

May 16, 1939.

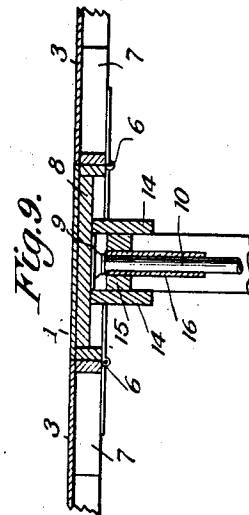
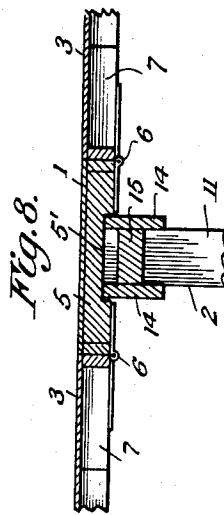
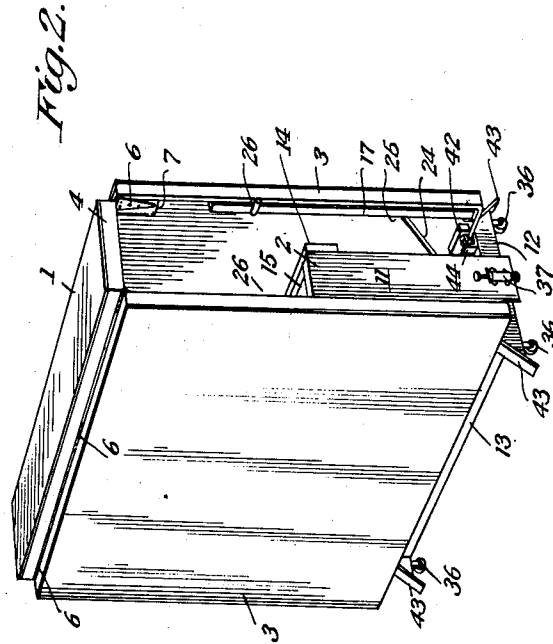
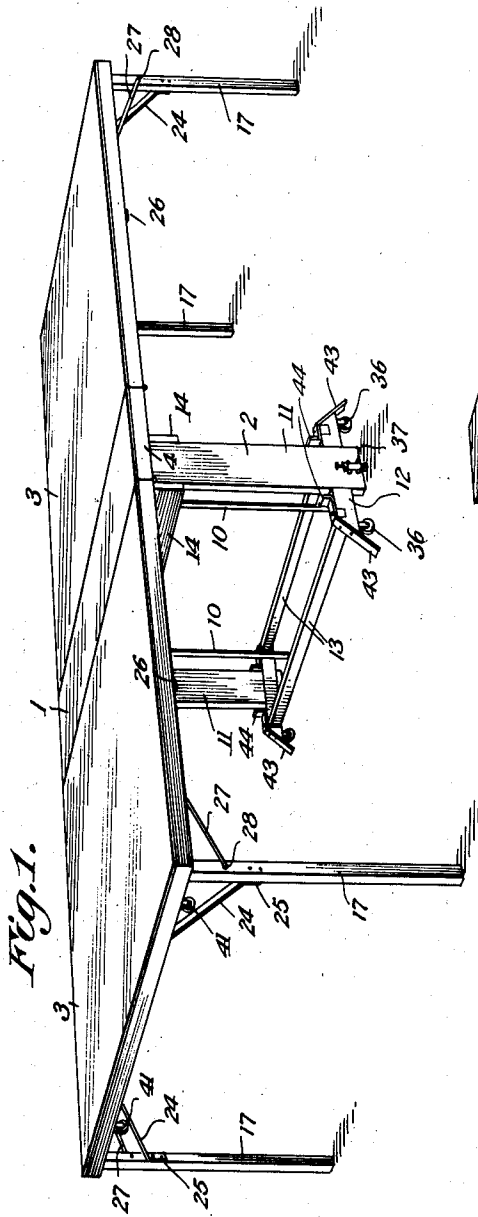
W. W. SWETT

2,158,950

FOLDING TABLE

Filed June 6, 1938

3 Sheets-Sheet 1



Walter W. Swett

INVENTOR

BY *Victor J. Evans & Co.*

ATTORNEYS

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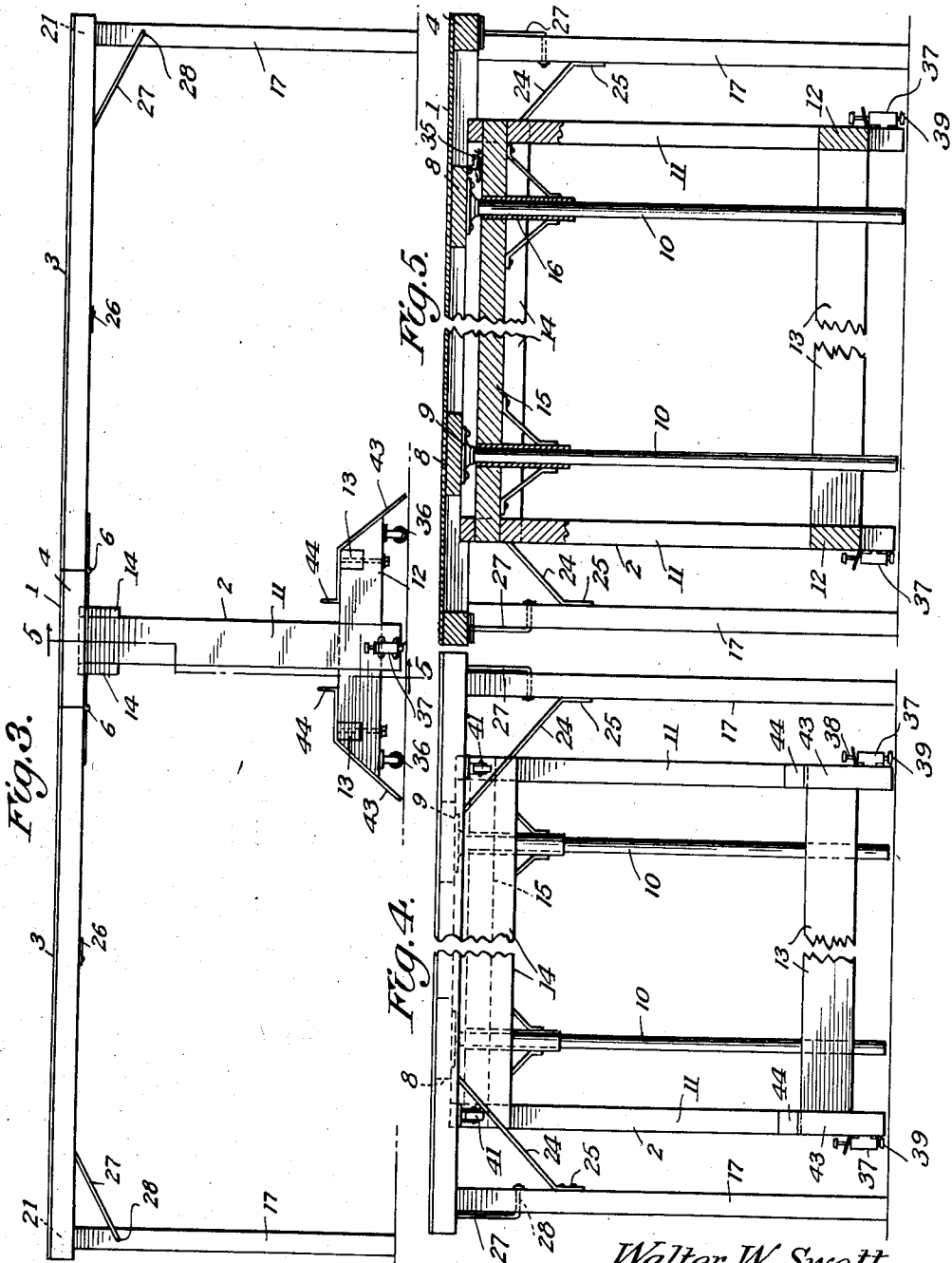
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FOLDING TABLE

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3 Sheets-Sheet 2



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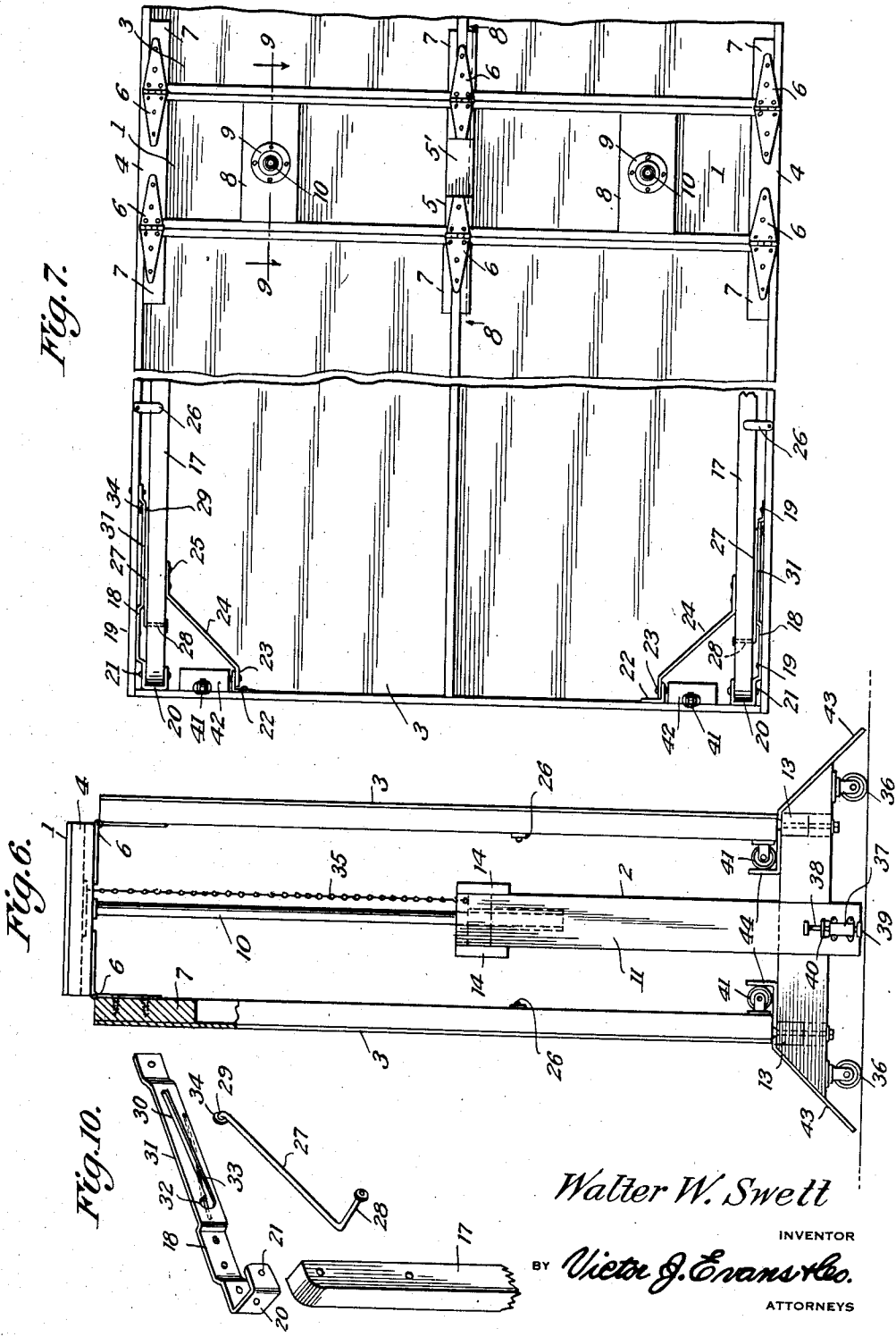
W. W. SWETT

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FOLDING TABLE

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,158,950

FOLDING TABLE

Walter W. Swett, Takoma Park, Md.

Application June 6, 1938, Serial No. 212,169

5 Claims. (Cl. 311—89)

This invention relates to folding tables and more particularly to tables used for games such as table tennis or ping-pong, or for dress making, drafting, displaying samples or other articles of any nature, for kindergarten or other school work, or any other purpose requiring a large flat surface.

The prime object of the invention is to produce a folding table structure including a minimum number of separate top panels or sections presenting a large working area when the table is opened and set up for use and arranged so as to be folded compactly and in small compass so as to be quickly and easily removed from the location in which it is used to a small out-of-the-way storage space.

A particular object is to produce a structure of simple character and economically manufactured, yet possessing the requisite stability for the purpose intended.

Other objects and advantages to be attained will hereinafter more fully appear.

The invention consists in the novel general structure and in the parts and combinations and arrangements of parts thereof, as hereinafter described and set forth in the appended claims, reference being had to the accompanying drawings illustrating a practical adaptation of the invention, and in which

Figure 1 is a perspective view of the table opened and set up for use;

Figure 2 is a perspective view of the table in folded condition;

Figure 3 is a side view of the table in opened condition;

Figure 4 is an end elevation, on an enlarged scale, of the table as shown in Figure 3, portions being broken away to foreshorten the view;

Figure 5 is a section on the line 5—5 of Figure 3, on the same scale as Figure 4 and portions being broken away to foreshorten the view;

Figure 6 is a view, in side elevation, of the table in folded condition, with a portion of the table broken away and shown in section to illustrate the hinge mounting of the drop leaf panel;

Figure 7 is a fragmentary, inverted plan view of the table top detached from the pedestal frame;

Figure 8 is a fragmentary sectional view taken on or about line 8—8 of Figure 7;

Figure 9 is a section on the line 9—9 of Figure 7; and

Figure 10 is a detail view of the hinge end portion of a foldable supporting leg for the drop

leaf, together with associated brace members for the leg.

The table as illustrated in the drawings and generally described comprises a top including a central, relatively narrow panel 1 which is mounted on a pedestal frame 2 with provision for vertical movement on said frame, said central panel having relatively long drop leaf panels 3 hinged thereto, said drop leaf panels being provided with foldable legs for supporting them in opened position and the panels being supported on the pedestal frame in closed position, as will be hereinafter more fully described.

Referring now more specifically to the drawings, the central panel 1 and drop leaves 3 of the table top are preferably made of ply-board or other non-warping material and each of the three panels is strengthened by a marginal frame on its under side and also by a cross rib or ribs connecting the marginal frame members. The central panel 1 is reinforced by relatively heavy cleats 4 on its under side, at its opposite ends, and also by a middle cleat 5, said cleats affording a stable support for the attachment of hinges 6, which latter are in turn attached to supporting blocks 7 provided therefor on the adjacent under sides of the drop leaves 3 in alignment with said cleats 4 and 5, respectively. Said central panel 1 is further reinforced on its under side and near its opposite ends by relatively wider cleats or blocks 8 to which flanged brackets 9 are attached, said brackets 9 having rigid guide rods or other suitable elongated members 10 depending therefrom and slidably engaging the pedestal frame 2 as will presently more fully appear.

The pedestal frame, as shown, comprises opposite end uprights 11 which are carried by transverse base members 12, said base members 12 being cross connected by a pair of lower horizontal frame members 13, while the uprights 11 are cross connected by a pair of spaced frame members 14 which are relatively flat and vertically disposed and between which a horizontally disposed member 15 is interposed and attached thereto so as to afford rigidity to the upper portion of the frame structure, said cross member 15 being preferably mortised into the uprights 11 at its opposite ends. As shown, said cross member 15 is provided with vertical openings having elongated bushings 16 secured therein and suitably braced, in which bushings the guide rods 10 of the table top panel 1 are slidably fitted.

In the opened and set up condition of the table, the central panel 1 is lowered to rest on the pedestal frame 2, at which time the drop leaf

panels 3 are supported at their outer ends by leg members 17 which are hingedly attached to said leaves near the corners thereof. As shown, the mounting for each of the leg members 17 comprises an elongated bracket 18 which is secured, as at 19, to the adjacent marginal frame member of the leaf and having a rebent substantially U-shaped end portion 20 abutting the adjacent right angular marginal frame member of the leaf, to which U-shaped portion of the bracket the leg member 17 is pivotally attached, as at 21. Further hinging of the leg member 17, together with a bracing effect, is accomplished by providing an angular bracket 22 on the marginal frame member against which the U-shaped portion 20 of the bracket 18 abuts and at a point inwardly from said portion 20, said bracket member 22 having the end portion 23 of a diagonal brace member 24 hingedly attached thereto in axial alignment with the pivot 21, said brace member 24 being attached at its opposite end to the leg member 17, as at 25. By this provision, the leg member 17 is readily foldable against the under side of the drop leaf panel 3 where it is releasably held by a conventional latch element 26 provided therefor on the side marginal frame member of the leaf (see Figure 7) while in its opened position said leg member 17 is braced laterally by the diagonal stay member 24. In order to brace the leg member 17 in its opened position and at right angles to the stay 24 so as to further steady the leg and prevent collapsing of the table, a brace member 27 is turned angularly at one end and pivotally attached to the leg member, as at 28, the opposite end portion 29 of said brace member 27 being turned at a right angle to the body portion and in the direction opposite to the portion 28, said angular portion 29 working in a longitudinal slot 30 provided in an offset portion 31 of the elongated bracket member 18. In the folded position of the leg member 17 said end portion 29 of the brace member 27 is located near the inner end of said slot 30 but in the opened position of the leg member said end portion 29 is pressed into engagement with the lateral offset 32 at the outer end of said slot 30 by a spring member 33 provided therefor on the offset portion 31 of the bracket 18. In this connection, it is noted that the angular portion 29 of the brace member 27 is provided with a head 34 for retaining it in its working relation in said slot 30 of the bracket member 18.

When the table is in opened condition with the drop leaves 3 supported at their outer ends on the leg members 17, the central panel 1 to which the inner end portions of the leaves 3 are hingedly attached rests solidly on top of the pedestal frame 2, that is to say, the cleats or blocks 8 on the under side of the panel 1 rest crosswise directly upon the adjacent top portions of the pedestal frame members 14, while the middle portion of the central cross cleat 5 on the under side of said panel 1 is cut away, as at 5', to reduce that portion of said cleat 5 to the same thickness as the respective cleats or blocks 8, said cutaway portion 5' straddling and resting upon the adjacent middle portions of said frame members 14.

In the folded condition of the table, the center panel member 1 is raised above the pedestal frame 2 and the drop leaves 3, with the outer supporting legs 17 folded back thereunder, are swung downwardly on their hinges 6 to vertical position on opposite sides of the pedestal frame 2 with

their end portions resting on the transverse base members 12 of said pedestal frame (see Figure 6). In lifting the center panel member 1 it is guided by the rod members 10 sliding through the elongated bearings afforded by the bushings 16 in the upper horizontal member 15 of the pedestal frame. Any suitable means may be provided for limiting the upward movement of the panel 1 and prevent the withdrawal of the rods 10 entirely from said bushings 16. As shown, a flexible connecting element, such as a chain 35, is provided for the purpose, said chain 35 being conveniently attached at its lower end to the upper portion of the pedestal frame 2 and at its upper end to the under side of the panel 1, and being obviously of a length so that when drawn taut the panel 1 is held against further upward movement with the lower ends of the rods 10 still within the bushings 16.

When the table is folded as shown in Figures 2 and 6, it is readily movable from place to place, as the transverse base members 12 of the pedestal frame are mounted on suitable swiveled casters 36, while to releasably hold the pedestal frame from movement on its supporting casters 36 at the time the table is being opened and set up for use and also while it is being folded, as well as during the time the table is in use, floor-engaging devices of the character of conventional door stops 37 may be provided on the lower end portions of the uprights 11 of said pedestal frame 2, these stops 37 each including the usual plunger 38 having a rubber or other suitable cushioning head 39 to engage the floor and the plunger being releasably held in its depressed position by a releasable detent 40.

To facilitate the operation in opening and closing the table and minimize the physical labor required of the operator, the drop leaves 3 are provided on their under sides near their outer margins with rollers 41 which ride on the floor during the swinging movement of the leaves while the center panel 1 is being moved vertically with relation to the pedestal frame 2. Preferably, these rollers 41 are mounted without any swivel action upon blocks 42 provided therefor on the under side of the leaf 3 so that said rollers will track only in a straight line during the swinging movement of the leaf on its hinges 6, said rollers being also arranged in alignment with inclined track members 43 provided on the end portions of the transverse base members 12 of said pedestal frame 2, said track members facilitating the movement of the lower portions of the drop leaf panels 3 on to and from the base members 12 while the operator is raising or lowering the center panel 1, as the case may be, and during which operation, of course, the stop members 37 have their plungers 38 operated to set the head portions 39 in engagement with the floor so as to hold the pedestal frame against movement. As shown, the track members 43 have upturned end portions 44 which serve as limiting stops against which the rollers 41 abut when the drop leaves 3 are in their vertical folded position and resting on the adjacent end portions of the transverse base members 12 of the pedestal frame (see Figure 6).

It is here noted that in the folded condition of the table with the drop leaves 3 resting on the transverse base members 12 of the pedestal frame, the flexible chain 35 is not fully tautened but is slightly slackened so as to permit the slight upward movement of the center panel 1 to permit the leaves 3 to be readily eased off the

base members 12, after which the center panel 1 is lowered and the rollers 41 ride downwardly on the inclined track members 43 and thence on the floor away from said track members until the center panel 1 is brought to rest upon the top of the pedestal frame 2. Then, with the panel 1 supported on the pedestal frame and said frame held against movement on the floor by the application of the stop elements 37, it is an easy matter to swing the drop leaves upwardly on their hinges 6 and unfold the leg members 17 and lock them in position to support the outer ends of said leaves 3. By the same token it is an easy matter to fold the table by first collapsing the leg members 17 and locking them in folded position under the drop leaves 3 and then lower the outer end portions of said leaves to the floor, after which it is only necessary to lift the center panel 1 from the pedestal frame 2, during which operation the outer end portions of the leaves move inwardly towards the pedestal frame with the rollers 41 riding first on the floor and then up the inclined trackways 43 and against the stop portions 44 on top of the base members 12 of said pedestal frame 2, the flexible stop element or chain 35 being, of course, fully tautened while the leaves 3 are swinging onto the frame base members 12, and the center panel 1 being finally eased downwardly until the leaves 3 are supportingly engaged with said base members 12.

By the foregoing it is seen that a foldable table structure is produced which permits the use of a comparatively narrow center panel for the table top and a pair of one-piece drop leaves which are each much greater in width from hinged end to free outer end than the height of the table when set up for use, whereby the table top is of amplified working length when the table is set up and at the same time the table can be folded compactly and in such a manner as to be quickly and easily removed from the location in which it is used to a small storage space. An important advantage in the provision of the relatively wide one-piece drop leaf is the elimination of seams and the presentation of an unbroken surface area which makes the table especially adaptable for the playing of table tennis or ping-pong in that the net may be stretched across the narrow center panel 1 and the seam where the drop leaf is hinged to said central panel being located so close to the net that there is little, if any, possible interference thereby in the natural rebound or deflection of the ball when batted into contact with the playing surface of the table during the play.

Obviously, if desired, suitable power means may be provided on the pedestal frame 2 for raising and lowering the center panel 1 and considerable modification may be made in the general structure of the table and parts thereof within the spirit and scope of the invention as defined by the appended claims. The invention, therefore, is not limited to the specific construction and arrangement shown in the accompanying drawings.

What is claimed is:

1. A folding table comprising a top including a narrow center panel and relatively wide drop leaf panels hinged at one end to said center panel, a pedestal frame on which said center panel is movably mounted with provision for supporting the panel in a lowered position on said frame, cooperative guide means whereby said center panel may be elevated and supported above said ped-

estal frame, said drop leaf panels having foldable legs at their outer ends for supporting said panels in opened position and in horizontal alignment with said center panel in its lowered position on said pedestal frame, said drop leaf panels, with their supporting legs folded thereunder, being supported in their folded position upon said pedestal frame and supporting said center panel in its raised position.

2. In a folding table, a transverse pedestal frame, a relatively narrow central table top panel having depending guide members slidably mounted on said pedestal frame whereby to guide said panel in up and down vertical movement on said frame, said panel in its lowered position being supported on said pedestal frame, relatively wide drop leaf panels hingedly attached at their inner ends to said central panel, said drop leaf panels having foldable legs at their outer ends for supporting them in open position and in horizontal alignment with said central panel in the lowered position of the latter, said drop leaf panels in their closed position, being supported at their lower ends on said pedestal frame, roller elements provided and arranged on said drop leaf panels to ride on the floor during part of the opening and closing movement of said panels, and opposed inclined trackways on said pedestal frame located adjacent the floor for guiding said roller elements onto and from said pedestal frame.

3. In a folding table, a central supporting frame, a central table top panel mounted on said supporting frame with vertical movement and supported directly on said frame in its lowered position, and a pair of relatively wide drop leaf panels hingedly attached at their inner ends to said central panel on opposite sides thereof, said drop leaf panels having provision at their outer ends for supporting them in horizontal opened position in alignment with said central panel in its lowered position, said drop leaf panels in vertical closed position resting with their outer ends on the base portion of said central supporting frame with the central table top panel supported thereby above said supporting frame.

4. In a folding table, a transverse pedestal frame, said frame being mounted on supporting casters and having releasable floor-engaging stop means for holding said frame against movement on the floor, a central relatively narrow table top panel having depending guide members mounted slidably on said pedestal frame whereby said panel may be raised and lowered, said panel in its lowered position resting directly on said pedestal frame, a pair of relatively wide drop leaf panels hingedly attached at their inner ends to the opposite sides of said central panel, foldable legs at the outer ends of said drop leaf panels for supporting said panels in horizontal opened position and in cooperative relation to said central panel in its lowered position, releasable bracing means for holding the legs of said drop leaf panels in their opened position, means for releasably holding said legs in closed position under said drop leaf panels, roller elements provided and arranged on said panels to ride on the floor during part of the opening and closing movement of the latter, and inclined trackways on opposite sides of the base portion of said pedestal frame adjacent the floor for guiding said roller elements onto and from said pedestal frame, said trackways having stop members at their inner ends for arresting said drop leaves in their folding movement upon the pedestal frame, said drop leaves in their vertical closed position being supported with their

outer ends on said pedestal frame and in turn supporting said central table top panel in its raised position above said frame.

5 5. In a folding table, a pedestal frame comprising vertical end members, transverse base members at the lower ends of said vertical members, cross connecting members at the upper ends of said vertical members, vertical guide bushings on said upper cross members of the pedestal frame, 10 a central table top panel having depending guide rods fitted slidably in said bushings on the pedestal frame, said table top panel in its lowered position resting upon said pedestal frame, means for limiting the upward movement of said panel, 15 a pair of relatively wide drop leaf panels hingedly

attached at their inner ends to said central panel, said drop leaf panels in vertical closed position being supported with their outer ends upon the transverse base portions of said pedestal frame, foldable leg members on said drop leaves for supporting them in horizontal opened position and in cooperative working relation to said central panel in its lowered position, roller elements on said drop leaf panels to ride on the floor during part of the opening and closing movement of said panels, and means for guiding said roller elements onto and from the transverse base portions of said pedestal frame.

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