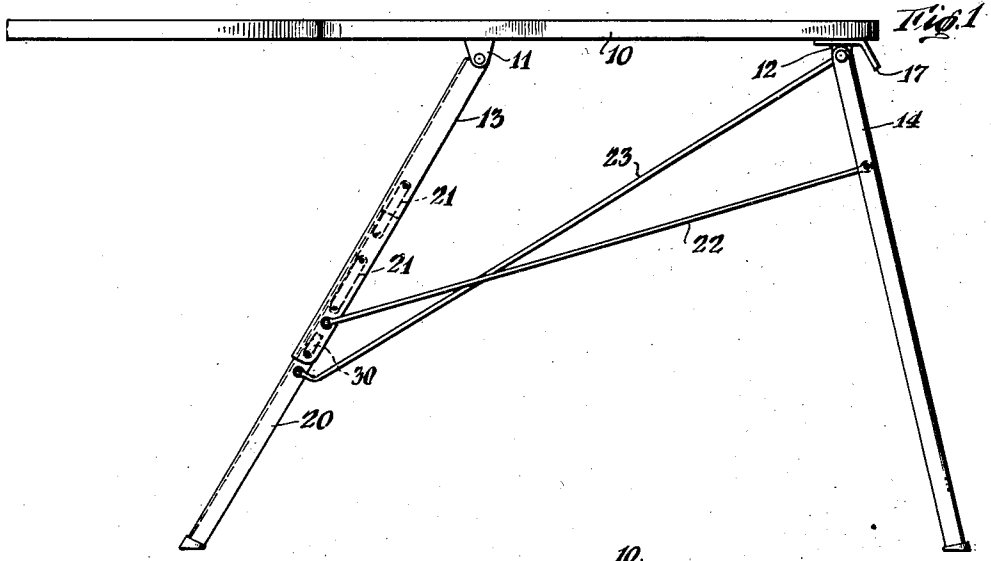
June 21, 1949. U. K. JOHANNSEN 2,474,107

FOLDING SUPPORT FOR IRONING BOARDS AND THE LIKE

Filed July 26, 1945

Fig. 1



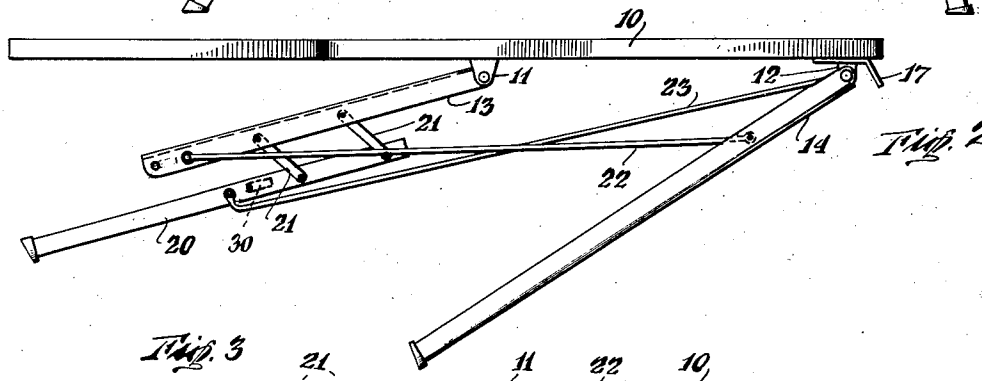


Fig. 2

Fig. 3

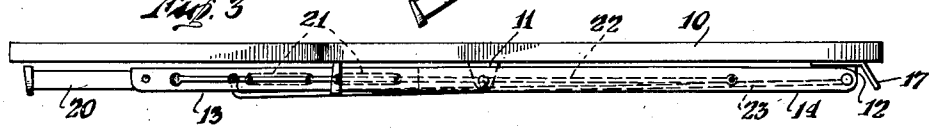


Fig. 4

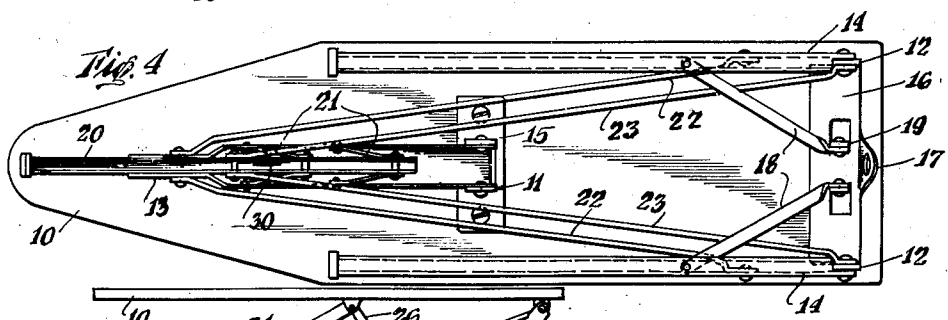
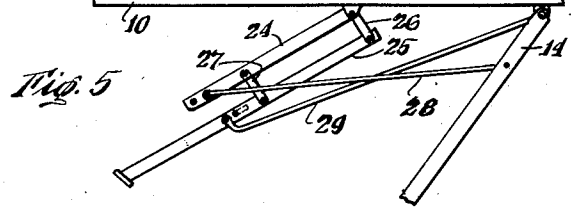


Fig. 5



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FOLDING SUPPORT FOR IRONING BOARDS AND THE LIKE

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2 Claims. (Cl. 38—117)

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This invention relates to a mechanically and functionally improved collapsible structure or assembly and in its more specific aspects aims to provide a unit of this type functioning as a support or table which will be of especial value when used as an ironing board.

It is an object of the invention to provide a structure which, with minimum effort, may have its parts extended or collapsed. When so retracted or collapsed, they will occupy only a small amount of space and will provide a compact unit capable of ready transportation.

A further object is that of furnishing a structure which, when extended, will be extremely rigid so that a satisfactory form of support is provided which will be free from any danger of collapse even when subjected to considerable strain and weight.

Another object is that of providing a unit of this type which will include relatively few parts, each individually rugged and simple in design; such parts being capable of ready assembly to economically furnish a structure operating over long periods of time with freedom from all difficulties.

With these and other objects in mind, reference is had to the attached sheet of drawings illustrating practical embodiments of the invention, and in which:

Fig. 1 is a side elevation showing a unit in erected position;

Fig. 2 is a similar view showing the unit in partially collapsed condition;

Fig. 3 illustrates the parts in completely housed or retracted positions;

Fig. 4 is a bottom plan view of the parts as shown in Fig. 3; and

Fig. 5 is fragmentary view similar to Fig. 2 but showing an alternative form of structure.

In these views, the reference numeral 10 indicates the deck of the structure. This deck may be formed of wood or any other suitable material. Supports 11 and 12 extend from the under face of the deck and pivotally mount legs 13 and 14. These supports may form parts of brackets 15 and 16 suitably secured to the top 10, it being observed that the bracket 16 is conveniently provided with an extension 17 from which the entire assembly may be suspended when collapsed.

The legs 13 and 14 are preferably formed of metal and are angular in section. Accordingly, they will combine a maximum of strength with a minimum of weight. While only a single forward leg 13 is preferably employed, a pair of rear legs 14 are included. Each of these latter legs may

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be braced by tangentially extending members 18 fixed at their outer ends to the legs and pivotally secured adjacent their inner ends, to extensions 19 of the bracket 16.

The leg 13 embraces a main body portion identified by this numeral and a supplementary or second body portion 20. Both of these portions may be parts of channel members with the portion 13 of a width such that it may receive and house the portion 20. The portions 13 and 20 are connected by pairs of links 21 pivotally secured at their opposite ends to the respective portions. Thus, a parallel link motion is provided; the links 21 being capable of swinging movements through substantially 180°. With the ends of the links attached to leg portion 20 swung in a counter-clockwise direction to a maximum distance, that portion 20 will be housed to a major extent within the body of portion 13 of the leg. When swung to a corresponding degree in a clockwise direction, portion 20 will be in line with and, in effect, form a fixed part of leg portion 13. In such position the pivots of the links have at least shifted to positions where they are aligned. Under these circumstances, the leg 13 will have a maximum length.

Now with a view to securing such an actuation of the parts, one pair of rods 22 have their outer ends secured one to each of the legs 14. Their opposite ends are secured as in Figs. 1 to 4 to the leg portion 13 and adjacent the outer end of the latter. Conveniently, such securing is at both ends of the rods effected by pivot connections; the pivot at the inner ends of the rods being substantially in line with the pivot of the links 21. The rods 23 are conveniently connected to the pivots supporting the legs 14. The ends of these rods are connected to the portion 20 of the leg 13 and, as will be observed, extend across the plane of the rods 22.

With the parts thus assembled, legs 14 may be swung to positions adjacent the underside of the deck 10 or else to positions such as have been shown in Fig. 1. As they are shifted to the latter positions, the rods 23 will act to cause the links 21 to swing in clockwise directions. In the interim, the rods 22 will bring the portion 13 of the leg from a position adjacent the underface of the deck to a position such as has been shown in Fig. 1. As is obvious in assuming the latter position, the cooperation of the leg portions 13 and 20 will act as a stop to limit movement of the parts beyond the desired point. Contact with the underface of the deck 10 will serve to limit

the movements of the parts beyond an opposite extreme position.

With the legs 14 and 13 diverging with respect to each other and the deck 10, it will be found that the greater the strain or weight imposed on that deck the greater will be the tendency of the parts to remain in the positions to which they have been shifted. However, by simply employing the legs 14 as actuating members, the parallel link movement will be operated to cause those ends of the links 21 attached to the leg portion 20 to swing in counter-clockwise directions as viewed in Fig. 1. This movement of the parts will continue until portion 20 is housed to a maximum extent within portion 13 and as these parts shift in circular directions with respect to each other. Again, when it is desired to erect the parts, it will be found that this may also be readily achieved by simply grasping and shifting the legs 14 with respect to the deck 10.

In certain instances, it might be desired to have the leg portion 20 of greater length. This may readily be achieved by resorting to the structure shown, for example, in Fig. 5. In that view, leg portions 24 and 25 have been indicated. These portions are connnected by links 26 and 27. The uppermost link 26, however, is disposed adjacent the point of pivotal connection of the leg portion 24 to the underside of the deck 10. Therefore, with the end of this pair of links connected to the leg portion 25, the latter may be of substantially greater height. The rods 28 and 29 connected to the pair of legs corresponding to the legs 14 will cause the parts to shift precisely in the manner afore described. Therefore, the operation of this form of unit will be the same as the operation heretofore traversed.

When the structure is extended, it may, in certain instances, be desirable to lock the parts against further movements with respect to each other. This may be achieved by having the portions 13 and 20 of the supporting leg each formed with an opening which is aligned as the leg portions reach their fully extended positions. A spring-pressed locking pin 30 may, under these circumstances, automatically project through both openings to prevent further movements of the parts. When the structure is to be collapsed, this may readily be achieved by simply retracting the pin and thereupon shifting the leg portions.

Thus, among others, the several objects of the invention as specifically afore noted are achieved. Obviously, numerous changes in construction and rearrangements of the parts might be resorted to without departing from the spirit of the invention as defined by the claims.

I claim:

1. A folding table including in combination a deck, a leg pivotally connected at its upper end to the underside of said deck and in one extreme position extending downwardly and outwardly with respect to said underside, said leg including an upper and a lower portion, links of substantially similar lengths each having one end pivotally connected to the upper of said portions at points spaced in the length of the latter and with their opposite ends similarly connected to the lower of said portions, said links and leg portions all projecting in directions parallel to each other in said one extreme leg position, means for preventing the movements of said links and portions beyond such parallel direction, said leg in its opposite extreme position extending substantially parallel and beside the under face of said deck and with the lower leg portion having the major part of its body disposed adjacent the body of the upper portion, a second leg also pivotally secured to the underside of said deck at a point spaced from the pivot of said first leg and means connecting said second leg with the portions of said first named leg whereby to swing the same from one to the other of said extreme positions as said second leg is swung around its pivot.

2. A folding table including in combination a deck, a leg pivotally connected at its upper end to the underside of said deck and in one extreme position extending downwardly and outwardly with respect to said underside, said leg including an upper and a lower portion, links of substantially similar lengths each having one end pivotally connected to the upper of said portions at points spaced in the length of the latter and with their opposite ends similarly connected to the lower of said portions, said links and leg portions all projecting in directions parallel to each other in said one extreme leg position, means for preventing the movements of said links and portions beyond such parallel direction, said leg in its opposite extreme position extending substantially parallel and beside the under face of said deck and with the lower leg portion having the major part of its body disposed adjacent the body of the upper portion, a second leg also pivotally secured to the underside of said deck at a point spaced from the pivot of said first leg, a pair of rods, one having one end pivotally connected to the lower of said first leg portions, its opposite end being connected substantially in line with the pivot of said second leg and the other of said rods having one end pivotally connected to the second leg at a point spaced from the pivot thereof, its body crossing said one rod and having its opposite end pivotally connected to the uppermost of said leg portions whereby as said second leg is swung around its pivot the portions of said first named leg will be moved from one to the other of said extreme positions.

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