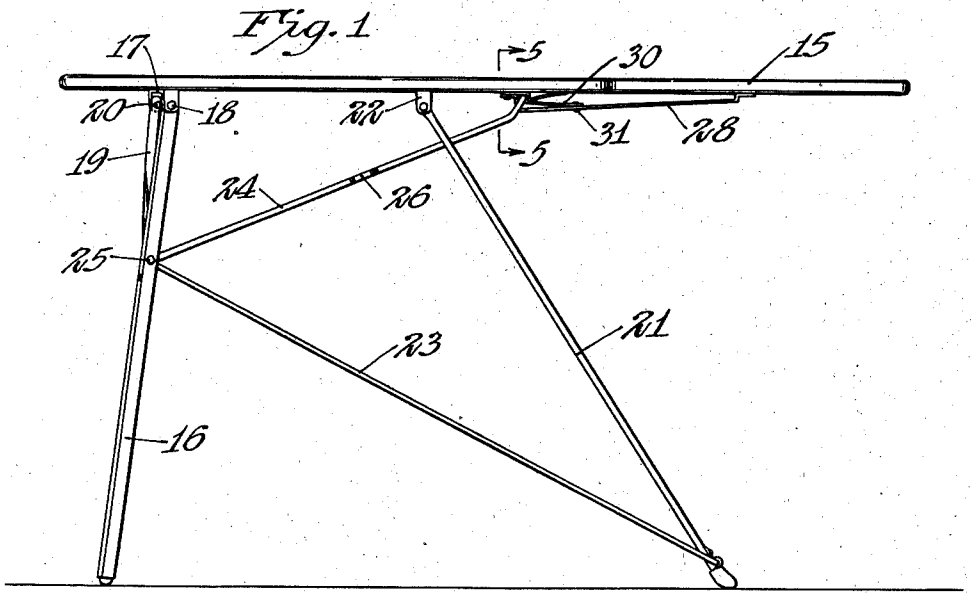
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IRONING TABLE HAVING FOLDING SUPPORT

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Fig. 1



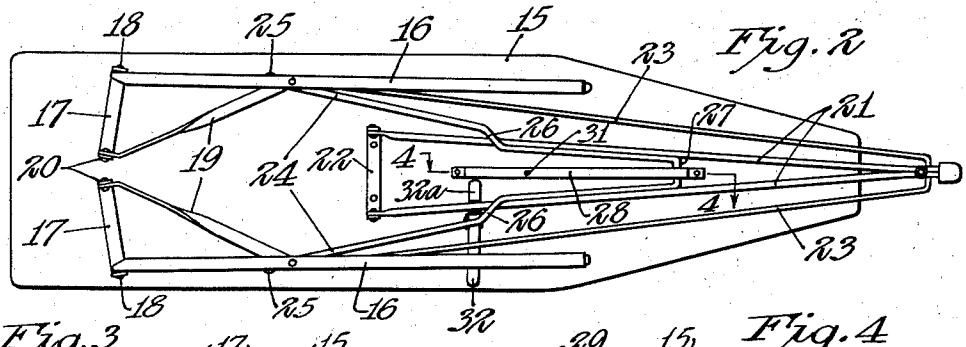


Fig. 2

Fig. 3

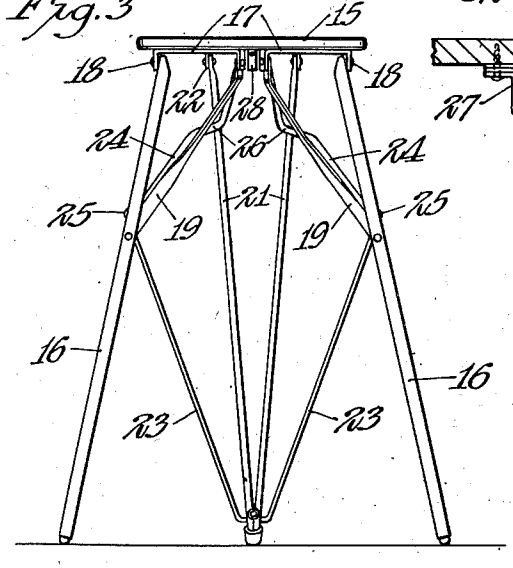


Fig. 4

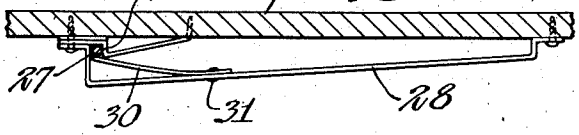
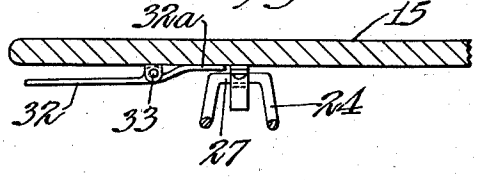


Fig. 5



Inventor
Henry V. Keller
By Williamson & Williamson
Attorneys

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Fig. 6

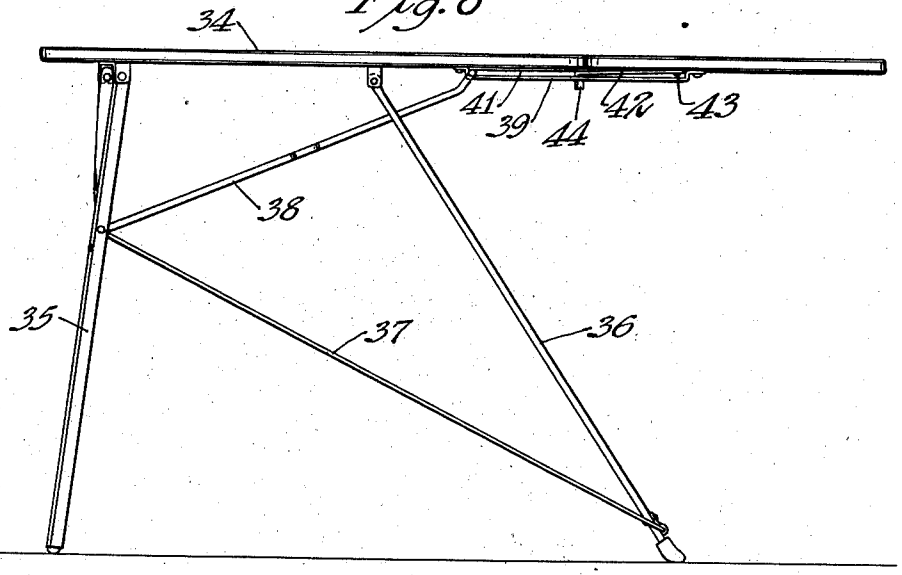


Fig. 7

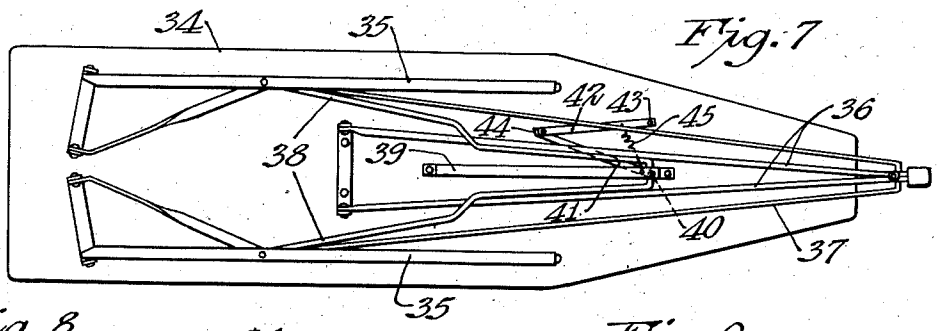


Fig. 8

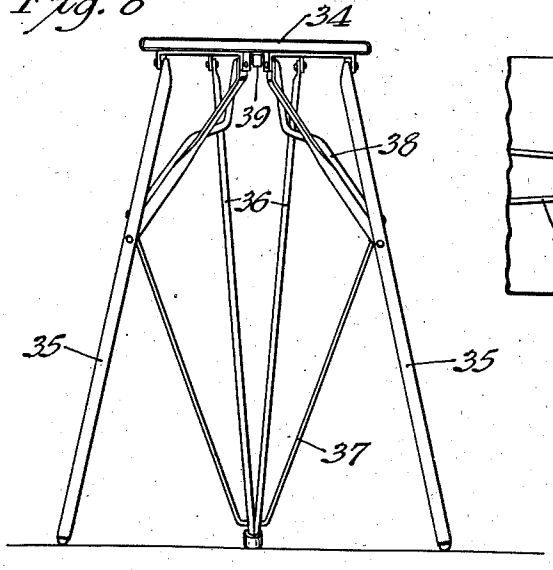
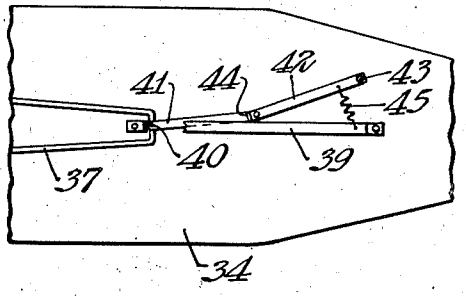


Fig. 9



Inventor
Henry V. Keller
By Williamson & Williamson
Attorneys

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Fig. 10

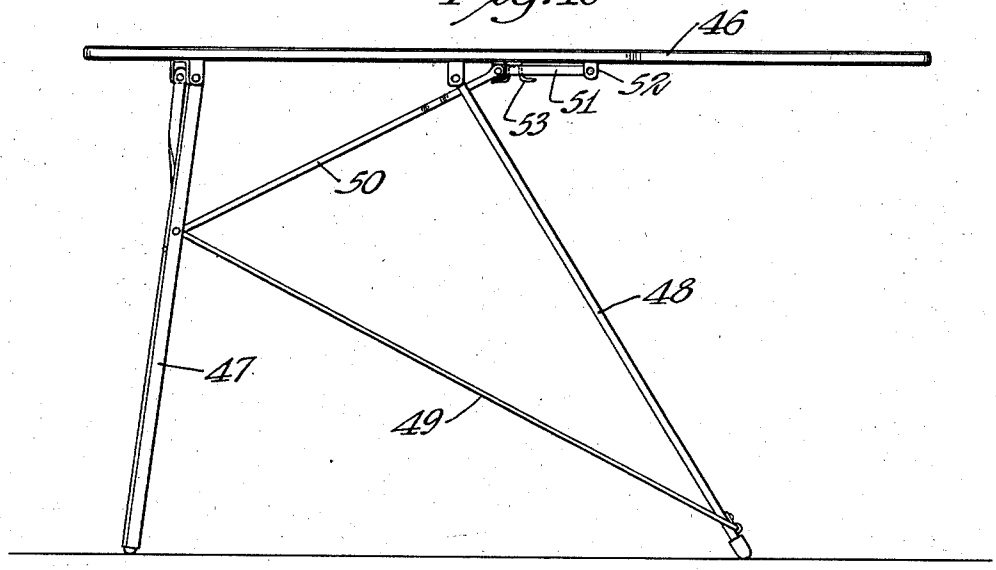


Fig. 11

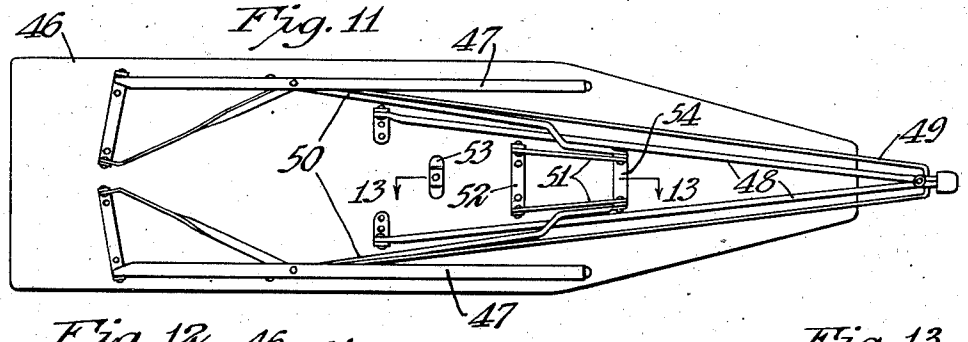


Fig. 12

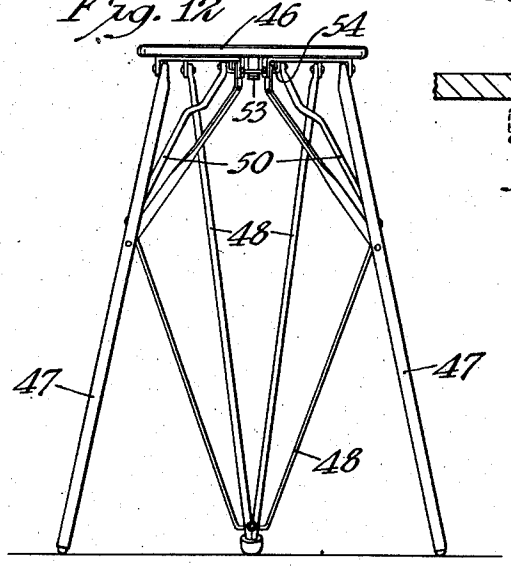
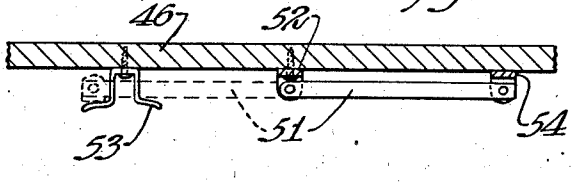


Fig. 13



Inventor
Henry V. Keller
By Williamson & Williamson
Attorneys

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IRONING TABLE HAVING FOLDING SUPPORTS

Henry V. Keller, Minneapolis, Minn.

Application March 31, 1944, Serial No. 528,872

3 Claims. (Cl. 38—117)

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This invention relates to ironing tables.

One of the principal objects of the invention is to provide an ironing table having leg units which can be folded and unfolded toward and away from the top of the table wherein either of the bracing means is arranged to facilitate unfolding of the legs from the collapsed or folded position thereof.

Another object of the invention is to provide means for facilitating the opening or unfolding of the front and rear leg units through the assistance of certain bracing means by reason of the position of the relationship of the leg and braces when folded or collapsed without the addition of structural members to said legs and bracing means.

Still another object of the invention is to provide an ironing table of the class described above in combination with means for releasably securing it in its set up position which can be conveniently used with the above mentioned relatedly positioned legs and braces.

These and other objects and advantages of the invention will more fully appear from the following description made in connection with the accompanying drawings, wherein like reference characters refer to the same parts throughout the views, and, in which:

Fig. 1 is a side elevational view of an embodiment of the invention;

Fig. 2 is a bottom plan view thereof of the legs and braces collapsed;

Fig. 3 is a rear elevation thereof;

Fig. 4 is an enlarged fragmentary sectional view taken approximately on the line 4—4 of Fig. 2;

Fig. 5 is an enlarged transverse fragmentary section taken approximately on the line 5—5 of Fig. 1;

Fig. 6 is a side elevation of another embodiment of the same invention;

Fig. 7 is a bottom plan view of the device shown in Fig. 6 with the legs and braces collapsed;

Fig. 8 is a rear elevation of the embodiment of Fig. 6;

Fig. 9 is a bottom plan view of the brace locking mechanism of the embodiment disclosed in Figs. 6 through 8;

Fig. 10 is a side elevation of still another embodiment of the invention;

Fig. 11 is a bottom plan view of the embodiment of Fig. 10 with the legs and braces collapsed;

Fig. 12 is a rear elevation thereof with the legs and braces set up; and

Fig. 13 is an enlarged fragmentary section taken substantially on the line 13—13 of Fig. 11 with a portion of the bracing structure shown in alternate positions in full and dotted lines.

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The first described embodiment of the invention is shown in Figs. 1 through 5. The table has a top 15 which may be formed of wood, metal or some other suitable material. It has a pair of rear legs 16 pivotally connected to brackets 17 at points 18. The brackets 17 have rear leg braces 19 pivotally secured thereto at points 20, and the angular disposition of the brackets 17 and their pivotal connection with the rear legs 16 and the rear leg braces 19 is such that when said rear legs 16 are swung from the collapsed position shown in Fig. 2 to the upright position shown in Fig. 3 the rear legs 16 will diverge downwardly. The front leg is made up of a pair of rearwardly divergent sections 21 which are pivotally connected to the underside of the top 15 by means of a bracket 22. For purposes of convenience the front leg or its two divergent sections may be designated as such by said numeral 21. Connecting the lower forward portion of the front leg 21 and the rear legs 16 is a rearwardly divergent brace made up of sections 23, and said brace 23 is so located relative to the front and rear legs that said legs and the braces 23 can be swung upwardly against the underside of the table top 15.

Pivotally connected to the rear legs 16 is a locking brace which is rearwardly divergent and made up of a pair of arms or sections 24, and it should be understood that in speaking of the locking brace or either of its divergent arms the numeral 24 is used.

In Fig. 2 the device is shown with the legs and braces folded against the table top 15. The front leg 21 is folded up substantially to contact with the underside of the table top. The locking brace 24 is shown to converge forwardly from the points 25 where they connect with the rear legs and they extend for some distance laterally outwardly of the inner pivoted ends of the front leg sections 21. Intermediate the ends of the arms of the locking brace 24 said arms are provided with bends 26 which bring the arms of the locking brace 24 across portions of the front leg sections 21 as the structure is viewed in Fig. 2. From the bends 26 to the forward end 27 of the said locking brace 24 those portions of the arms of said brace lie between the two sections of the leg brace 23.

As is best shown in Figs. 2 and 5 the forward end 27 of the locking brace 24 is squared so that a portion thereof is on a line extending transversely of the table top 15. A guide strap 28 extends longitudinally of an intermediate portion of the underside of the table top 15 and, as best shown in Figs. 1 and 4, said guide strap 28 is spaced downwardly from the underside of the table top 15 so that the forward end 27 of the locking brace 21 can slide longitudinally of the underside of the table top between said top and

the strap 28 and within the longitudinal limits of the strap 28.

As best illustrated in Fig. 4 there is an abutment element 29 secured to the underside of the table top 15 at the rear end of the guide strap 28. A leaf spring 30 is secured to the guide strap 28 at 31 at the forward end of said spring, and the rear end of the spring 30 is free so that said rear end can be moved toward and away from the abutment 29.

A locking brace release lever 32 is pivotally secured to the bracket 33 on the underside of the table top 15 and the inner end 32a of said release lever 32 is adapted to lie between the underside of the table top 15 and the forward end 27 of the locking brace 24.

When the ironing table is in the collapsed position shown in Fig. 2 the front leg 23, rear legs 16 and the various braces including the locking brace 21 lie closely adjacent the underside of the table top 15 and in approximately the same plane. In order to set up the table from its collapsed position it is necessary, of course, that the front and rear legs be swung away from the table top to the position shown in Fig. 1 and it is naturally desirable that the swinging movement of the legs away from said top be coordinated in such a manner that setting up of the table is not only convenient but there will be no binding of the connections between the front and rear legs. With the structure disclosed the table can be set up in a quick and convenient manner by placing the rear or left-hand end of the top on the floor and pulling the front leg 21 at its free or forward end. By reason of the fact that the front leg 21 underlies the angular portions 26 of the leg brace arms 24 force is exerted against the leg brace as soon as a pull is applied to the front leg 21 and this force is simultaneously transmitted to the rear legs 16 at the points 25 where the locking brace 24 is connected to said rear legs. This coordination between the front and rear leg units and the locking brace 24 cause the rear legs 16 to open or swing away from the table top 15 simultaneously with the front leg 21 to which the manual operative force is applied. There is no strain upon the legs and bracing structure and the entire unit will open from a collapsed position with ease.

When the table has been set up the forward end 27 of the locking brace 24 will snap behind the abutment 29 and over the inner end 32a of the release lever 32. This maintains the table in a rigid position for use and the spring 30 yieldably retains the front end 27 of the locking brace 24 behind the abutment 29. The locking brace is released from the abutment 29 by pressing on the lever 22 which extends conveniently outwardly to a point adjacent an edge of the table top 15, and when its outer end is pressed toward the table top it will move the front end 27 of the locking brace 24 from behind the abutment 29 and against the resiliency of the spring 30 so that the leg and brace units can be swung up against the underside of the table top 15.

In Figs. 6 through 9 there is disclosed another embodiment of the invention which utilizes the relative positioning of the locking brace and front leg, but it has a different type of mechanism for releasably securing the locking brace when the table is set up. The general structure of the table shown in Figs. 6 through 9 is in many ways similar to that of the table disclosed in Figs. 1 through 5. It includes the top 34, rear legs 35, front leg unit 36, leg brace 37 and locking brace 38. A guide 39 is provided for the forward end of the locking brace 38.

Pivotally connected to the forward end of the locking brace 38 at the point 40 is a lever arm 41 which in turn is pivotally connected to a lever arm 42 having one end pivoted to the underside of the table as at 33. At the point where the levers 41 and 42 are pivotally connected there is provided an upturned portion 44 on the lever arm 42 which serves as a handle. A tension spring 45 is extended between the guideway 39 for the locking brace 38, and the lever arm 42. When the table is collapsed the locking lever arms 41 and 42 are in the position shown in Fig. 7. When the table is opened to the position of Figs. 6, 8 and 9 the locking lever arm 41 will follow along with the forward end of the locking brace 38 as said locking brace travels rearwardly and the lever arms 41 and 42 will eventually straighten out and as they reach an aligned position the spring 45 will pull the levers 41 and 42 across dead center to the position shown in Fig. 9, the handle 44 and the lever 42 moving into contact with the locking brace guide 39. Obviously, when it is desired to collapse the table the handle 44 on the locking lever arm 42 would be drawn away from the locking brace guide 39 past dead center, whereupon the locking brace and the legs can be collapsed to the position of Fig. 7.

In Figs. 10 through 13 there is disclosed another embodiment of the invention which incorporates the same idea of having the locking brace extend across the front leg in the collapsed position of the table so that movement of the front leg in setting up the table will exert pressure against the locking brace, and this force in turn will be transmitted to the rear legs to open them. This type of structure is similar to the first described embodiments in several ways. It includes the top 46, rear legs 47, a front leg 48 and a leg brace 49, all of which are the same as in the above described forms of the invention. The locking brace, however, is differently constructed although, as stated above, it includes the same functional advantage in opening the table as in the constructions shown in Figs 1 through 9. The locking brace of Figs. 10 through 13 includes a main rear portion 50 which is hingedly connected to a shorter forward portion 51, the latter being pivotally connected to a bracket 52 secured to the underside of the table top 46.

The collapsed position of the table is shown in Fig. 11, and that figure clearly illustrates how the locking brace portion 50 extends across an intermediate portion of the front leg 48 so that when said front leg 48 is swung away from the table pressure will be exerted against the locking brace 50 and transmitted to the rear legs so that the entire unit will easily open. When the table is opened the locking brace sections 50, 51 are swung to an over-center position as indicated in Fig. 10. The two extreme positions of the locking brace portion 51 are shown in Fig. 13, the full line position of said member 51 indicating the collapsed position of the table and the dotted line position indicating the set up position. When the locking brace sections 50, 51 are swung to the position of Fig. 10 and the dotted line position of Fig. 13, a pivoted cleat 53 is turned to overlie a strap 54 which expands the pivotal connection between the locking brace sections 50 and 51.

With the structure disclosed the table can be set up in working position by exerting slight pressure on any leg member or brace member or by

resting the table on the foot of the front leg and pushing lightly on the top itself. The entire leg unit will at once swing easily into operating position. This is especially advantageous when the table is stored by hanging on a hook in a storage compartment or closet. Previous to this invention it had always been difficult to set up an ironing table because the leg and brace members were flat against the table top in the folded position and had to be manually lifted past a dead center position in opening. With my invention the table can be laid flat and the legs can still be easily raised into operating position.

Although I have shown several different types of securing means for the locking brace extending from the rear legs to the underside of the top, it will readily be seen that said locking braces have a common and decidedly useful positional relationship to the front leg and the rear legs when the table is collapsed. The locking brace is so arranged that at least a portion thereof overlies portions of the front leg in such a manner that when the front leg is swung away from the underside of the table top it engages and moves the locking brace which in turn transmits force to the rear legs, the entire leg and brace assembly opening freely and smoothly as a unit.

In addition to the above and principal advantage of the invention it should also be noted that there are several types of fastening devices for the locking brace which can conveniently be used in combination with the leg and brace arrangement so that its smooth functioning is not interfered with.

It will, of course, be understood that various changes may be made in the form, arrangement, details and proportions of the various parts without departing from the scope of my invention.

What is claimed is:

1. In an ironing table, a top, a front leg unit, a rear leg unit, said leg units being pivotally connected to said top for swinging movement toward and away from the top, a locking brace connected at one of its ends to a first one of said leg units below the point of pivotal connection of said leg unit with said top, the other end of said locking brace being movable relative to said top, and said locking brace per se being disposed at an angle to and overlying and crossing a portion of the second of said leg units when said leg units are pivotally moved toward said table top to a collapsed position, whereby force applied to said second of said leg units to move the same away from said top is positively directed to that portion of said locking brace disposed at an angle to and overlying and crossing said second of said leg units.

2. In an ironing table, a top, a front leg unit, a rear leg unit, said leg units being pivotally connected to said top for movement toward said top to a collapsed position and away from said top to a set-up position, a brace connected at its rear end to said rear leg unit below the point of pivotal connection of said rear leg unit with said top, said brace being movable at its forward end relative to said top, and said brace being disposed at an angle to and overlying and crossing an intermediate portion of said front leg unit when said front and rear leg units are pivotally moved toward said top to a collapsed position, whereby force applied to said front leg unit to move it away from said top will be transmitted directly to that portion of said brace which overlies and crosses said front leg unit.

3. In an ironing table, a top, a front leg unit comprising sections pivotally connected to said top and diverging from their point of pivotal connection, a rear leg unit pivotally connected to said top, said leg units being swingable toward said top to a collapsed position and away from said top to a set-up position, a rearwardly diverging locking brace having its divergent rear end portions connected to said rear leg unit below its point of pivotal connection with said top, the forward end of said locking brace being movably associated with said top, and portions of said diverging locking brace per se being disposed at an angle to and overlying and crossing portions of said front leg sections when said leg sections are pivotally moved toward said top to a collapsed position, whereby force applied to said front leg sections to swing them away from said top is applied directly to those portions of said diverging locking brace which are disposed at an angle to and overlie and cross said portions of said front leg sections.

HENRY V. KELLER.

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