United States Patent

Leemhuis

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[54] **LEGLESS IRONING BOARD**

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[51] **Int. Cl.**.....**D06f 81/06**

[58] **Field of Search**.....108/135, 160, 152, 161, 149; 38/103, 104, 105, 112, 141

[56] **References Cited**

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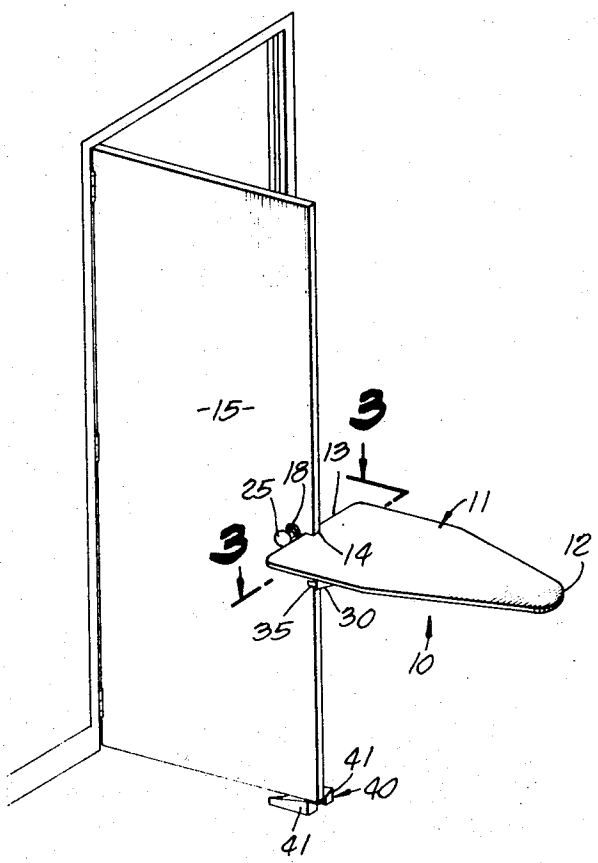
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[57] **ABSTRACT**

A compact, legless ironing board suitable for use by travelers and provided with adjustable means at its heel end detachably engageable over the shanks of door knobs to hold the heel end of the board clamped crosswise of the edge of an open door for emergency ironing and pressing tasks. A chucking device is insertable beneath the door corner and is effective to wedge the door against hinging movement in either direction until released.

9 Claims, 6 Drawing Figures



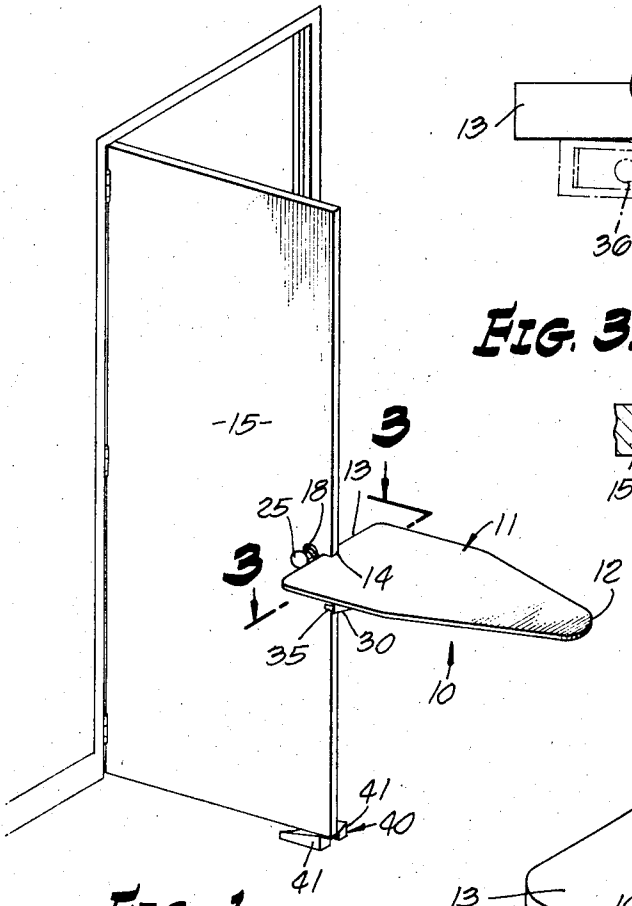


FIG. 1.

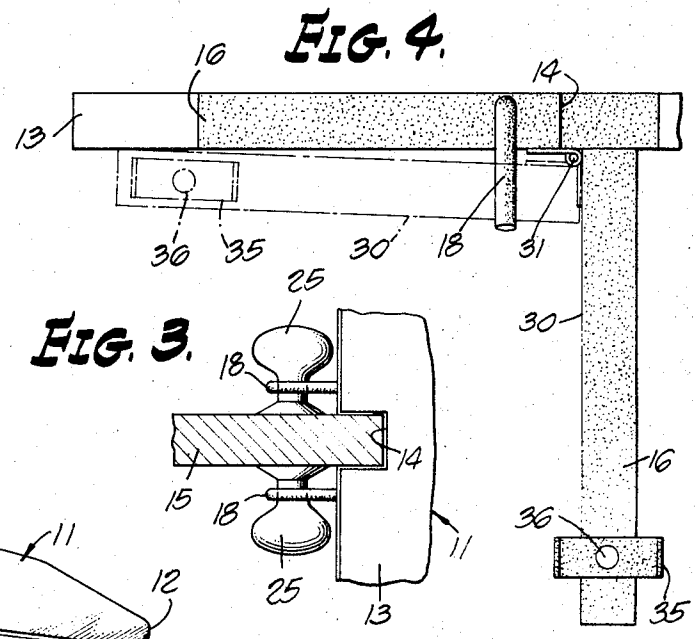


FIG. 4.

FIG. 3.

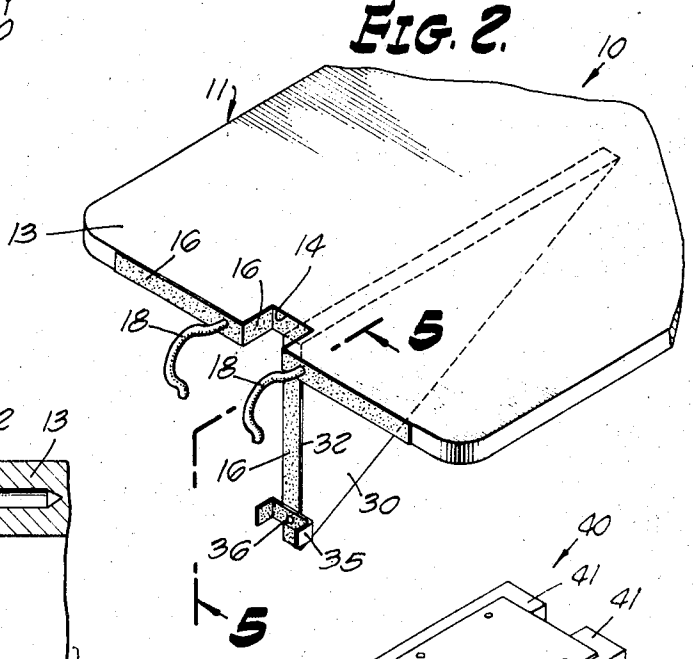


FIG. 2.

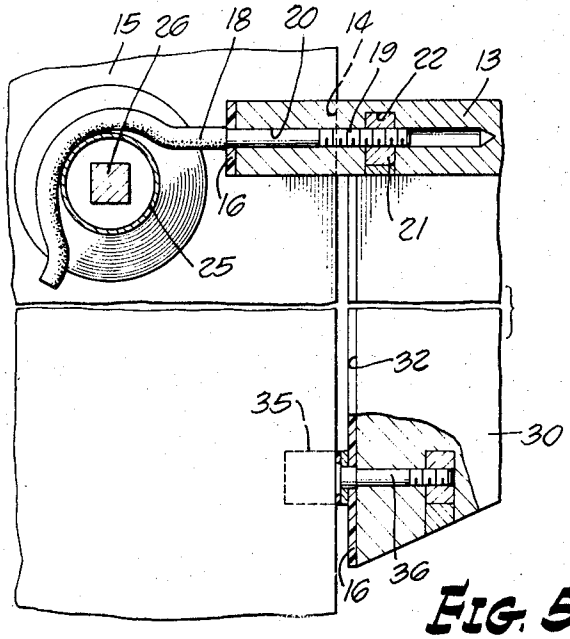


FIG. 5.

FIG. 6.

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LEGLESS IRONING BOARD

This invention relates to ironing boards and more particularly to a compact, legless board for use by travelers and occupants of trailers and detachably mountable outstretched from the edge of an open door while anchored to the shanks of the door knob.

Travelers and occupants of trailers and Pullman type compact living quarters have need for a small legless ironing board readily stowable in a minimum of space and adapted to be carried in hand luggage. Various proposals for legless ironing boards have been made heretofore but these designs leave much to be desired and are unsatisfactory for a number of reasons. Some of these proposals make use of the knob on any convenient room door. However, all prior designs of this type are arranged to have the heel end of the board flush against one face of the door and held in position thereagainst by various clamping devices engageable with the door knob. Such designs not only are likely to damage the finish of the door surface, but impose excessive stresses on the door knob not infrequently causing damage or failure of the knob. In particular, such anchoring devices place the door knob and its supporting shank in tension and result in shearing the set screws used to hold the knob assembled to the latch operating shank. Furthermore, the surface contours of door faces vary widely, some being flat and lying in a common surface and others being designed with panel inserts of widely varying configurations. Furthermore, the door casing finishing structure normally projects beyond the surface of the door and interferes with if it does not prevent proper assembly of the board to the door knob.

The foregoing and other serious shortcomings of prior legless ironing board designs are avoided by the present invention. To this end, the simple legless board herein disclosed is designed for rigid securement with its notched heel end embracing the edge of an open door and projecting forwardly in the general plane of the door. The heel end of the board is equipped with adjustable hook means lying closely against either side of the notch and these readily engage over the shank of the door knob at its base ends so as to place this heavy shank structure in shear and avoid placing the set screws or other assembly fasteners for the door knob under stress of any kind. A folding bracket hinged longitudinally of the lower side of the heel end bears against the edge of the door when extended and supplements the hook means and notch in supporting the board firmly in a horizontal operating position. A simple positive action chucking device is insertable beneath the lower corner of the door and cooperates with the floor surface in anchoring the door in any desired open position so long as the board is mounted thereon.

Accordingly, it is a primary object of the present invention to provide a simple lightweight legless ironing board having numerous novel features.

Another object of the invention is the provision of a compact, legless ironing board readily attached to and detached from a room door knob while the door is in open position.

Another object of the invention is the provision of a legless ironing board adapted to be assembled astride the edge of an open door and to be held in position thereon by hook means engaging over the shanks of the door knobs.

Another object of the invention is the provision of a legless ironing board supportable from the door knob of an open door and held rigidly in position projecting outwardly from the edge of the door while the latter is wedged in a selected open position by chucking means inserted therebeneath.

These and other more specific objects will appear upon reading the following specification and claims and upon considering in connection therewith the attached drawing to which they relate.

Referring now to the drawing in which a preferred embodiment of the invention is illustrated:

FIG. 1 is a perspective view showing a preferred embodiment of the ironing board assembled to the edge of an open door;

FIG. 2 is a fragmentary perspective view on an enlarged scale from the heel end of the board before assembly to the door;

FIG. 3 is a fragmentary cross sectional view on an enlarged scale taken along line 3—3 on FIG. 1;

FIG. 4 is a fragmentary end view on an enlarged scale taken crosswise of the heel end of the board and showing by dot and dash line the position of the bracket when folded for storage;

FIG. 5 is an enlarged fragmentary cross-sectional view taken along line 5—5 on FIG. 2; and

FIG. 6 is a perspective view of the chucking device per se.

Referring initially, more particularly to FIG. 1, there is shown an illustrative embodiment of the invention legless ironing board, designated generally **10**, comprising an elongated flat and rigid main body **11** having a rounded toe end **12** and a broad heel end **13**. The latter is notched at **14** so as to snugly embrace the edge of a conventional room door **15**. Notch **14** as well as the heel end proper is preferably covered with a thick resilient guard strip **16** effective to accomodate a reasonable variation in the thickness of doors while resisting play between the door and the board when in use.

Adjustably supported in the heel of the board closely adjacent the opposite edges of notch **14** are a pair of J-shaped hooks **18,18** having threaded stems **19**. These stems have a loose fit within wells **20** projecting through the heel end of the board into mating engagement with threaded anchor means **21** fixed within recesses **22** of the main body of the board. The hooked ends of members **18** are preferably coated with plastic or elastomer to avoid scarring any object with which they come in contact and more particularly the door surface or hardware. The conventional door knobs **25** are held assembled to the door in the usual manner and have a snug telescopic fit over the opposite ends of the non-circular latch operating bar **26**.

It is important that the hooks **18** hold the board firmly seated against the bottom of notch **14**. To this end, hooks **18** are readily rotated in either direction as necessary for their outer ends to project the requisite distance to have a firm press fit over the shanks of the door knobs in the manner made clear by FIGS. **3** and **5**. A proper adjustment is readily determined by trial and error and, once made for a particular door, need not be changed.

Supplementing hooks **18** in anchoring the board to the door edge is a bracket here shown as generally triangular in form with its longer horizontal edge hinged

to the central underside of the board by a piano type hinge **31** (FIG. **4**). The upright vertical edge **32** of the bracket is positioned close to the door edge and in the plane of the bottom of notch **14**. The lower corner of bracket **30** is provided with a pivoting U-shaped clip **35** rotatably mounted on a screw **36**. Clip **35** conforms in shape and size with notch **14** which it underlies in order to embrace the edge of the door and hold the bracket firmly in its extended position. Accordingly, it will be apparent that bracket **30** and clip **35** cooperate with hooks **18** in stabilizing and holding the board supported in a proper horizontal operating position. When not in use, clip **35** is rotatable so as to lie generally in the plane of bracket **30** for compact storage as is clearly evident in the dotted line showing of the bracket in FIG. **4**.

A useful auxiliary accessory comprises a chucking block **40** which is insertable beneath the lower outer corner of the door to clamp the door rigidly in a desired open position while the ironing board is mounted thereon. In a preferred form, chucking device **40** comprises a pair of double wedge-shaped blocks **41,41** interconnected by a flexible resilient plate **42**. Thus it will be observed that the upper faces of the wedges **41** slope in two directions, namely toward their forward ends as well as transversely and toward one another beneath the connecting plate **42**. Prior to insertion the upper faces of the wedges lie in a common plane with the underside of the flexible plate **42**. However, when forcibly inserted beneath the outer corner of the door, plate **42** is forcibly bowed downwardly thereby forcing wedge members **41** into firm gripping relation with the floor so that they are equally effective in preventing swinging movement of the door in either direction.

The mode of use and assembly of the board to the door will be readily apparent from the foregoing detailed description. It is merely necessary to adjust the projection of hooks **18** from the heel of the board if this be necessary. Any necessary adjustment having been made, the operator unfolds bracket **30** and pivots clip **35** to its proper position as shown in FIG. **2**. The board is then placed astride the edge of the open door while held horizontally and in a plane above the door knob. With the clip **35** and notch **14** embracing the door the operator lowers the board until the slightly resilient hooks **18** are pressed over and firmly engaged with the shanks of the door knobs. This operation is usually performed after the chucking device **40** has been inserted under the corner of the door so there is no risk of the door swinging while the board is being installed. The operator then proceeds to use the board in the normal manner.

After the ironing operation is finished, the board is removed by lifting it bodily upwardly until hooks **18** are disengaged from the door knob whereupon it is pulled away from the door and the bracket is folded against the underside of the board for storage until again needed.

While the particular legless ironing board herein shown and disclosed in detail is fully capable of attaining the objects and providing the advantages hereinbefore stated, it is to be understood that it is merely illustrative of the presently preferred embodiments of the invention and that no limitations are intended to the detail of construction or design herein shown other than as defined in the appended claims.

I claim:

1. A legless ironing board suitable for transport in hand luggage comprising: an elongated flat rigid main body having a rounded pointed toe end and a broad heel end, said heel end being notched centrally thereof to seat over and embrace the free edge of an open room door, hook means projecting outwardly from the heel end of said main body with portions spaced closely adjacent the opposite sides of said notch and positioned to engage over the shank portions of a door knob and cooperable therewith to hold the edge of the door firmly seated in said notch, and bracket means secured to the underside of said main body in alignment with said notch and arranged to rest against the edge of the door in the plane of the door to supplement said hook means in supporting said ironing board firmly and rigidly in a horizontal position.

2. A legless ironing board as defined in claim **1** characterized in the provision of hinge means connecting said bracket means to said main body centrally and lengthwise of the underside thereof.

3. A legless ironing board as defined in claim **2** characterized in the provision of a U-shaped clip secured to the lower corner portion of said bracket means and sized and positioned to embrace the edge of a door at a level below said notch and cooperating with the latter in stabilizing the support of said board while mounted on a door.

4. A legless ironing board as defined in claim **3** characterized in that said U-shaped clip is swivelly connected to the outer vertical edge of said bracket means and pivotable between an operating position crosswise of said bracket means in the extended position of the latter and to a retracted position generally in the plane of said bracket means at other times.

5. A legless ironing board as defined in claim **4** characterized in that said notch and said U-shaped clip have resilient surface-protective means fixed thereto in position to contact the door and safeguard the same against scratches and surface damage.

6. A legless ironing board as defined in claim **1** characterized in that said hook means are generally J-shaped and threaded along the stem portions thereof, and threaded means carried crosswise of bores opening through the heel end of said board mateable with said threaded stems whereby said hook means may be adjusted as necessary to fit over the shanks of door handles of different sizes and locations relative to the door edge.

7. A legless ironing board as defined in claim **1** characterized in the provision of wedge shaped chucking means adapted to be inserted beneath the lower outer corner of an open door in a direction generally parallel to the plane of the door and cooperating with the door and the floor to wedge the door firmly in a desired open position.

8. A legless ironing board as defined in claim **7** characterized in that said chucking means comprises a pair of wedge shaped members held assembled in spaced apart parallel relation by resilient plate means sloping downwardly toward the narrower ends of said wedge members, whereby the insertion of said plate means beneath the lower corner of a door causes the plate to bow downwardly crosswise of the door.

9. A legless ironing board as defined in claim **8** characterized in that said wedge shaped members are

wedge shaped both crosswise and lengthwise thereof with their thicker portions along the remote lateral sides thereof and crosswise of the higher transverse edge of said sloping plate.

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