June 19, 1951 J. W. BRYAN 2,557,594

FOLDING LEG SERVING TRAY

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FIG 1

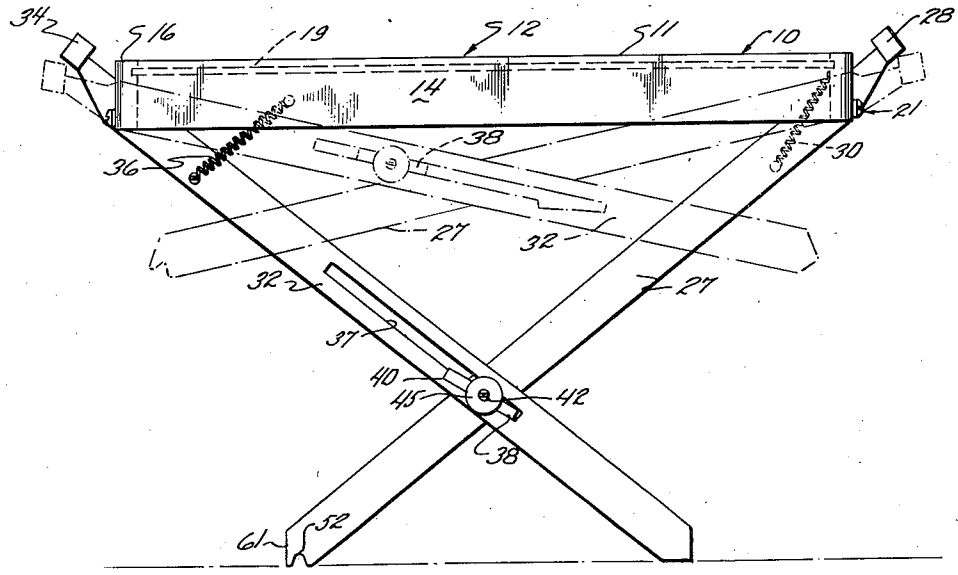


FIG 2

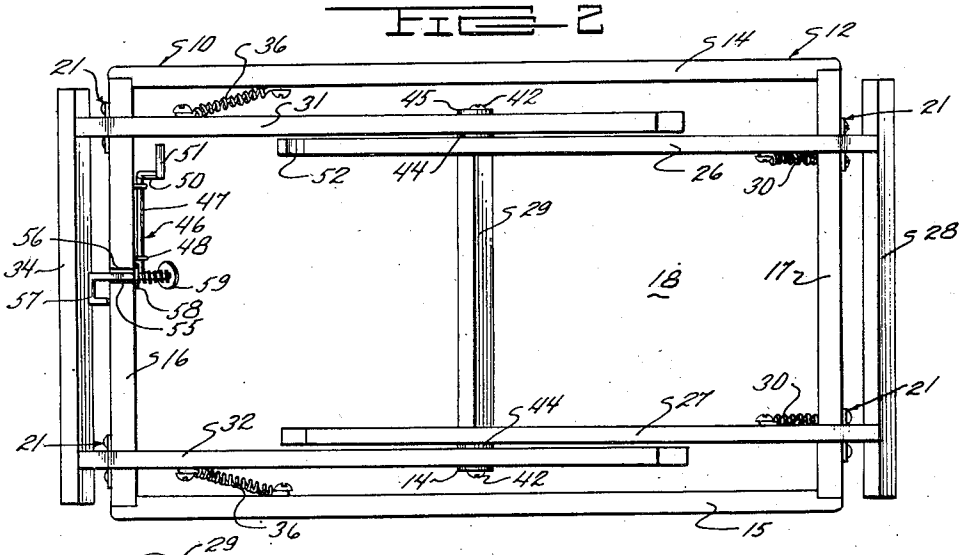
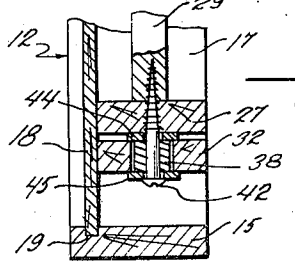


FIG 7



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FOLDING LEG SERVING TRAY

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FIG 3

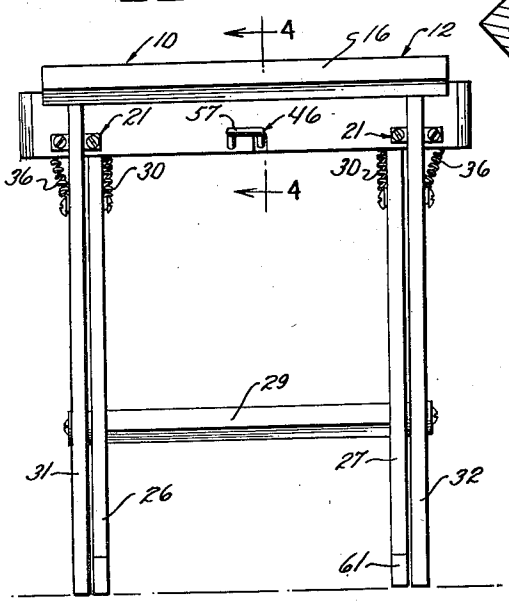


FIG 4

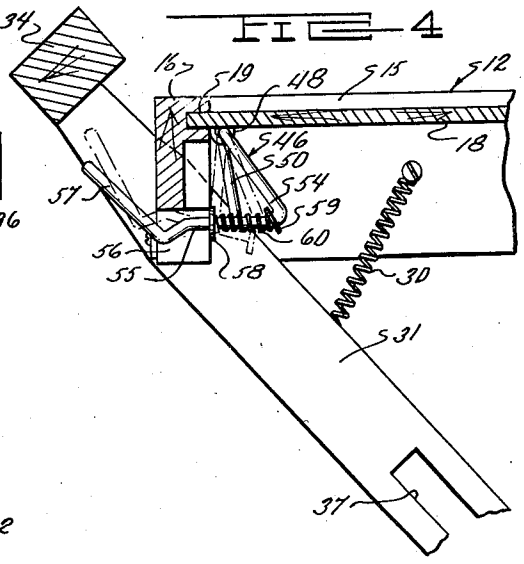


FIG 5

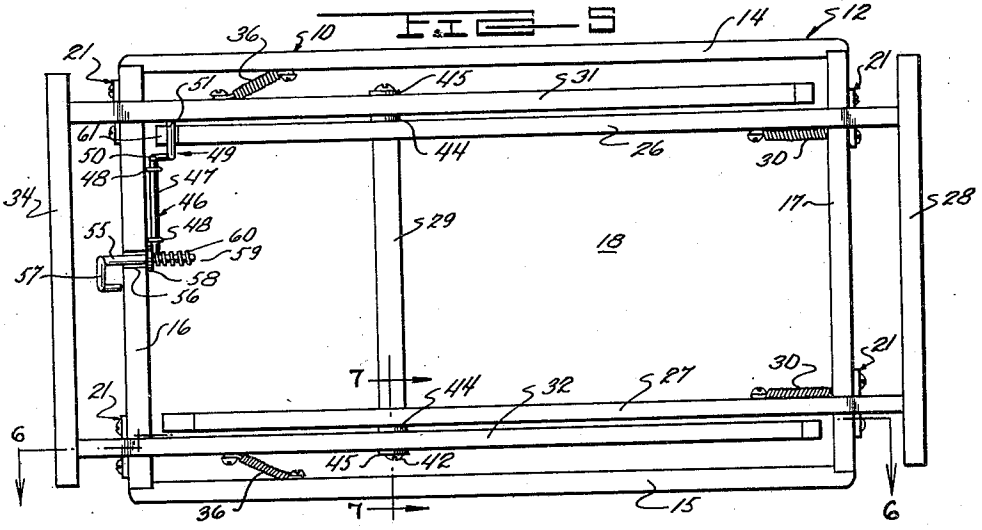
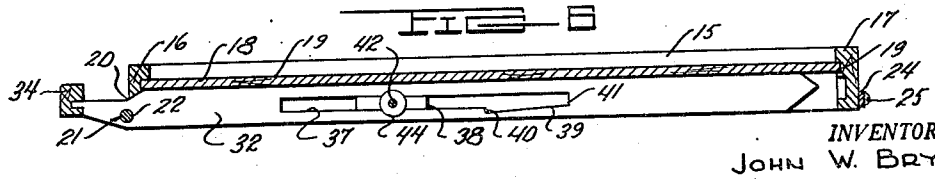


FIG 6



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FOLDING LEG SERVING TRAY

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2 Claims. (Cl. 311—83)

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This invention relates to a serving tray, and more particularly to a serving tray having folding legs pivoted thereon for extension, so that the units may be used as a serving table.

It is an object of this invention to provide a folding-leg serving tray of the kind to be more particularly described hereinafter having legs which are retractable within the confines of the top of the serving tray and having latch means for securing the legs in their folded or extended positions.

Another object of this invention is to provide a novel latching means for securing the extended legs in their extended position, and a novel latch-actuating means for releasing the interlocking engagement of the extended legs, whereby the legs may be folded or retracted below the serving tray.

Still another object of this invention is to provide a serving tray of this kind which may be conveniently carried about to a desired location with the legs fully retracted below the tray, the legs being mounted for extension to support the tray at the desired position. The ends of the legs are extended outwardly beyond the ends of the tray and connected together in pairs at each end by transverse bars which are positioned for use as handles for carrying the tray and handles for actuating the legs to their folded and extended positions.

A further object of this invention is to provide a device of this kind wherein the handles of the trap constitute the handles for actuating the tray-supporting legs and for properly rocking the legs for releasing the latching means by which the legs are secured in their extended, tray-supporting position. The latching means for securing the legs in their retracted unfolded position is disposed adjacent the handle bars to be readily actuated by a person supporting the tray by holding the bars, at which time the legs may be extended to a tray-supporting position.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is a side elevation of a folding-leg serving tray constructed according to an embodiment of my invention;

Figure 2 is a bottom plan view of the serving tray shown in Figure 1;

Figure 3 is an end elevation of the serving tray;

Figure 4 is a fragmentary detail section taken on the line 4—4 of Fig. 3;

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Figure 5 is a bottom plan view of the serving tray, showing the legs pivoted to their folded or retracted position;

Figure 6 is a longitudinal section taken on the line 6—6 of Figure 5;

Figure 7 is a fragmentary, detail, transverse section taken on the line 7—7 of Figure 5.

Referring to the drawings, the numeral 10 designates generally a novel folding-leg serving tray constructed according to an embodiment of my invention. The folding-leg tray 10 is formed of a flat, top tray member or platform 11 which may be formed of wood or other suitable material. The tray member 11 is formed of a rectangular frame 12 having side frame members 14 and 15 extending along the length thereof and a pair of end frame members or end plates 16 and 17 connected between the extreme ends of the side frame members 14 and 15, respectively. A center panel 18 is secured within the frame 12 by engagement of the side edges of the panel in a recess or groove 19 formed on the inner side of each of the frame members adjacent the upper edge thereof.

Each of the end frame members 16 and 17 is formed with a pair of cut-out notches 20 on the lower side thereof and adjacent the opposite ends. A pivot member 21 is secured across each of the notches 20 for pivotally mounting the supporting legs of the serving tray 10 on the end members thereof. The pivot members 21 are formed as flat plates having a central pivot pin 22 between the end plates 24. The end plates 24 are secured to the end members 16 and 17 adjacent the opposite edges of the notches 20 by bolts 25 or other suitable securing devices.

A pair of supporting legs 26 and 27 are pivotally connected to the pivot members 21 on one of the end members, as the end member 17. The end members 26 and 27 are pivotally engaged on the pivot members 21 by engagement of the pivot pin 22 through the legs adjacent the upper, outer ends thereof. A handle 28 is fixed on the extreme upper end of each of the legs 26 and 27 above the pivot members 21 and is spaced outwardly beyond the end frame members 17 in each of the pivoted positions of the pair of legs. A transverse connecting bar 29 is secured between the inner sides of the legs 26 and 27 adjacent the lower ends thereof, being spaced upwardly from the extreme lower or inner ends of each of the legs. A spring 30 is fixed between the upper side of the end member 17 above the notch 20 therein and each of the legs 26 and 27 a short distance downwardly from the pivoted connection of the legs to the end member 17. The coiled spring 30

is arranged for constantly biasing the legs 26 and 27 upwardly to a retracted position between the frame members of the tray member 11.

A second pair of legs 31 and 32 are pivotally connected to the pivot members 21 carried by the end frame members 16 opposite from the end frame member 17. The pivot members 21 carried by the end frame member 16 are engaged through the upper ends of the legs 21 and 22 a short distance downwardly from the extreme upper end thereof and a transverse bar or handle 34 is fixedly connected to the extreme upper end of each of the legs 31 and 32.

The legs 31 and 32 are constantly biased to a retracted position below the tray member 11 between the side frame members 14 and 15 by a pair of springs 36 which are fixed at one end to the side frame members 14 and 15 and at the other end to the legs 31 and 32 a short distance downwardly below the pivot thereof. The legs 26 and 27, being fixedly connected together by the transverse connecting bar 29 adjacent the lower ends thereof, are adapted to be positioned between the legs 31 and 32, the pairs of legs being in criss cross relation with respect to each other in all positions of the legs. Further, the pairs of legs are connected at the criss cross point for movement toward and away from each other.

Each of the legs 31 and 32 is formed with an elongated slot 37 extending along the length thereof adjacent the lower end. The slots 37 constitute channel means extending along the length of each of the legs 31 and 32 within which a latch member or slide 38, pivotally mounted on the outer side of each of the first pair of legs 26 and 27, is adapted to be slidably engaged. The grooves or channels 37 are substantially rectangular in configuration, and the latch member 38 is also rectangular in configuration, the latch member 38 having a length considerably shorter than the total length of the channels 37. Each of the channels 37 is formed with an enlarged recess 39 at the extreme lower end thereof, the recess 39 being substantially triangular in configuration, having the apex or narrow portion of the triangle at the lower end of the channel or groove 37. The upper end of the triangular recess 39 forms a ledge or shoulder 40 extending downwardly and outwardly from the lower surface of the groove 37, the ledge 40 being spaced upwardly from the extreme lower end of the groove or channel 37. In the extended position of the legs, the latch member 38 is adapted to be seated against the ledge 40, the extreme upper end of the latch member 38 being engageable with the lower confronting surface of the ledge 40. The lower end of the groove 37, at the lower end of the triangular recess 39, is substantially the same width as the major portion of the channel member 37, and the corner 41 formed thereby constitutes the pivot point for the latch member 38 during the pivotal movement of the latch member when the latch member 38 is pivoted for locking the legs in their extended tray-supporting position.

The latch member 38 is pivotally mounted on the outer side of each of the legs 26 and 27 by a bolt or pivot member 42 which extends through the latch member 38 intermediate the length thereof, the latch member 38 being rockably supported on the shank portion of the bolt 42. The latch member or latch 38 is spaced outwardly from the legs 26 and 27 by a washer 44, the washer 44 being slidably engageable with the inner surface of the channeled legs 31 and 32. A second washer 45 is engaged between the head of the bolt 42 and the outer sides of the legs 31 and 32, the inner surface of the washer 45 slidably engaging the outer surfaces of the legs 31 and 32 along the side edges of the channel or groove 37.

A latch 46 is rockably supported on one of the end frame members, as the end frame member 16, for releasably securing the legs 26 and 27 together with the legs 31 and 32 in their retracted or folded position within the limits of the frame members which constitute the tray member or element 12. The latch 46 is formed of an elongated length of wire or rod bent upon itself to the desired shape. The rod 46 is formed with an elongated pivot bar 47 which is rockably supported on the inner side of the end frame member 16 by a pair of eyes or bearing members 48 which are fixedly secured to the inner side thereof. A crank 49, including a radially-extending bar 50 fixed to one end of the pivot bar 47 and a horizontally-extending latching bar 51, is fixed to or preferably formed integrally with the extreme outer or lower end of the arm 51. The bar 51 is adapted to be latchably engaged in a recess 52 which is formed on the extreme lower end of one of the legs, as the leg 27. The inner end of the latch 46 is formed with a downwardly and inwardly-extending lever bar 54 formed integrally with the extreme inner end of the pivot bar 47. A substantially longitudinally-extending, horizontal bar 55 is formed integrally with the lower inner end of the lever arm 54 and is adapted to be extended outwardly through a notch or recess 56 on the lower side of the end frame member 16. A looped handle 57 is formed on the extreme outer end of the horizontally-extending bar 55, the handle being disposed between the outer side of the end frame member 16 and one of the handle bars, as the handle bar 34. A washer 58 is loosely engaged about the outwardly-extending horizontal bar 55 and bears against the inner surface of the end frame member 16 on the opposite sides of the inside end of the groove or notch 56. A second washer 59 is fixed on the inner end of the horizontally-extending bar 55 spaced inwardly from the washer 58 and a resilient member or spring 60 is engaged between the washers 58 and 59 for constantly pressing the lever arm 54 inwardly about the pivot bar 47, and the horizontally-extending latching bar 51 inwardly relative to the tray member 11 for latching engagement in the recess 52 on the lower end of the leg 27.

In the use and operation of the serving tray constructed according to an embodiment of my invention, from the fully folded position, wherein the legs are enclosed between the frame members of the tray member 11, with the handles 28 and 34 gripped in the hands of a person, the finger of one hand of the person may be engaged in the loop 57 of the latch 46 for releasing the latch bar 51 from engagement in the recess 52 on the lower end of the leg 27. Upon pivoting the handles 28 and 34 upwardly about the pivot members 21, the legs will be caused to rock to the extended pivoted position, shown in Figures 1 and 3 of the drawings. When the latch member 38 bears against the extreme lower end of the channels 37, the tension on the handles 28 and 34 may be released and the serving tray 10 placed on the floor to be supported thereon. The springs 30 and 36 will tension the legs for pivotal movement upwardly to the retracted position, such tension

effecting the pivotal movement of the latching member 38 about the corner 41, so that the upper end of the latch bar or member 38 will be seated below the shoulder or ledge 40. In this position of the latch 38, the legs are held in their extended position and any weight on the top of the tray 11 will not affect the folding pivotal movement of the legs to the retracted position.

For folding the legs to their retracted position, the handle 34 is initially rocked upwardly in the same direction as when it was rocked for lowering the legs 31 and 32, this lowering rocking movement effecting the further pivotal movement of the latch 38 about the corner 41 at the lower end of the channels 37, followed by dropping of the latch 38 into the recesses 39 and movement of the latch slidably along the recesses 39 and up and over the shoulders 40 and along the channels 37 until the latch 38 abuts against the adjacent ends of the channels 37 resulting in retracting of the legs to the under side of the tray member 11. The springs 30 and 36 will bias the legs for retracted movement and as the legs near their extreme retracted position, the extreme lower edge 61 of the leg 27 will bear against the latching bar 51 for rocking the latch 46 in a position whereby the latching bar 51 may be spring pressed for engagement again in the recess 52 for holding the legs in their fully retracted position. The handles 28 and 34 provide for the carrying about of the tray 10, either with the legs folded entirely on the under side of the tray element 11 or with the legs exposed in their extended position.

I do not mean to confine myself to the exact details of construction herein disclosed, but claim all variations falling within the purview of the appended claims.

I claim:

1. A serving tray comprising a platform, an end plate positioned on each end of said platform and having one end dependingly secured thereto, a first pair of spaced legs each pivotally connected adjacent one end thereof to the end plate adjacent thereto, a second pair of spaced legs each pivotally connected adjacent one end thereof to the end plate adjacent thereto, said second pair of legs being arranged in criss cross relation with respect to said first pair of legs and connected at the criss cross point for movement toward and away from each other, a handle extending between said one end of each of said first and second pairs of legs and secured thereto, spring means operatively connected to each leg of said first and second pairs of legs and to the adjacent portion of said platform for urging the legs toward said platform, and latch means on one of said end plates and engageable with the other end of one of said first pair of legs for holding said legs in position of movement toward each other.

2. A serving tray comprising a platform, an end plate positioned on each end of said platform and having one end dependingly secured thereto, a first pair of spaced legs each pivotally connected adjacent one end thereof to the end plate adjacent thereto, a second pair of spaced legs each pivotally connected adjacent one end thereof to the end plate adjacent thereto, said second pair of legs being provided with longitudinally extending slots intermediate their ends and said slots being formed with shoulders adjacent the other ends of said second pair of legs, said second pair of legs being arranged in criss cross relation with respect to and adjacent to one face of said first pair of legs, a slide rockably supported on said one face of each of said first pair of legs and projecting through the slot in the adjacent one of said second pair of legs for slidable movement therein, said slide being engaged against the adjacent shoulder in extended position of the legs, a handle extending between said one end of each of said first and second pairs of legs and secured thereto, spring means operatively connected to each leg of said first and second pairs of legs and to the adjacent portion of said platform for urging the legs toward said platform, and latch means on one of said end plates and engageable with the other end of one of said first pair of legs for holding said legs in position of movement toward each other.

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