May 3, 1932. P. DUNLOP 1,856,378

FOLDING STOOL WITH TABLE EXTENSION

Filed Nov. 17, 1928

Fig. 1.

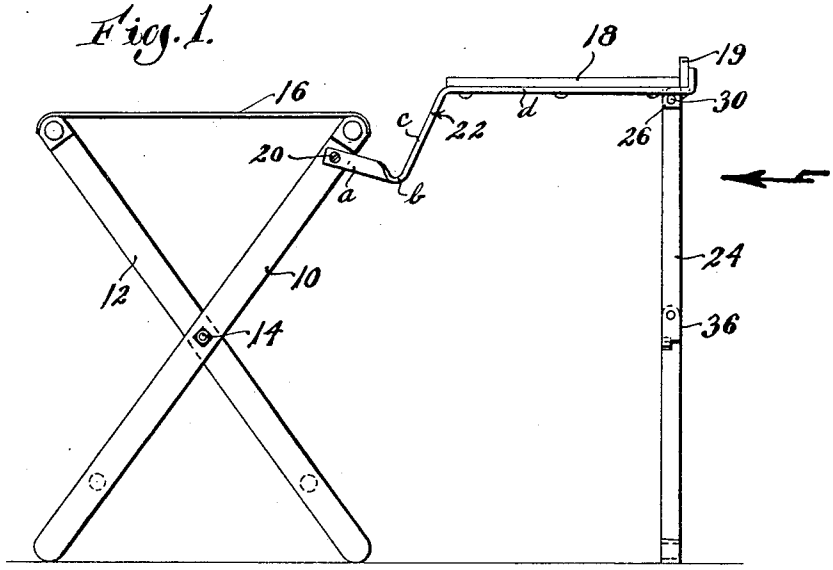


Fig. 5.

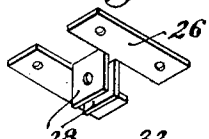


Fig. 3.

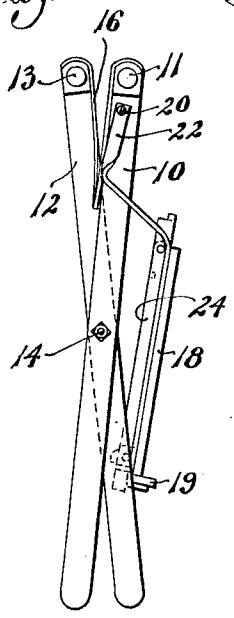


Fig. 4

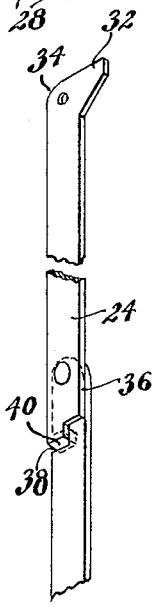
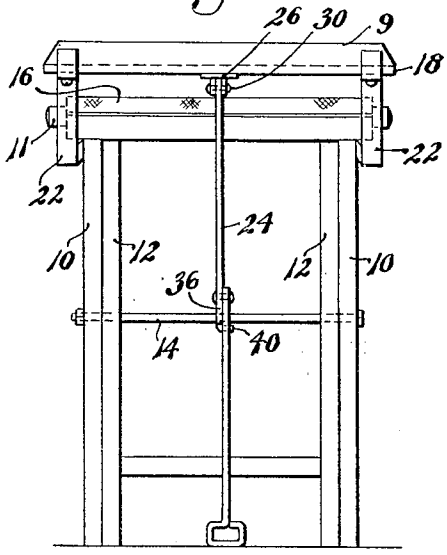


Fig. 2.



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UNITED STATES PATENT OFFICE

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FOLDING STOOL WITH TABLE EXTENSION

Application filed November 17, 1928. Serial No. 320,167.

This invention relates to improvements in folding stools with table extensions. More especially it relates to a combination stool and table which conveniently and quickly may be collapsed into small space.

It is among the objects of the invention to provide a simply constructed, low cost and efficient combined table and chair for individual use, which may be light in weight, compact in form for ready transportation, as in an automobile; and which can be set up for use in a few seconds of time, to serve the needs of campers, road-side luncheoners, etc. A feature of importance resides in its having a stable and securely self sustaining structure when the table is loaded in its extended position. Another object is to employ a principle of construction such that the table leaf and its supporting leg may be arranged out of the way when the stool only is to be used; and such that the bundle into which the whole may be collapsed is so relatively small, compact and flat that one or several of them may be placed in a small space such as may be found between the seats of an automobile or in its luggage carrier.

These objects, and other advantages which characterize the invention, are attained while employing a foldable stool, of usual construction, having two pairs of legs, the legs of each pair being pivoted to and crossing each other midway of their length, and a flexible seat connected between cross bars at the upper ends of the legs. Pivoted at the upper forward ends of the legs are two strip-metal swing brackets, together carrying a table leaf which is adapted to be raised or extended on these brackets into a horizontal plane, at or slightly above the level of the stool seat and forward of it, or to be dropped on them to a compacted hanging position, against the legs of the stool. For supporting the leaf as a table, in extended position, one or more mid-jointed folding legs are pivotally secured to the under side of the leaf near its outer edge, of sufficient length to rest on the ground or floor, when unbroken at the joint, at which time they combine with the said brackets at forward tops of legs for sustaining the leaf in a horizontal plane. A suitable stop at the upper end of the jointed leg prevents the swinging thereof in forward direction beyond a position of verticality for the leg; and stops, together with a friction bearing at the leg joint, limit the degree of opening of the leg at its mid-joint, and tend to maintain it in either open or folded position. Thus the device may be collapsed to lie flat; and it quickly and easily, may be spread open to provide a seat with associated table on which articles of food or the like may be held at a convenient distance from a person sitting on the stool, and yet be held with safety even when the stool is unoccupied. For example, a relatively heavy object, such as a bottle of milk, may be held anywhere on the table, while no person is sitting on the chair, without danger of its weight overbalancing the device as a whole.

It is intended that the patent shall cover, by suitable expression in the appended claims, whatever features of patentable novelty exist in the invention disclosed.

In the accompanying drawings:

Figure 1 is a side elevation of the invention set up ready for use;

Figure 2 is an elevation at right angles to Figure 1, looking in the direction of the arrow in Figure 1;

Figure 3 is a similar view of the device collapsed and folded flatwise; and

Figures 4 and 5 are perspectives of details, respectively of the jointed table leg and the bracket for attachment of the leg to the table.

Referring to the drawings, an ordinary folding stool is comprised of two pairs of crossed legs 10, 12, all being pivoted together midway of their length by rod 14, with the pairs crossing each other at the pivot. A flexible canvas seat 16 is slung between a bar 11 which connects the upper ends of the legs 10 and a like bar 13 which connects the upper ends of the legs 12. A chair back (not shown) may be provided if desired.

According to the invention a table leaf 18 is pivotally connected to the legs 10, near their upper ends, as at 20, by means of arms 22 secured to the under side of leaf 18 and projecting backward from it to the locations 20

of said pivots. An upstanding flange 19 along the front edge of the table tends to prevent the slipping of articles from the table if it happens to be set unevenly. On the under side of the leaf, near its front edge, a jointed leg 24 is pivoted in bracket 26 and is adapted to be swung to a position of verticality under the leaf with its free end resting on the ground or floor for supporting the leaf 18 in open position. The bracket 26 conveniently and economically may be made from a rectangular piece of suitably stiff sheet metal. Cutting two slits inward from each side edge, and bending down the tongues of material between these slits, to right angles to the original plane of the piece, forms two tongues 28 reaching downward adjacent and parallel to each other. One end of the leg 24 is adapted to fit between these tongues, and to be pivoted therein as at 30. Preferably this pivoted end of leg 24 will be formed with a projecting toe 32 as indicated in the drawings (Fig. 4), this serving as a stop to limit the opening swing of the leg on its pivot 30, while permitting movement of said leg around its pivot in the opposite or collapsing direction. And for this latter purpose the rear upper corner of this leg is rounded, as at 34. The mid-joint 36 may be of any suitable type, that shown comprising a cut-away portion 38 in one section of the leg 24 and a tongue 40 on the other section, slightly bent so as to engage in the notch 38, with frictional drag to maintain the sections in adjusted positions, and adapted to limit the relative movement of the two sections, so that one will not swing past the line of the other. When the leg 24 is folded and arranged between the folded table and stool it rests against the pivot rod 14 of the stool and thereby is held against dropping both when the stool only is in use and when the device as a whole is collapsed.

In use the stool seat 16 will be open to the limit; and the table leaf 18 may be left down out of the way if only a seat is desired. When the table is wanted, the leaf 18 may be swung up around pivot 20 to a position of horizontality; and the jointed leg 24 may be opened at its mid-joint and on its bracket, and brought to vertical position under the leaf with its free end resting on the ground or floor. A suitable foot 42 may have been provided for leg 24 to have stability.

For transportation and storage purposes the device is readily collapsible into a compact flat bundle. The table leg first being broken at the joint 36 and folded together to lie between the lowered leaf 18, resting against the pivot rod 14 of the stool between the legs 10, 12 thereof, next the stool may be folded together in the usual way, and the table leaf be pushed flat against it, as illustrated in Figure 3 of the drawings, with the folded table leg 24 maintained by the pivot rod 14 of the stool against falling to a position where it would project from the compactly arranged bundle. Thus may be provided an exceedingly practical and utilitarian piece of equipment for campers, automobilists and the like. It provides a firm support for articles of food or the like placed on the table, holds them steady if a person rises from the stool, and permits of their being set at a convenient distance from a person sitting on the stool. It is easily transportable by hand or in a small space in a vehicle. Also its structure is so simple that it is inexpensive to manufacture. These features all are combined in a device which is convertible, easily and quickly, between set-up and knocked-down positions.

The brackets 22 are important elements in accomplishing the above results. These are of a modified S-shape. In this S, made of strip metal at small expense, the part *a* runs out from chair leg 10, edgewise up, and therefore is not bendable downward. This provides a base support at *b*, where the strip has a quarter turn on small radius, followed by a bend upward so that the middle portion *c* of the S can rise in a direction approximating verticality. By reason of the approximate verticality this portion in turn is stiff to carry load of a weight above it. Thus the S constitutes a rear leg or strut for the table, which leg can run approximately vertically to a desired height above the level of the seat 16 within convenient reach of a person using the table while sitting on the stool. This rear strut takes the thrust of weight on table approximately endwise, and therefore is not likely to be bent by weight of articles or by pressure of the person on the rear part of the table. Thus it is one feature of the S-bracket 22 that by it the table can be set at a level above that of the seat. It can be made to be elevated more than is illustrated by making the middle portion *c* of the S longer. Another feature is that the table can be located at a convenient distance from the person sitting. This can be done by designing the part *a* with suitable length and all of this is without affecting the degree of flatness which the whole may assume when collapsed. If the part *c* were longer the brackets 22 would simply swing further around their pivots 20, when collapsing, until the leaf 18 has assumed substantially the same position in which it is seen in Figure 3.

Thus the invention provides the further advantages of locating the collapsible table at convenient height and distance.

I claim as my invention:

1. The combination, with a folding chair, of a leaf disposed in substantially the same plane as the chair seat, and having pivotal connection to the chair at each side thereof; and a vertical leg for said leaf, pivoted forward on the under side of the leaf and reach-

ing to the floor, for supporting the leaf as a table in a horizontal plane; the whole being foldable into a compact bundle wherein said leaf and said leg are confined within the limits of extent of the chair.

2. The combination, with a folding stool having a cross rod between its legs, of a leaf hinged at each side at points high up on the legs of the chair, and adapted to fold substantially flat against said legs in their folded position; a leg for the leaf pivoted forward on the under side of the leaf and foldable flat against the leaf; the whole being foldable into a compact bundle wherein said chair constitutes an obstruction preventing said leaf leg from falling to a projecting position.

3. The combination, with a collapsible chair, having pivoted crossed legs, of a leaf hinged on a horizontal axis at the top of a pair of said legs to fold substantially flat against said legs in the collapsed position of the whole; a leg for the leaf, jointed in the midst of its length for folding, and also jointed to the leaf to swing flat against the leaf; and a rod crossing between the leg pivots; whereby in the collapsed state said folded leaf leg is confined between said rod and folded leaf.

4. The combination, with a folding chair, of a table leaf mounted on the upper portions of modified **S**-shaped brackets whose lower ends are pivotally mounted on a horizontal axis high on legs of said chair; and a foldable leg pivoted on the under side of said leaf, extending to the floor, for supporting the forward end of a leaf in its raised position; the middle portion of each said **S**-bracket extending in a direction approaching verticality and constituting a strut for the rear end of the leaf, with the lower portion of the **S** serving as a base support for the upright portion.

5. The combination, with a folding chair, of a table leaf mounted on the upper portions of modified **S**-shaped brackets whose lower ends are pivotally mounted high on a horizontal axis on legs of said chair; and a foldable leg pivoted on the under side of said leaf, extending to the floor, for supporting the forward end of the leaf in its raised positions; said brackets comprising bent strips of sheet metal of which the lower portions extend a distance away from the chair, and are arranged edge up to be unbendable by vertical stresses, and of which the middle portion rises steeply, as a strut, to the raised leaf.

Signed at Boston, this fifteenth day of November, 1928.

PORTER DUNLOP.