

June 12, 1923.

1,458,314

G. ADAMS

IRONING BOARD

Filed Dec. 1, 1919

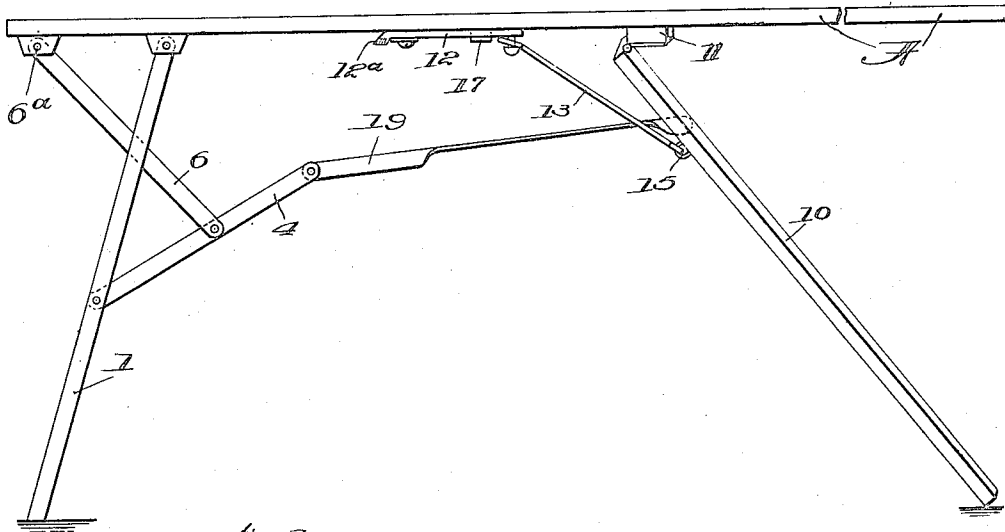


Fig. 1.

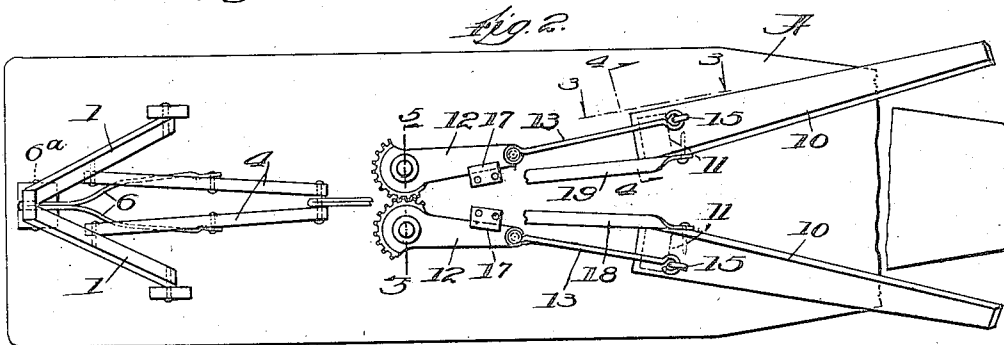


Fig. 2.

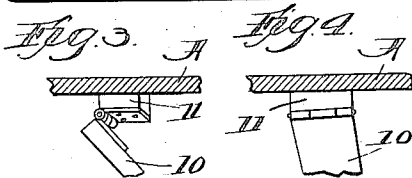


Fig. 3.

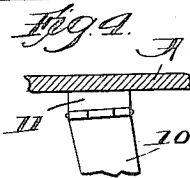


Fig. 4.

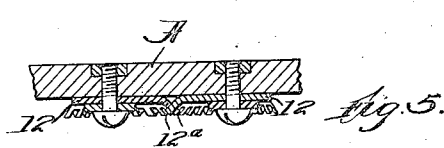
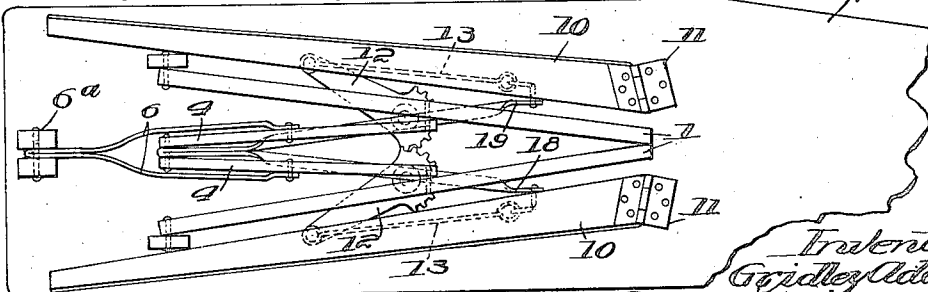


Fig. 5.



Witness:
[Signature]

Fig. 6

Inventor:
G. Adams
by *Burton Burton*
his Atty.

Patented June 12, 1923.

1,458,314

UNITED STATES PATENT OFFICE.

GRIDLEY ADAMS, OF CHICAGO, ILLINOIS.

IRONING BOARD.

Application filed December 1, 1919. Serial No. 341,662.

To all whom it may concern:

Be it known that I, GRIDLEY ADAMS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ironing Boards, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The purpose of this invention is to provide an improved construction of an ironing board and the like with folding legs. It consists in the elements and features of construction shown and described, as indicated in the claims.

In the drawings:

Figure 1 is a side elevation of an ironing board equipped according to this invention, shown in erected position for service.

Figure 2 is an inverted plan view of the board with the legs extended as when in use.

Figure 3 is a section at the line, 3—3, on Figure 2, being in a vertical plane parallel to one of the extended legs.

Figure 4 is a section at the line, 4—4, on Figure 2 being in a plane at right angles to the plane of Figure 3.

Figure 5 is a section at the line, 5—5, on Figure 2, being the plane in which are located the pivots of the leg-controlling lever and links at extended position of the legs.

Figure 6 is a view similar to Figure 2, showing the parts in folded position.

In the structure shown in the drawings the ironing board or ironing table top member is shown at A, and this member is hereinafter referred to as the "board." To the under side of the board, A, there is hinged near one end of the board a leg member which is conveniently and desirably formed of two bars, 1, 1, spread apart at their upper ends which are hinged to the under side of the board while the apex of the triangle, the joined ends of the members, 1, 1, constitute the foot of the leg on the floor. This leg is provided with triangular braces consisting of two bars, 4, 4, pivotally connected respectively at one end of each with the bars, 1, 1, and connected together at their opposite ends, from which links, 18 and 19, extend respectively to two legs, 10, 10, hereinafter described which support the opposite end of the board. From points on the bars, 4, 4, intermediate their ends control-links, 6, 6, extend convergently up and toward the proximate end of the board, meeting and

being secured by the same pivot, 6^a, to the under side of the board, at a point outward from the hinged upper end of the triangular link member, 1, 1, between whose two said bars, 1, 1, the control links, 6, 6, extend convergently as stated to reach their pivotal connection with the board. The several parts of this triangular bracing are dimensioned substantially as shown so as to be adapted to fold substantially into one plane up against the under side of the table when the legs, 10, 10, are also folded up against the under side of the table by their mountings and connections hereinafter described. And upon consideration of the structure as shown particularly in Figures 1 and 2, it will be understood that at unfolded position for supporting the board the downward pressure of the board and its load and the pressure of the work done thereon tends to hold the legs extended and slanting outwardly; and that the connections shown check them at a definite limit of outward spread when the legs, 10, 10, are checked at their limit as hereinafter shown. It will also be understood by means of the connections the folding inward and upward toward the under side of the table of the legs at either end will operate to fold the legs at the other end also.

The remaining supports consist of two legs, 10, 10, which are pivoted to the board for swinging in planes oblique to each other so as to become spread apart when they are unfolded away from the board to position for supporting the latter in position for service. The relatively oblique swing of these two legs may be caused by pivoting the legs to the board on pivots which are oppositely oblique to the plane of the board, or oppositely oblique to the length of the legs, or oppositely oblique to the length of the board, or which have all three of these obliquities, namely, to the plane of the board, to the length of the board and the length of the legs. For greatest convenience in accommodating the several parts within the width of the board and obtaining the desired spread of the legs both longitudinally and transversely, it is found desirable to employ all three obliquities, and the structure shown in the drawings is so constructed. The connection of each leg to the board with all three obliquities mentioned is most conveniently effected by cutting the leg oblique to its length at the hinged end for appli-

cation of the hinge, and mounting the hinge on a block, 11, secured to the under side of the board, the block being wedge shaped so that the surface to which the hinged member is secured makes an acute angle to the plane of the board as seen in Figure 4, the edge of the block at which the hinge pivot is located being oblique to the length of the board, as seen in Figure 2.

For causing the two legs, 10, 10, to swing simultaneously and so that the operator seizing either leg may spread both legs to position of service, means is necessarily provided connecting the two legs. Obviously this connection cannot be made by a rigid member extending transversely to the leg, because the distance apart of the two legs constantly changes throughout the swing from collapsed to unfolded position. Such connection is, however, provided by means of interengaging lever members, 12, 12, which, as illustrated, are plates fulcrumed on the under side of the board and having gear segments, 12^a, 12^a, which intermesh at one side of their fulcrums, the ends opposite said segment geared ends being connected by links, 13, 13, with the legs, 10, 10, respectively, the pivotal connections of the links at both ends being such as to permit them to swing freely in every direction, and this is easily effected by making the links of rods bent at the ends to form eyes which engage correspondingly formed eye bolts mounted on the legs respectively at 15, 15. The lengths of the links, 13, and of the arms of the lever, 12, from their fulcrums to the link connections, and the positions of the pivotal connections with the links of the legs respectively, are so located and the parts are so dimensioned that the out-folded position of the legs,—that is, the position of service for supporting the board,—the two pivots of each link are substantially aligned with the fulcrum of the lever to which the link is connected; and thereby the link and lever constitute tension connections of the leg to the board, limiting the out-folding or spreading of the leg. By providing a stop, 17, to stop the swinging of each lever at a point just perceptibly beyond that to which the lever is swung in spreading the legs to the limit permitted by the dimensions of connections described, the swinging of the legs to their out-folded position, and the attendant swinging of the connections about their respective pivots tending to carry the parts slightly beyond the position of alignment of the link with the lever fulcrum as stated, causes the parts to become locked at the position to which they are thus swung at which the lever reaches the stop, 17; and thereby the connections described constitute compression braces, preventing the in-folding of the legs away from their out-spread position of service, until the operator starts

the connected parts back from that position by swinging them past the position of alignment of said pivots; whereupon the legs may be readily folded back against the board.

I claim:—

1. In combination with the board having a hinged leg at one end and two legs at the other end of the board pivoted thereto for swinging each about a single pivotal axis in a plane oblique to the plane of swinging of the other of said two legs; means connecting the two legs for simultaneous swinging, consisting of interengaging lever connectors fulcrumed on the board, and links connecting them respectively with the two legs.

2. In combination with the board having a hinged leg at one end and two legs at the other end of the board pivoted thereto for swinging each about a single pivotal axis in a plane oblique to the plane of swinging of the other of said two legs; means connecting the two legs for simultaneous swinging, consisting of interengaging lever connectors fulcrumed on the board, and links connecting them respectively with the two legs, the pivots of the links having their pivot planes aligned with the fulcrums of the levers respectively at the down-and-outwardly-swung positions of the legs respectively; whereby said lever and link connections constitute tension members for limiting the spread of the legs.

3. In combination with the board having a hinged leg at one end and two legs at the other end of the board pivoted thereto for swinging each about a single pivotal axis in a plane oblique to the plane of swinging of the other of said two legs; means for connecting the two legs for simultaneous swinging, consisting of interengaging lever connectors fulcrumed on the board, and links connecting them respectively with the two legs; the pivots of each link being in a plane containing the axis of the corresponding lever at the down-and-outwardly-swung position of the legs, and stops on the board for the respective levers, limiting their swing just beyond the positions of alignment of said pivots respectively, whereby said links constitute compression braces for preventing the in-folding of the legs.

4. In a device for the purpose indicated in combination with the board, a leg for one end of the board hinged thereto; a control link hinged to the board at a point longitudinally outward from the leg hinge, a connecting link from the leg to the control link; said links being pivoted to each other at a point situated inward from the leg at board-supporting position of said parts; legs for the other end of the board hinged thereto, and links from said last mentioned legs to one of the two first mentioned links pivoted

thereto at a point longitudinally inward with respect to the board from the intersection of said first two links.

5 5. In the structure defined in claim 4 foregoing, the last mentioned legs being hinged to the board for folding up inward longitudinally of the board.

10 6. In the structure defined in claim 4 foregoing, the last mentioned legs being hinged to the board for folding up inward longitudinally of the board, and the link to which the links are connected which extend to said last mentioned legs being said connecting link.

15 7. In a device for the purpose indicated in combination with the board, a leg for one end of the board hinged thereto; a control link hinged to the board at a point longitudinally outward from the leg hinge, a connecting link from the leg to the control link; 20 said links being pivoted to each other at a point situated inward from the leg at board-supporting position of said parts; legs for the other end of board hinged thereto, and 25 links from said last mentioned legs to the connecting link pivoted thereto at the opposite side of the pivot of said first mentioned links to each other from the pivot of the connecting link to the first mentioned 30 leg.

8. In a device for the purpose indicated,

in combination with a board, a leg for one end consisting of two bars joined at the foot and diverging upwardly transversely of the board to wide-spread hinge connections to 35 the board; control links, 6, hinged to the board at a point longitudinally outward from said leg hinges and forked to afford two diverging terminals at the other end; links, 4, 4, pivoted to said diverging leg bars 40 respectively at the inner sides of said bars and pivoted intermediate their ends to the divergent terminals respectively of the control links at the inner sides of said respective terminals; legs for the opposite ends 45 of the board, hinged thereto for folding up against the board divergently from each other outside the position of the diverging bars of the first mentioned leg when so folded up, and links, 19, from said second 50 mentioned legs respectively to the convergent end of the links, 4, 4, said links, 19, being pivoted to the inner sides of said second mentioned legs and the inner sides of said links, 4, 4; whereby all of said legs 55 and links may be folded upward against the board with a minimum overlapping.

In testimony whereof, I have hereunto set my hand at Chicago, Illinois, this 25th day of November, 1919.

GRIDLEY ADAMS.