Figs. 2, 3, and 5 of the drawing. The four legs 3, 4, 5 and 6 of the table are connected by hinges 7 to the end sections near the outer corners of the latter, and the legs attached to each end section are adapted to fold against the underside of the section and parallel with one another. Braces 8, for bracing the legs transversely of the table, are connected to the legs and to the movable members of hinges 9 on the undersides of the end sections. These hinges and the hinges 7 are so arranged that each leg and its connected brace 8 will swing about a common axis in folding and unfolding the legs. Folding braces 10 are connected to the legs and to the undersides of the end sections, these folding braces being adapted to brace the legs longitudinally of the end sections when the table is set up.

On the undersides of the end sections and near the ends thereof are fastening devices or clips, which may conveniently be parts of the hinges 7 and 9. As shown, the movable parts of the hinges 9 have overturned ends 9^a which constitute clips, and hinges 7, to which diagonally opposite legs 4 and 5 are attached, likewise have overturned ends 7^a , which constitute clips. A locking rod 11 is connected by a pivot pin 12 to one of the legs 3, near its upper end, and a similar locking rod 13 is similarly connected to the diagonally opposite leg 6. These locking rods are adapted to lie parallel with the legs to which they are connected, against the underside of the table top, when the table is folded, and when the table is unfolded and the top is straightened, as shown in Fig. 1, these locking rods are swung upwardly under the table top and pressed laterally into engagement with the clips 9^a and the clip 7^a to which the opposing leg is attached. The locking rods, as shown in the drawing, are slatlike in form and fit snugly and edgewise between the clips and the top of the table, thereby supporting the several sections in a rigid manner. The braces 8 swing with the

legs and the braces 10 lock the legs in their unfolded positions. The legs also are prevented from folding accidentally by the locking rods which extend between the clips on the hinges 7 and 9 and the table top.

In folding the table, the locking rods or bars 11 and 13 are released from the clips or fastening devices and swung about their pivotal points to positions parallel with the legs to which they are attached. The release of the locking rods from the clips permits the table top to be folded and the intermediate sections of the top fold inwardly between the end sections, as illustrated in Figs. 2 and 5. In Fig. 3, the intermediate sections are shown partly folded. Before the top is folded, the legs are folded inwardly against the underside of the top. Thus, as illustrated in Fig. 3, after the leg 6 and the attached locking bar 13 are folded against one end section of the table, the leg 5 will be folded over the locking bar 13 and will lie parallel with the leg 6. Similarly, the leg 3 and locking bar 11 will be folded against the underside of the top and the leg 4 will then fold over the locking bar 11. This is shown clearly in Fig. 5. When the table is completely folded, the two end sections of the top will be outermost and the two intermediate sections will occupy a part of the space between said end sections, while the legs and locking bar will occupy the space between the meeting edges of the intermediate sections and the outer side edges of the end sections. In setting up the table, the top will be unfolded and the legs swung outwardly and locked by the braces 10 and the locking bars will then be pushed into engagement with the clips, all of which can be done in a few moments.

Instead of bending over the ends of the hinges 7, to form the shoulders or clips 7^a, as in the previously described figures, butt hinges may be used as shown at 7^b, in Fig. 6, and the legs of the table may be notched to form shoulders, as shown at 7^c. The locking bars will then fit in the space between the shoulders on the legs and the table top, as shown in Fig. 6. Likewise, if desired, instead of bending over the ends 9^a on the hinges 9, to form shoulders or clips, the braces 8 may be formed with off-set portions to be engaged by the locking bars.

As a substitute for the butt hinges 2, in Fig. 3, I may use the form of hinge illustrated in Figs. 7 and 8. This hinge is composed of two similar parts, each consisting of a narrow strip 2^a having at one end an upwardly projecting ear 2^b, and the ears are connected by a pivot pin 2^c. The strips 2^a are secured to the sides of the cross-pieces

2^a, at the ends of the sections a' of the table top, and when the table is unfolded the ears of the hinge project through a slot or notch a², in the meeting edges of the sections a', as shown in Fig. 7. With this form of hinge, the sections fold in a more satisfactory manner than with the butt form shown in the other figures of the drawing.

What I claim is:

1. In a folding table, a top comprising two relatively wide end sections and two relatively narrow intermediate sections hinged together, the intermediate sections adapted to fold between the end sections, leaving a space between the meeting edges of the intermediate sections and the outer side edges of the end sections, and legs hinged to the ends of the end sections and adapted to fold longitudinally thereof in said space.

2. In a folding table, a top comprising two relatively wide end sections and two relatively narrow intermediate sections hinged together, the intermediate sections adapted to fold between the end sections, leaving a space between the meeting edges of the intermediate sections and the outer side edges of the end sections, fastening devices attached to the ends of the end sections, and locking bars hinged to the upper ends of the legs and adapted to fold substantially parallel with the legs, said legs and bars adapted to fold in said space and said bars adapted to interlock with the fastening devices when the table is unfolded.

3. In a folding table, a top comprising several sections hinged together, hinges secured to the end sections near their ends, each hinge, on its movable half, having an overturned part forming a shoulder, legs secured to said movable halves and folding longitudinally of the end sections, and locking bars hinged to the legs so as to fold parallel therewith and adapted to be extended at right angles to the legs and to rest on said shoulders when the table is unfolded.

4. In a folding table, a top comprising several sections hinged together, hinges secured to the end sections near their ends, each hinge, on its movable half, having an overturned part forming a shoulder, legs and leg braces secured to said movable halves and adapted to fold longitudinally of the end sections, and locking bars hinged to the legs so as to fold therewith and adapted to rest on the shoulders when the table is unfolded.

In testimony whereof I hereunto affix my signature.

MANSELL A. DAVIS.