PORTABLE FOLDABLE TABLE

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This invention relates to a portable foldable table, and has for its principal object the provision of such a table, which, when folded, is much more easily portable than any previous designs in a home or on a patio, where storage space for such an item is usually rather limited, a further important feature being the ease with which the table can be folded after use and unfolded again when it is to be set up for use, the positive locking action obtainable with the present unique design making certain that when the table is set up for use it cannot possibly collapse and, when folded, is equally well locked up.

Among the features of the present invention that are considered of special importance are:

(1) Double use of a hook on the bottom of the table top to engage the cross portion on the upper end of one of the U-shaped legs of the supporting X-frame, for good support in set-up position and to snap over a flexible cross rod intermediate the ends of the other U-shaped leg of the X-frame to lock the table top and folded legs in folded position, and

(2) Use of the cross-portion of one of the U-shaped legs of the supporting X-frame (a) as a foot for support of the grill in set-up position, or (b) as a handle in carrying the table in folded condition to and from the place of use, or (c) as a cross-member in hanging up the table in folded condition on a hook or nail on a wall.

The invention as illustrated in the accompanying drawings, in which

FIG. 1 is a combination side view and perspective of the portable foldable table of my invention, as it appears when put up and set for use

FIG. 2 is a side view taken from the left-hand side of FIG. 1;

FIG. 3 is a vertical section on the line 3—3 of FIG. 2; FIG. 4 is an enlargement of the upper right-hand corner portion of FIG. 3, to better illustrate the locking action;

FIG. 5 is a side view of the table in folded condition;

FIG. 6 is a vertical section on the line 6—6 of FIG. 5, and

FIG. 7 is an enlargement of the central portion of FIG. 6, to better illustrate the locking action.

The same reference numerals are applied to corresponding parts throughout the views.

Referring to the drawings, the foldable portable table of my invention comprises a top 8 having cross-pieces 9 and 10 fastened to the under side thereof, the top being adapted to be supported on an X-frame 11—12, as shown in FIG. 1, and the X-frame being foldable substantially to parallel relationship to the top 8 as shown in FIGS. 5 and 6.

The longer leg 11 of the X-frame is generally U-shaped with its lower cross portion 13 adapted to rest on the floor or ground 14, while the upper end 15, which are flattened in parallel planes, as indicated at 16, are pivoted at 17 to brackets 18 fastened, as at 19, to the bottom of the cross-piece 9. The other leg 12 of the X-frame is also generally U-shaped with its cross-portion 20 disposed uppermost and engaged in a double-pronged hook 21 mounted on and extending downwardly from the bottom of the other cross-piece 10, while the lower end of the arms 22 of this leg have rubber or plastic crutch tips 23 mounted thereon for non-skid engagement with the floor or ground 14. Small, generally triangular, bracket-ets 24 riveted to the opposite side portions of leg 11 intermediate the ends thereof, as indicated at 25, carry a somewhat flexible and resilient cross-rod 26, which, at its opposite ends, extends through bearing holes 27 provided therefor in the opposite side portions 11 of leg 11 to pivotally connect the legs 11 and 12 and permit the folding and unfolding of the table. Nuts 28 of a self-tapping type are applied to the projecting ends of the rod 26.

In operation, the hook 21 is designed to snap over the flexible and resilient cross-rod 26 in moving to and from the folded position shown in FIGS. 5, 6, and 6, the operator using the cross-portions 13 and 20 as hand grips to spread the legs 11 and 12 apart in unfolding the table and to move these parts together in the folding operation. When the table is folded, as seen in FIGS. 5 and 6, the anti-skid crutch tips 23 prevent slippage with respect to the floor if one chooses to lean the folded table against a wall for support. Usually, the cross-portion 13 is used as a handle in carrying the folded table about from one place to another, although the cross-portion 20 can also be used as a handle for that purpose more conveniently by a shorter person. In hanging the folded table up on a hook or nail on the wall, the cross-portion 13 is normally used. When the table is unfolded, it is a simple matter to insert the cross-portion 20 of leg 12 with a snap fit into the double pronged hook 21 for good rigid support of the table in its unfolded condition. The unique construction of the double pronged hook 21 accounts for the secure hold and the snap action in locking the cross-portion 20 in the hook, the hook being made from a single strip of spring steel, bent to a U-shape, the generally rectangular cross-section 29 of the U serving as its attaching portion and leaving a single hole provided therein at the forward end through which a screw 30, the rounded head of which projects downwardly to serve as a detent located directly over the front end portions 31 of the two prongs of the hook, as clearly appears in FIG. 4, so that as one enters the rounded cross-portion 20 of the leg 12 into the hook 21 the rounded head of the screw 30 riding on the top of the cross-portion 20 of the leg 12 causes the hook 21 to be sprung downwardly, as indicated in dotted lines in FIG. 4, relative to the front end of its cross-portion 29 held by the screw 30, enough to admit the cross-portion 20, after which the hook 21 snaps back into place, holding the cross-portion 20 securely locked behind the rounded head of the screw 30. In the hooking of the two pronged hook 21 over the cross-rod 26, the inclined outer edge portions 32 on the free end portions 31 of the two prongs of the hook slidably engaging the cross-rod 26 as the two legs 11 and 12 are being forced together, cause the rod 26 to be sprung downwardly enough to pass the free ends 31 of the two prongs whereupon the cross-rod 26 snaps upwardly into place behind these prongs, as seen in FIG. 7, securely locking the table in folded condition. To unfold the table, one only need pull the cross-portions 13 and 20 of the legs 11 and 12 apart, and there again the hook 21 is sprung outwardly relative to the front end of its cross-portion held by screw 30 enough to allow the cross-rod 26 to move from behind the two prongs of the hook, or, if desired, one may press downwardly on the mid-portion of the cross-rod 26 with one hand while pulling outwardly on the cross-portion 13 of leg 11 with the other hand to facilitate unlocking of the legs from their folded position, and, of course, in that event there is less need for springing outwardly of the hook 21 relative to its fastened front end portion held by screw 30.

It is believed the foregoing description conveys a good understanding of the objects and advantages of my invention. The appended claims have been drawn to cover all legitimate modifications and adaptations.

I claim:

1. A foldable portable table comprising a top and a
foldable X-frame thereunder for support thereof in its horizontal operative position, said X-frame comprising two generally U-shaped legs, the first of which has the upper ends of the arms thereof pivotally connected to the under side of said top on one side of its center while the substantially horizontal cross-portions of the U at the lower end of this leg rests on the ground or floor, the second leg being of inverted U-form pivotally connected intermediate the ends of the arms thereof to the respective arms of the first leg intermediate the ends thereof, the lower ends of the arms of the second leg providing support of the top on the ground or floor while the substantially horizontal crossportion of this U at the upper end is detachably engaged in a substantially vertical hook provided on the under side of the top on the other side of its center and facing the pivotal connection of the first leg with the top, the X-frame upon disconnection of said hook from the cross-portion of said second leg being foldable to substantially flat form into compact substantially parallel relation to the top so that the cross-portion of one of said legs serves as a handle for portability of the folded table while the hook is detachably engaged over a substantially horizontal projection provided on one of said legs.

2. A foldable table as set forth in claim 1 wherein a substantially horizontal cross-rod extending through registering bearings provided on the arms of said two generally U-shaped legs forms the pivotal connection between said legs besides providing the last named substantially horizontal projection for detachable engagement with said hook in the folded condition of said table.

3. A foldable table as set forth in claim 1 wherein a substantially horizontal cross-rod extending through registering bearings provided on the arms of said two generally U-shaped legs forms the pivotal connection between said legs besides providing the last named substantially horizontal projection for detachable engagement with said hook in the folded condition of said table, said rod being flexible and resilient and engaging the hook at a point intermediate the ends of said rod, and said hook having a cam surface thereon for deflection of said rod preparatory to its snapping onto the hook.

4. A foldable table as set forth in claim 1 wherein the hook is of a double pronged type, the same comprising a generally U-shaped body of spring steel sheet material bent to generally U-shape providing an elongated generally rectangular attaching portion adapted to be fastened to the under side of the table top and downwardly bent side portions of hook form defining the prongs both facing one end portion of said cross-portion, which is the end portion fastened to the under side of the table top by a fastener having a downwardly projecting rounded head located directly over the outer ends of said prongs, the body portion being flexible downwardly by flexing of the attaching portion relative to the fastener, whereby the rounded head of said fastener serves as a detent for detachably securing the cross-portion of the second leg in the hook when the said cross-portion is snapped into place therein past said head.

5. A foldable table as set forth in claim 2 wherein the hook is of a double pronged type, the same comprising a generally U-shaped body of spring steel sheet material generally U-shape providing an elongated generally rectangular attaching portion adapted to be fastened to the under side of the table top and downwardly bent side portions of hook form defining the prongs both facing one end portion of said cross-portion, which is the end portion fastened to the underside of the table top by a fastener having a downwardly projecting rounded head located directly over the outer ends of said prongs, the body portion being flexible downwardly by flexing of the attaching portion relative to the fastener, whereby the rounded head of said fastener serves as a detent for detachably securing the cross-portion of the second leg in the hook when the said cross-portion is snapped into place therein past said head.

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