Jan. 7, 1930. A. J. WILLIAMS 1,742,431

IRONING BOARD

Filed Oct. 25, 1928

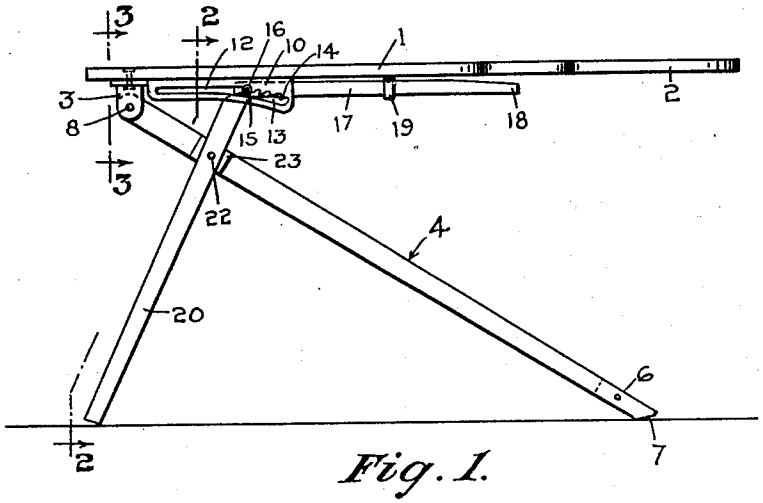


Fig. 1.

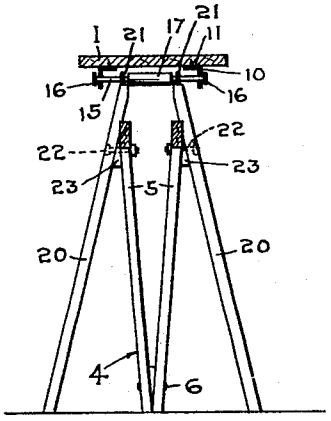


Fig. 2.

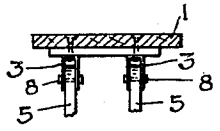


Fig. 3.

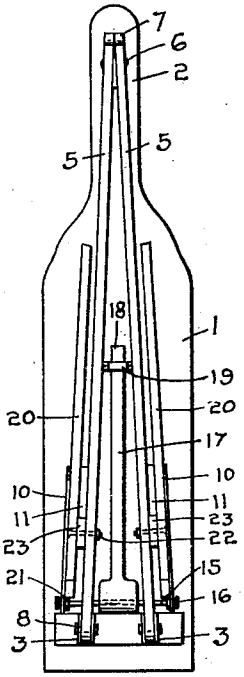


Fig. 4.

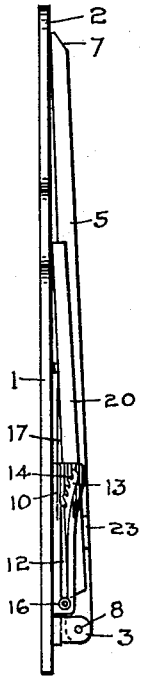


Fig. 5.

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IRONING BOARD

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My invention has reference to improvements in ironing boards of the folding variety, and its objects, generally stated, are:

To provide a device of this character, having, in connection with a single and folding leg, a pair of folding legs which are divergent when operatively disposed but which automatically converge when the legs are placed in closed positions, and all foldable within the compass of and against the body portion, thus adding to its compactness and serving to support the legs and connecting parts against strain when the board is subjected to handling while in folded condition;

Further, to provide a board which may be instantly adjusted to a height which will accommodate it to the requirements of the user;

Further, to provide a construction in such a device which will permit all play to be taken up in its pivotal connections, when in use, and thereby assure to the user at all times a substantial and solid working surface; and,

Further, such additional objects, advantages and capabilities as will later more fully appear.

In the accompanying drawing—

Figure 1 is a side elevation of the device complete, and in open position;

Fig. 2, a view drawn along the line 2—2, of Fig. 1, portions being shown in cross section and in elevation;

Fig. 3, a view, partly in cross section, drawn along the line 3—3, of Fig. 1, portions of a single but bifurcated leg of the device being shown as broken away;

Fig. 4, a rear elevation of the device in folded position; and,

Fig. 5, a side elevation of the same.

Referring more particularly to the drawing, the body portion of the device, denoted as 1, is provided, in the present embodiment of the invention, with a portion 2 reduced in width, which is useful in ironing sleeves, or the like, but as will be obvious, it may be of any other suitable form. A pair of hangers, each designated as 3, are bolted to the body portion and disposed in spaced relation. Said hangers, in common with the other parts to be described are located on or extend from the underside of the body portion. What I term as the single leg of the device, generally denoted as 4, consists of a pair of members 5 bolted together, as at 6, to form at one end a leg which is provided with a beveled foot portion 7, and bifurcated at the other end and pivotally mounted in said hangers, as is more particularly illustrated in Fig. 4, by the bolts 8.

A pair of bracket members, of metallic construction, are secured to the body portion and adjacent the hangers, the same being oppositely disposed and extended longitudinally of said portion, in spaced parallel relation. Each is of identical construction, and comprises a body member 10, which carries a right angular portion 11, through which the member is secured in place, as indicated in Fig. 2. Said member is also provided with an elongated slot 12, horizontally disposed, which terminates at one end in a curved slot 13 having a plurality of teeth 14 extending in a like curve and spaced away from the lower edge thereof.

A rod 15, having at each end a retainer 16, is slidably mounted in the members last described and is operable therein in a manner which will presently appear. A link 17, is fixedly secured at one end to said rod, and centrally thereof, as more particularly appears in Fig. 4, and is reduced in thickness at the other end, as at 18, to provide a convenient handle, the link being held in a horizontal position against the body portion by the keeper 19. This link, including its functions and mode of operation, will be described with more particularity hereinafter.

As detailed in Fig. 2, a pair of legs, each denoted as 20, are swingingly and slidably mounted on the rod 15 by the screw eyes 21, secured in the upper end of each leg, said legs being disposed on either side of the link 17, and the head of the link, immediately connected with the rod, serving as a spacing element therefor. Each leg is pivotally connected with the leg 4 by a bolt 22, secured in place, and bears upon and rotates over a wedge-shaped block 23, fixedly secured to the last-named leg. The pivotal connections last described are designed to permit a slight play in the legs so that they will work freely.

As it may be noted in Fig. 1, when the board is in open and operative position the rod 15 is engaged on either side by a pair of oppositely disposed teeth 14, which serve to hold the same securely in said position. When it is desired to vary the height of the device, the adjustment therefor may be effected by the user grasping the handle 18 of the link, when, by reason of the clearance between said teeth and the slot 13 and the fact that said rod is fixedly secured to the link, the link may be manipulated by pressing the handle 18 toward the body portion so as to disengage the rod from the teeth and the rod may be then brought forwardly so as to engage another pair of teeth, thus lowering the board. The plurality of teeth provided for this purpose and disposed as they are in a curved line extending downwardly as shown in Fig. 1, in cooperation with the pivotal connections of the legs and the other connecting elements shown and described, will permit a considerable variance in the height of the device.

The board may be folded by releasing said rod from the teeth with which it is engaged, through manipulation of the link as just described, and forcing the rod, by said link, to enter the horizontal and parallel slots 12, when the legs may be collapsed. The link also serves to hold the rod in free sliding engagement with said slots and likewise the slots 13, and is instrumental also in keeping the pair of legs in alignment so that they can be folded without binding or inconvenience. As the folding operation proceeds, said pair of legs, by virtue of the wedge-shaped blocks on which they act and their swinging and sliding connections with the rod, will gradually converge at their lower ends and diverge at their upper ends, and when the board is completely folded, said legs, together with the single leg, will occupy the positions shown in Figs. 4 and 5, and wherein the legs are located within the limits of the body portion and rest thereon. When the device is thus folded, it may be handled, or easily placed in condition for shipping, without danger of springing the legs or connections, and it is in a most compact and convenient form for these purposes.

The board may also be folded in other ways, as for instance, it may be placed on its larger end, to relieve the legs of weight and to make the link more accessible, and on release of the rod from the teeth securing it in place, the legs will readily fold up against the body portion.

The device may be adjusted for height also, by the user placing a foot against the free end of the single leg, when the board is in operative position, and raising the body portion until the rod is free of the teeth in which it is engaged, then when the user permits said leg to slide forwardly a short distance the rod will drop into engagement with another and forward pair of teeth when the body portion is lowered, thereby lowering the board.

As is evident, if it be desired to increase the height of the board or put it in operative position after being folded, and assuming that the rod is disengaged from the teeth, the same may be accomplished by a reversal of the cycle of operations described.

The spread of the legs is the chief factor in determining the height of the device, but said teeth, in addition to their function as catch elements for the rod, also serve, on account of the curved line on which they extend as shown, to compensate for the difference in the lengths of the single leg and the pair of legs as they extend upwardly from their pivotal connections each with the other, and the positions they assume in their pivotal movements. Said teeth are thus important in securing and maintaining the body portion in a level position when the device is operatively disposed, and as the legs have a three-point contact with the floor on which they stand, they will accommodate themselves to a surface which might be somewhat uneven and still support the body portion in said position.

The legs, being triangularly arranged, receive the stresses and strains incident to the use of such a device mainly in a longitudinal direction, and they, in conjunction with their connecting elements, as described, obviously will take up lost motion in the parts, caused through wear or otherwise, when pressure is applied to the body portion, and thus provide a solid and practically permanent basis therefor.

Also, the disposition of the parts is such as to afford a body portion having an underside free from obstructions for the major part of its length, which makes the device particularly efficacious and handy when ironing dresses and large articles.

Changes in and modifications of the construction described may be made without departing from the spirit of my invention or sacrificing its advantages, hence I ask that I be not confined to the specific structure set forth.

I claim:

1. An ironing board, comprising a body portion, a pair of members secured to the body portion in spaced parallel relation, each carrying a horizontal slot terminating in a downwardly curved and toothed slot, a link, having at one end and extending equal distances therefrom a fixedly secured and transversely extending rod mounted in said members and at the other end a handle, a keeper secured to the under side of the body portion and adapted to provide a sliding connection for the link with the body portion, a bifurcated leg pivotally connected with the body portion, wedge-shaped blocks fixedly secured

on opposite sides of the leg, and a pair of legs pivotally secured to the first leg and rotatable on the blocks, each having a swinging and sliding connection with the rod and being spaced apart by the adjacent end of the link.

2. A folding ironing board, comprising a body portion, a pair of slotted and notched bracket members secured to the body portion, a link, having at one end a fixedly secured and transverse rod mounted in the bracket members and engageable with the slotted and notched portions of the bracket members, means secured to each end of the rod to prevent lateral displacement of said rod in the bracket members, a keeper secured to the body portion and adapted to provide a sliding connection for the intermediate portion of the link with the body portion, a leg, having a bifurcated end hingedly secured to the body portion, a wedge-shaped block secured on each side of the leg, a pair of legs pivotally secured to the first leg and rotatable on the blocks, and a swinging and sliding connection for each of the last-named legs with the rod.

3. In an ironing board, having a body portion and a single leg pivotally secured thereto, a pair of bracket members having slotted and notched portions secured to the underside of the body portion in spaced parallel relation, a link, having at one end a fixedly secured and transversely extending rod mounted in the bracket members and engageable with said slotted and notched portions, a keeper, adapted to provide a sliding connection for the intermediate portion of the link with the body portion, a wedge-shaped block fixedly secured on each side of the leg and oppositely disposed, a pair of legs straddling the first leg and pivotally connected with the blocks, and a swinging and sliding connection for each leg of the pair of legs with the rod.

4. In an ironing board, having a body portion and a single leg pivotally secured thereto, a pair of members secured to the body portion in spaced parallel relation, each having a depending body portion carrying a horizontal slot terminating in a downwardly curved slot, the last-named slot being provided with a plurality of overhanging teeth, a member, slidably engaged with the first-named body portion, a rod, fixedly secured in the last-named member and slidably engaged with the first-named members, a wedge-shaped block fixedly secured on each side of the leg and a pair of legs, each pivotally connected with the first leg and bearing on one of said blocks, and provided with a swinging and sliding connection with the rod.

5. In a folding ironing board, having a body portion, a pair of bracket members secured to the body portion, a link, slidably engaged with the body portion, a rod fixedly secured to the link and slidably mounted in the members, a single leg pivotally secured to the body portion, a pair of legs straddling the single leg and pivotally connected therewith, an inclined bearing for each of the pair of legs and on which the same is adapted to rotate, and an annular connecting member for each of the last-named legs with the rod which permit said legs to swing longitudinally of the body portion and are adapted, in cooperation with the inclined bearings, to cause the free ends of said pair of legs to converge when the ironing board is being folded and to diverge when said board is being placed in open position.

6. In an ironing board, having a body portion and a single leg pivotally secured thereto, a pair of brackets secured to the body portion and oppositely disposed, each being provided with a horizontal slot terminating in a downwardly curved slot, said curved slot having overhanging notches, a single leg pivotally mounted on the body portion, a pair of legs straddling the single leg and pivotally connected therewith, a rod slidably engageable with the brackets, and a swinging and sliding connection for each of the pair of legs with the rod, said rod, in cooperation with the brackets and the legs, being adapted to establish and maintain the body portion in a level position and in adjusted positions for varying its height.

7. In an ironing board, having a body portion and a single leg pivoted thereto, a pair of spaced members secured to the body portion, each having a horizontal slot terminating in a curved and notched slot, a rod slidably engageable in said slots, a pair of legs straddling the single leg and pivoted thereto, swinging connections for said pair of legs with the rod, the portions of the pair of legs extending above their pivotal connections with the single leg being of equal length relative to the other but of a different length than the similarly disposed portion of the single leg, the curved and notched slot being adapted, in cooperation with the rod engageable therein, to compensate for the difference in said lengths of the legs and to establish and maintain the body portion in level and height-adjusted positions.

8. In a folding ironing board, having a body portion and a single leg pivoted thereto, a pair of spaced members secured to the body portion, each having an elongated slot, a rod slidably engaging the slots, a pair of divergent legs swingingly and slidably engaging the rod and pivoted to the single leg, an inclined bearing for each leg of the pair and on which it is adapted to rotate, said legs being adapted to be spread or contracted for varying the height of the body portion and to be folded against said portion when in closed positions, and the pair of legs, when rotated on said bearings during the folding of the ironing board, being adapted to converge so

as to be disposed within the limits of the body portion when folded.

9. In a folding ironing board, having a body portion and a single leg pivoted thereto, a pair of spaced members secured to the body portion, each having an elongated slot, a rod sildably engaging both slots, a pair of legs swingingly engaging the rod and pivoted to the single leg, the pair of legs being adapted to rotatably and slidably engage said rod, and a bearing for each leg of the pair adapted to cause a convergence of the free ends of the pair of legs when said legs are folded.

10. In a folding ironing board, having a body portion and folding supporting means at one end of the body portion; means connected with the body portion for supporting a rod transversely of said portion, a rod slidably mounted in the last-named means, a pair of legs swingingly and slidably engaging the rod and pivoted to the first-named means, and an inclined bearing for each leg of the pair interposed between each of said legs and the first-named means, adapted, in cooperation with the slidable engagement provided for said legs with the rod, to cause the free ends of said legs to automatically converge when the ironing board is folded.

ALFRED J. WILLIAMS.