Oct. 11, 1949. D. M. KENNEDY 2,484,382

SUPPORTING STAND AND SHELF

Filed Sept. 11, 1945

Fig. 1.

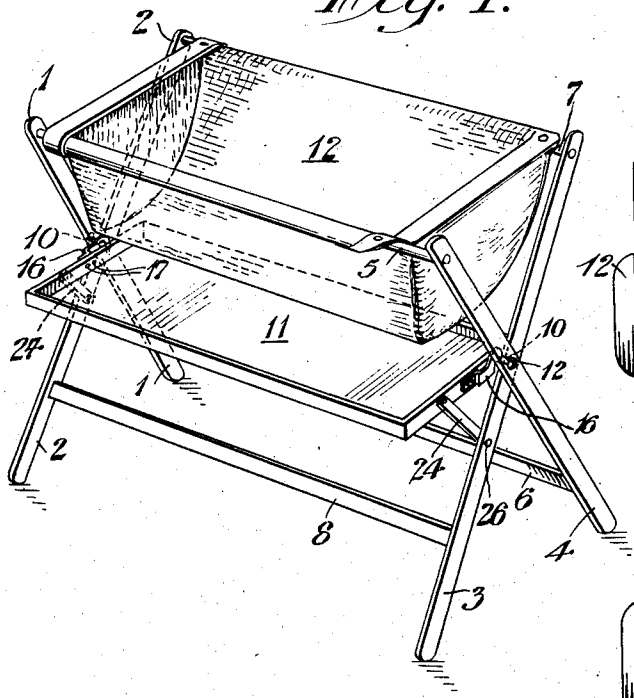


Fig. 2.

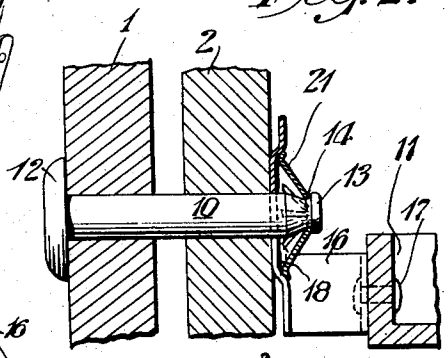


Fig. 3.

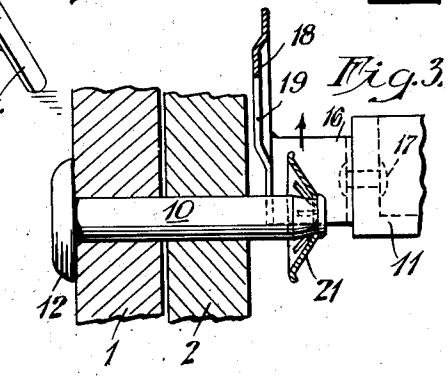


Fig. 4.

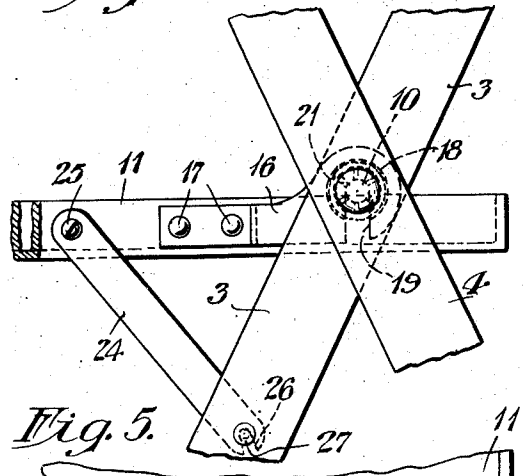


Fig. 5.

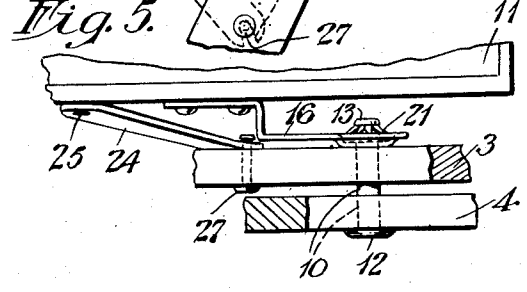
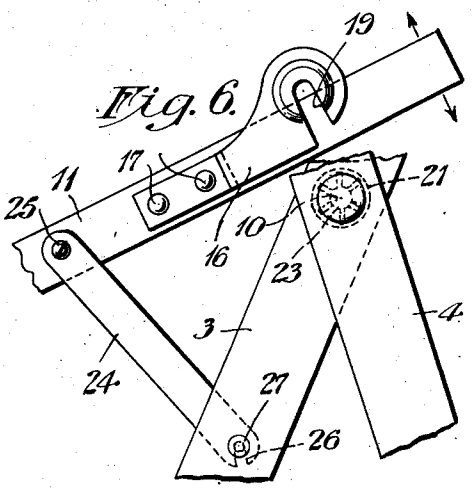


Fig. 6.



INVENTOR
DEWEY M. KENNEDY
BY
Pennie, Davis, Marvin & Edmonds
ATTORNEYS

Patented Oct. 11, 1949

2,484,382

UNITED STATES PATENT OFFICE

2,484,382

SUPPORTING STAND AND SHELF

Dewey M. Kennedy, Rochester, N. Y.

Application September 11, 1945, Serial No. 615,557

2 Claims. (Cl. 248—166)

1

This invention relates to a foldable supporting structure or stand including two pairs of cross-legs and a shelf pivotally attached to the cross-legs, and has for its object the provision of an improved device of this character. The invention is especially concerned with infants' bathing devices having the foldable cross-legs at the ends of the supporting structure and arranged to fold into substantial parallelism, and has for its principal object the provision of a shelf foldably interconnected to the supporting structure at the point of pivotal connection of the cross-legs and, to this end, provides a special engaging means for pivotally connecting the ends of the shelf to pins which pivotally connect the cross-legs together.

In one of its advantageous embodiments, the invention provides a slotted bracket on each end of the shelf for attaching the shelf to pins having means for cooperating with a self-locking spring clip to hold the shelf in secured pivotal connection with the cross-legs. In a preferred and advantageous embodiment, the invention provides a slotted bracket having an annular depression concentric with a hole for receiving a headed pin and a self-locking spring clip which fits into the annular depression and has spring means for effecting a locking engagement with the head of the pin.

These and other novel features of the invention will be better understood after considering the following discussion taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a perspective view of a bathing device embodying the invention;

Figs. 2 and 3 are fragmentary views, partly in section, taken along vertical planes intersecting the connecting points of the cross-legs 1, 2, showing two different positions of the parts;

Fig. 4 is a fragmentary enlarged side view of a part of the apparatus of Fig. 1 taken at the intersection of the cross-legs showing the shelf connected;

Fig. 5 is a plan view of Fig. 4, and

Fig. 6 is a view similar to Fig. 4 showing the shelf prior to connection.

The improved infant's bathing device illustrated in the drawings comprises a supporting structure including a pair of foldable cross-legs 1 and 2 at one end of the bathing device and a pair of similar cross-legs 3 and 4 at the other end of the bathing device. The cross-legs 1 and 4 are connected at the top by longitudinal rail 5 and at the bottom by longitudinal rail 6. Cross-legs 2 and 3 are connected at the top by longitudinal rail 7 and at the bottom by longitudinal rail 8. The cross-legs 1 and 2 and cross-legs 3 and 4 are pivotally connected together by the pins 10, and the upper rails 5 and 7 support the collapsible fabric tub 12. The bathing device is preferably provided with the usual dressing table and screen guard (not shown) and may include any of the other accessories usually provided.

2

The means for pivotally attaching the shelf 11 to the cross-legs are the same on both ends and I shall, accordingly, identify those elements with the same characters. As shown in Figs. 2 and 3, the legs 1 and 2 are connected together with a pin 10 having a large flat head 12 on the outside and a small head 13 formed by the annular cut 14. Normally, the legs 1 and 2 are held in the spaced positions shown in Fig. 2 by reason of the relative differences in length between the short rails 7 and 8 with respect to the longer rails 5 and 6. The cross-legs may be squeezed together to the closed position shown in Fig. 3. The shelf 11 has a sheet metal bracket 16 permanently attached to each end, as by screws or rivets 17. The projecting end has an annular depression 18 (Fig. 3) embracing the end of the slot 19 which provides an opening concentric with the depression in which the pin 10 operates in pivotal connection with the bracket (Figs. 2 and 4) when the slot is slid over the pin, as shown in Figs. 3 and 6. The spring clip 21 is punched out of spring steel and has a number of radial slits leaving petals surrounding a central hole 23 which is smaller in diameter than the head 13 and about the diameter of the cut 14.

In assembling the shelf, the legs are squeezed together from the position shown in Fig. 2 to the position shown in Fig. 3. This causes the head-end 13 of the pin to extend from leg 2. The spring clip 21 may have been placed in the position of Fig. 3 or not, as desired, prior to slipping the slot 19 over the pin 10. After the bracket is in the position of Figs. 2 and 4 and the spring clip in the position of Fig. 3, the legs are released and permitted to spring outwardly to the spread position of Fig. 2. Since the spring clip is permanently connected to the pin and the exterior diameter of the spring clip is slightly smaller than the interior diameter of the depression 18, the pressure exerted by the legs maintains the spring clip in the depression and thereby secures the shelf to the pin. In a very simple operation, the shelf may be removed by squeezing the legs together to free the spring clip from the depression and raising the shelf upwardly.

The shelf is held in its operative horizontal position by the end braces 24 which are pivoted

to the shelf on screws **25**. The braces have end slots **26** which are, as shown in Figs. 4 and 6, slipped over pins **27**. By raising the front edge of the shelf, the notches are removed from engagement with the screws and the shelf may be pivoted on pins **10** to a position in parallelism with legs **1** and **3**. In this manner, the shelf may be folded along with the folding of the cross-legs.

I claim:

1. In a foldable supporting stand including two pairs of foldable cross-legs, the improvement which comprises a shelf for the stand, a pin pivotally connecting each pair of cross-legs together, a spring clip, means on one end of each pin for engaging the spring clip, a bracket at each end of the shelf arranged to be supported on one of the pins, means on the bracket for engaging the spring clip to secure the bracket to the pin, said pairs of cross-legs being set with a space therebetween whereby the legs may be pressed together to detach the means on the bracket from the spring clip in the removal of the shelf, and means for bracing the shelf in its horizontal operative position, said shelf being pivotal on the pins whereby it may be swung to assume an inoperative position in parallelism with the legs.

2. In a foldable supporting stand including two pairs of foldable cross-legs, the improvement which comprises a shelf for the stand, a pin pivotally connecting each pair of cross-legs together with a head on one end and a coupling means on the other end, one set of two rails connecting two of the legs top and bottom, a second set of two rails connecting the other two legs top and bottom, the first-mentioned two rails being shorter than the second set of rails whereby the legs of each pair of cross-legs are spaced apart but may be pressed together to slide over the pin, a bracket at each end of the shelf with means for engaging a pin and the coupling means, whereby the normal spaced position of the legs holds the bracket in engagement with the coupling means, but when the legs are pressed together the brackets may be disconnected from the coupling means to remove the shelf.

DEWEY M. KENNEDY.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,442,391	Filipache	Jan. 16, 1923
1,582,756	Jennings	Apr. 27, 1926
2,113,689	Haban	Apr. 12, 1938
2,217,658	DePuy	Oct. 15, 1940