May 24, 1949. E. C. BOOTH 2,471,059

COLLAPSIBLE SUPPORT FOR IRONING BOARDS

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Fig. 1.

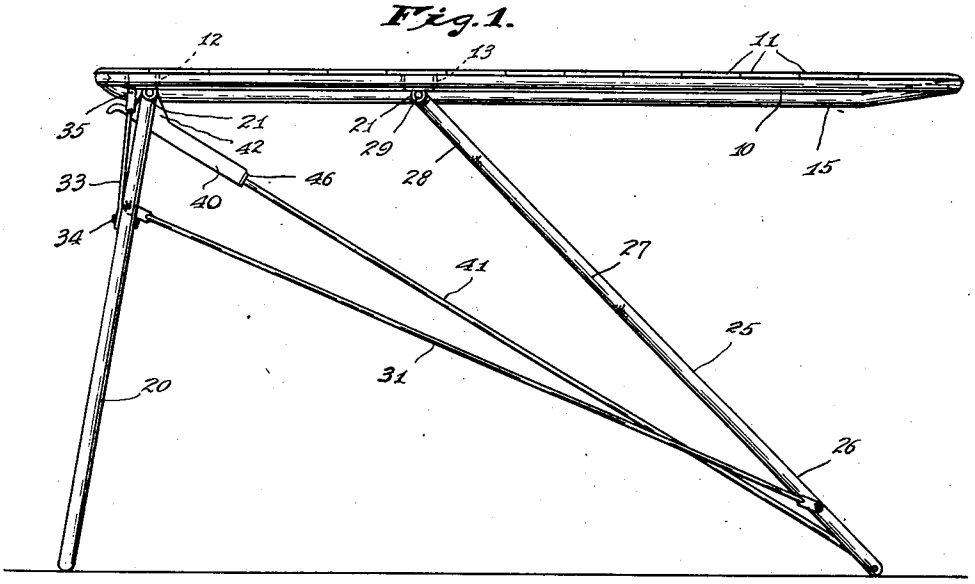


Fig. 5.

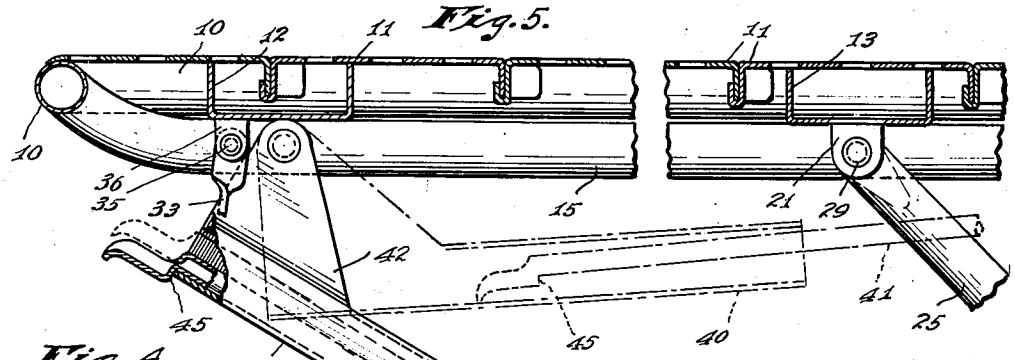


Fig. 4.

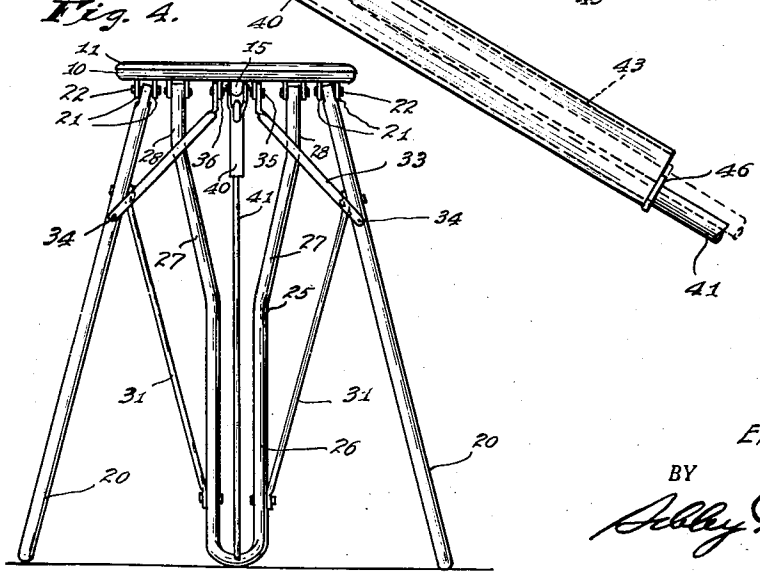
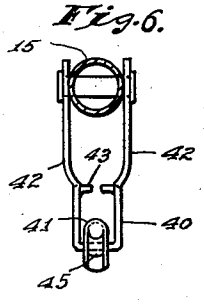


Fig. 6.



INVENTOR.
EARL C. BOOTH,
BY
Ashley Brooks & Jenkins
ATTORNEYS.

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Fig. 2.

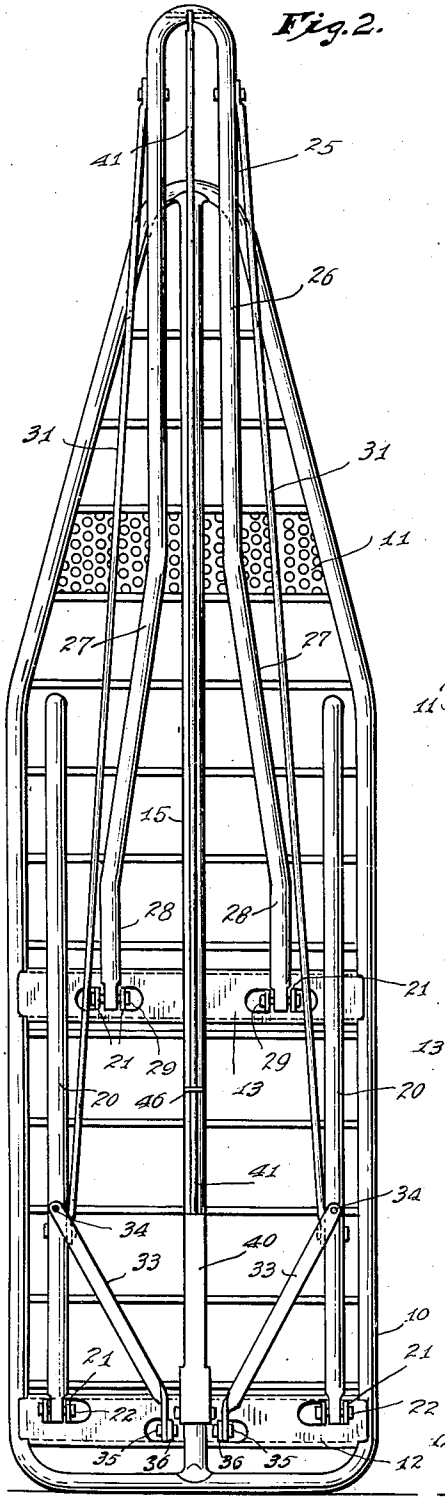
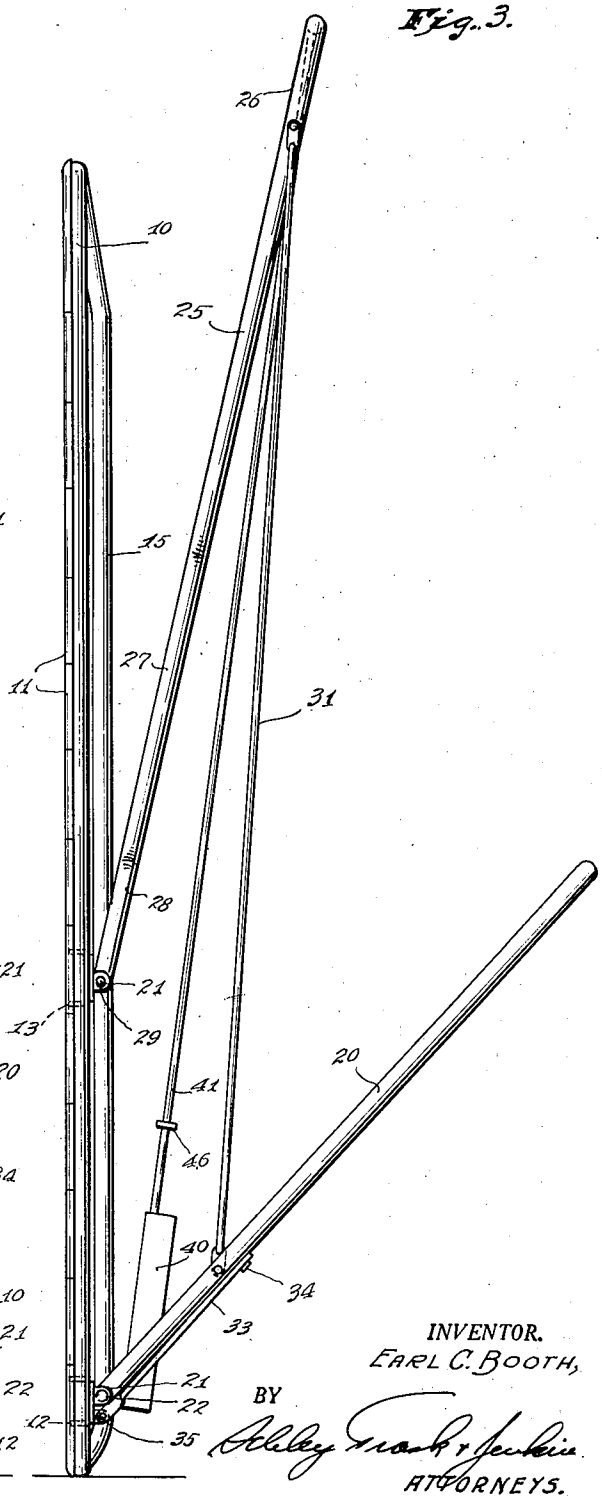


Fig. 3.



INVENTOR.
EARL C. BOOTH,
BY
Ashley Scott & Jenkins
ATTORNEYS.

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COLLAPSIBLE SUPPORT FOR IRONING BOARDS

Earl C. Booth, Columbus, Ind., assignor to Noblitt-Sparks Industries, Inc., Columbus, Ind., a corporation of Indiana

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2 Claims. (Cl. 38—117)

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My invention relates to a collapsible support for an ironing board and has for its primary object the provision of a support which lends itself to fabrication from metal tubing and sheet-metal stampings. A further object of my invention is to produce an ironing-board support which may be easily and quickly collapsed or extended and which, when extended, will be stable and rigid.

In carrying out my invention I secure on a common axis near the rear end of the ironing-board top a pair of rear legs, and at a point intermediate the length of the ironing-board top I pivotally attach thereto a front leg adapted when the support is erected to extend forwardly and downwardly. Each of the rear legs is connected by a link to a point near the free end of the front leg so that both the front legs and the rear legs will move jointly to and from extended position. To hold the board in extended condition I provide a brace connected to the front leg near the free end thereof and extending upwardly and rearwardly into slidable association with a latch member pivotally attached to the ironing-board top near the rear end thereof. The brace and latch member have releasable cooperating provisions which operate when engaged to hold the legs extended. The legs, both front and rear, are desirably formed of metal tubing, the links and brace may be in the form of metal rods or tubing, and the latch member is desirably a sheet-metal stamping.

The accompanying drawings illustrate my invention: Fig. 1 is a side elevation of the ironing-board in extended condition; Fig. 2 is an elevation of the ironing-board showing the legs and other parts in collapsed condition; Fig. 3 is a side elevation of the ironing-board illustrating the legs in partially extended condition; Fig. 4 is a rear elevation of the erected ironing-board; Fig. 5 is a fragmental vertical section on an enlarged scale showing the cooperating brace and latch member; and Fig. 6 is a rear elevation of the brace in latched condition.

The ironing-board top illustrated in the drawing comprises a border frame 10 of metal tubing covered with a plurality of sheet-metal panels 11 extending transversely of the border frame 10 and secured to the sides thereof. Near the rear end of the border frame, there is a cross-member

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12, desirably in the form of a sheet-metal stamping of channel cross-section. A similar cross-member 13 extends between the sides of the border frame intermediate the length thereof. To strengthen and stiffen the top, it embodies a truss-like brace 15 extending beneath and secured to the cross-members 12 and 13 and having its ends bent upwardly and secured to the ends of the border frame. The particular top illustrated, which forms no part of my present inention, embodies some features more fully described and claimed in my prior Patent No. 2,442,676, granted June 1, 1948.

The top-supporting structure, which forms the subject matter of the present invention, embodies a pair of rear legs 20 each pivotally attached at one end to the rear cross-member 12 of the top. To effect this attachment in a simple and economical manner, ears 21 are struck up from the web of the cross-member 12 and pierced for the reception of a pivot pin or bolt 22. The pivotal connection of each of the rear legs 20 is through a loose connection or one so arranged that the legs are not constrained to movement in a plane normal to the ironing board top.

The front leg, designated in its entirety by the reference numeral 25, is desirably formed from a single length of metal tubing bent to provide a narrow elongated U-shaped portion 26 (Fig. 2), diverging portions 27, and parallel end portions 28. The end portions 28 of the front legs are pivotally connected to the front cross member 13, as through pivot pins or bolts 29 extending through ears 21 on such cross member.

The front leg 25 is connected by a link 31 to each of the rear legs 20, so that both the front and rear legs may be moved jointly from collapsed to extended position. The length of each link 31 is such and its points of connection to the front and rear legs are so disposed that while the two legs will occupy substantially coplanar positions when collapsed the rear legs 20 will swing through a much greater angle than the front leg 25 as the legs are extended. Preferably, the legs are arranged so that when extended the rear legs will slope downwardly and rearwardly from their point of connection to the top, as will be clear from Fig. 1.

Each of the rear legs has associated with it a brace 33 pivotally connected at one end to the

leg by a pivot pin or bolt **34** which is so disposed so that it lies approximately normal to the plane of the top when the legs are collapsed. The opposite end of each brace is connected, as by a pivot pin or bolt **35**, with an ear **36** struck up from the rear cross member **12** near the middle thereof. As will be clear from Figs. 1, 2, and 3, the pivot pins **35** are not coaxial with the pivot pins **22**, but instead are disposed rearwardly of the pivot pins **22**. As a result of this relative disposition of the pivot pins **35** and **22**, the legs **20** when collapsed against the lower surface of the top are generally parallel to each other but when extended diverge from each other, as shown in Fig. 4, to increase the effective width of the ironing-board base and hence increase stability.

For the purpose of releasably holding the board in extended condition, there is pivotally attached to the rear cross member **12** a latch member **40** which slidably receives a brace **41** extending from the latch member **40** to the free end of the front leg **25** to which it is pivotally connected. The latch member **40** is desirably formed as a sheet-metal stamping of channel-shaped cross-section. At its rear or upper end, the flanges of the channel are provided with extensions in the form of ears **42** which receive between them and are pivotally connected to the brace **15** on the ironing-board top. In advance of, or below, the ears **42** the upper edges of the flanges of the stamping constituting the latch member are bent inwardly to form lips **43**.

The brace **41**, which is desirably formed of metal tubing or metal rod, extends longitudinally completely through the latch member **40** and is provided in rear of such latch member with a downwardly extending, forwardly presented shoulder **45**. In advance of the latch member, the brace **41** is provided with an abutment **46** limiting upward, or rearward, movement of the brace in the latch member. The distance between the shoulder **45** and abutment **46** is substantially equal to the length of the latch member, as will be clear from Fig. 5; and the fit of the brace within the latch member is sufficiently loose to permit the shoulder **45** to be received within the latch member.

When the ironing-board is in collapsed position, the legs **20** and **25** are disposed in substantially coplanar relation against the bottom of the ironing-board top in the manner illustrated in Fig. 2. With the legs in this position, the brace **41** and latch member **40** occupy the respective positions illustrated in chain lines in Fig. **5**. When it is desired to extend the support, the free ends of the legs are moved away from the top toward and through the position illustrated in Fig. 3. As this movement progresses, the brace **41** moves rearwardly in the latch member **40** until the abutment **46** engages the end of such latch member. The abutment **46** is so located on the brace **41** that when it engages the end of the latch member to limit swinging movement of the legs, the legs will be in the position which they occupy when the board is erected. If the brace **41** is now moved laterally of itself to cause engagement of the latch **45** with the rear end of the latch member **40** the legs are now positively held in their extended positions.

Conveniently, the ironing board is erected with the top in the vertical position shown in Figs. 2 and 3. Extension of the legs may be instituted by moving the free end of one of them away from the top or by tilting the top so that the two legs will fall away from it under the influence of

gravity. With the board anywhere near the vertical position shown in Fig. 3, the force of gravity acting upon the lower end of the brace **41** will tend to cause the shoulder **45**, as soon as it has cleared the rear end of the latch member **40**, to drop into engagement with such latch member. Whatever procedure is followed to extend the legs and engage the shoulder **45** with the rear end of the latch member **40**, such engagement with the latch member will locate the legs in extended condition and the board may then be rotated into its normal position about the outer ends of the rear legs **20**.

To collapse the board, it may be rotated about the lower ends of the legs **20** until the rear end of the top engages the floor, and the brace **41** then moved to disengage the shoulder **45** from the latch member **40**, whereupon the legs may be jointly swung into position against the lower face of the top. A modified procedure for collapsing the board is merely to lift and release the rear end of the brace **41** when the board is in erected condition. This permits the front end of the ironing-board to drop against the front leg **25** under the influence of gravity, the free end of such front leg remaining on the floor, the brace sliding through the latch member **40**, and the rear legs **20** swinging into coplanar relationship with the front leg.

I claim as my invention:

1. In an ironing board, a top, a pair of rear legs pivotally connected to said top near the rear end thereof, a front leg pivotally connected to said top at a point intermediate the length thereof, a pair of links respectively connecting said rear legs with said front leg, said links being so arranged as to cause said legs to swing jointly between substantially coplanar position adjacent the lower surface of the top and positions in which the legs diverge from each other to form a stable support for the top, a brace pivotally connected to said front leg and adapted to extend upwardly and rearwardly therefrom to a point beneath said top, a latch member pivoted to said top and slidably receiving said brace, said latch member being formed of sheet metal bent into channel-shaped cross-section and having two generally parallel, spaced flanges between which said brace is received, said flanges having relatively wide portions forming ears through which the latch member is pivoted to the top and relatively narrow portions provided along their edges with in-bent lips preventing removal of said brace from between the flanges by lateral movement, said brace being provided with an abutment engageable with said latch member to limit rearward movement of the brace in the latch member, said brace and latch member having releasable provisions engageable with each other when the brace is at the upper limit of its movement in the latch member to prevent downward movement of the brace, said provisions being engageable with and disengageable from each other by movement of the brace laterally of itself with respect to the latch member.

2. In an ironing board, a top, a pair of rear legs, pivotally connected to said top near the rear end thereof, a front leg pivotally connected to said top at a point intermediate the length thereof, a pair of links respectively connecting said rear legs with said front leg, said links being so arranged as to cause said legs to swing jointly between substantially coplanar position adjacent the lower surface of the top and positions in which the legs diverge from each other to form

a stable support for the top, a brace pivotally connected to said front leg and adapted to extend upwardly and rearwardly therefrom to a point beneath said top, a latch member pivoted to said top and slidably receiving said brace, said brace being provided with an abutment engageable with said latch member to limit rearward movement of the brace in the latch member, said brace and latch member having releasable provisions engageable with each other when the brace is at the upper limit of its movement in the latch member, the upper end of said brace being offset downwardly to provide a shoulder engageable with the upper end of the latch member to prevent downward movement of the brace, said shoulder being engageable with and disengageable from the upper end of the latch member by movement of the brace laterally of itself with respect to the latch member.

EARL C. BOOTH.

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