Oct. 9, 1934. R. VAN SEYLE ET AL 1,976,422

STAND FOR IRONING BOARDS AND THE LIKE

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Fig. 1.

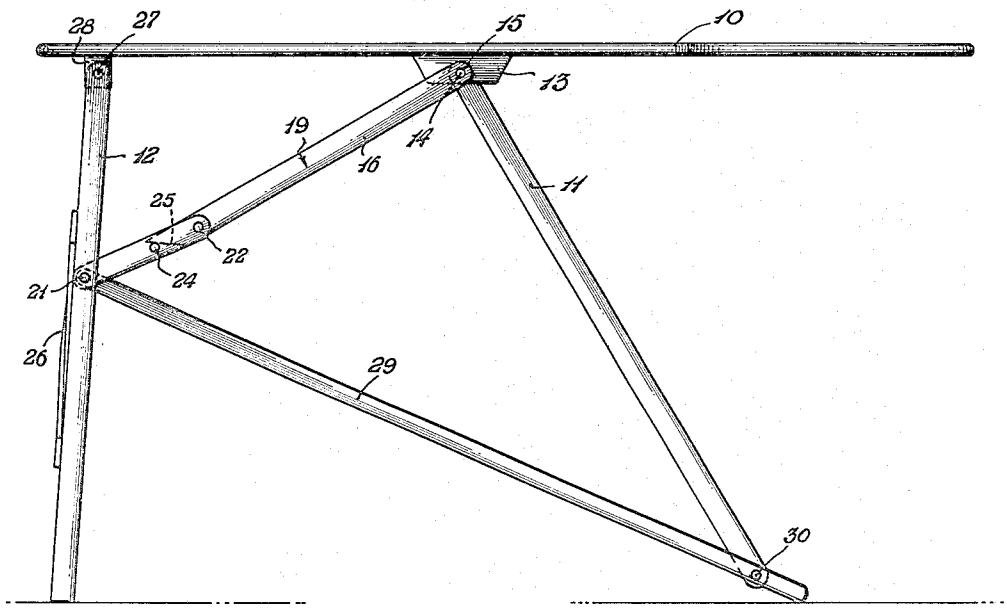


Fig. 2.

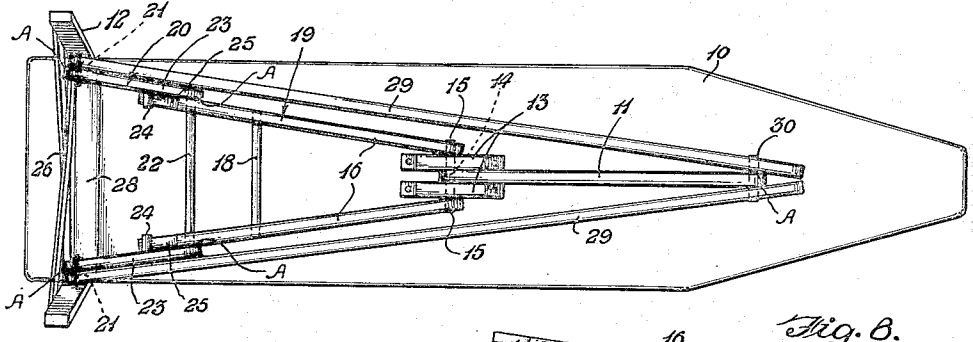


Fig. 9.

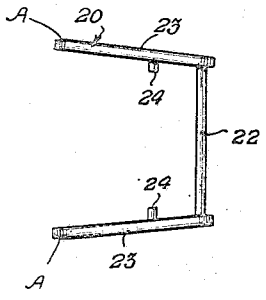
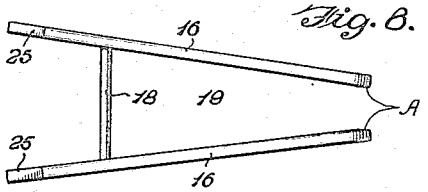


Fig. 6.



Inventors

Robert Van Seyle
Leslie Leroy Smith
Edward Judge Barnes

By Richard K. Stevens

Attorney

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Fig. 3.

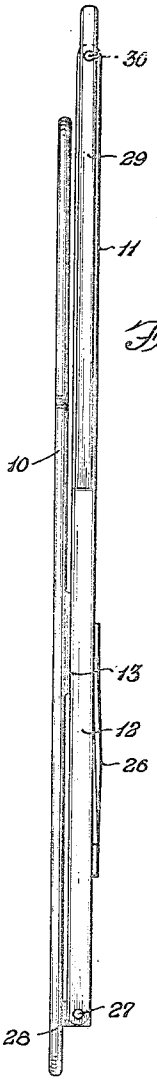


Fig. 4.

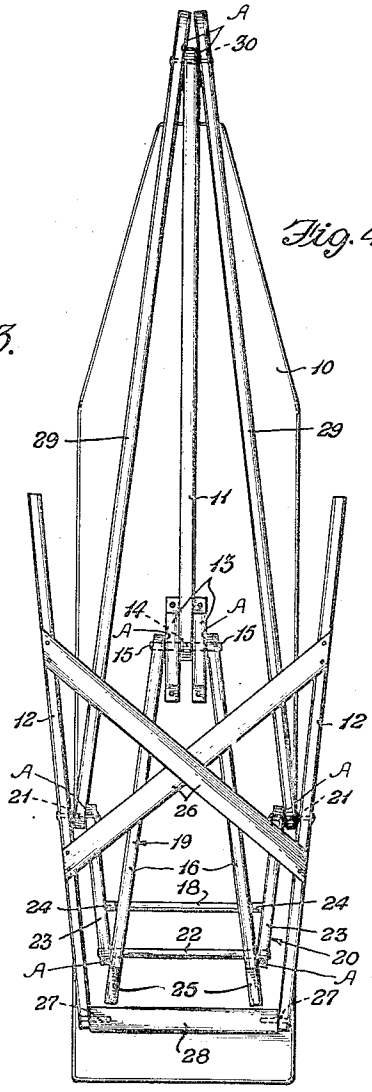
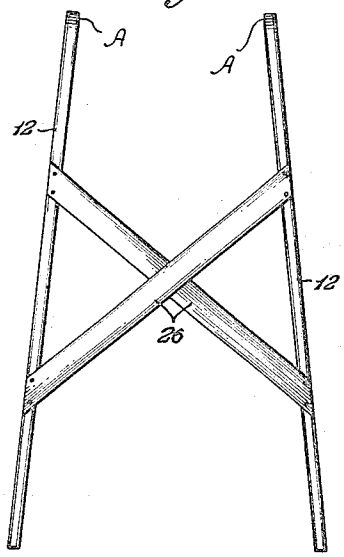


Fig. 7.



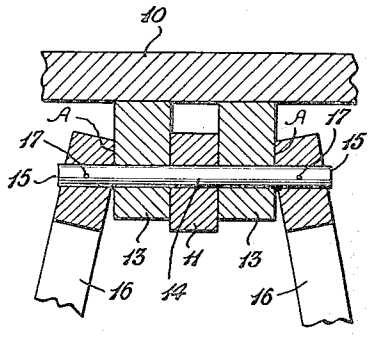
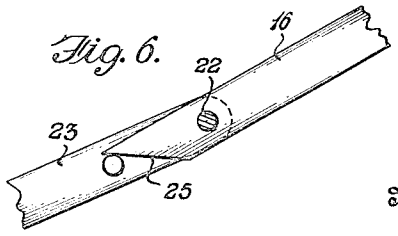


Fig. 5.

Fig. 6.



Inventors

Robert Van Seyle

Leslie Leroy Smith

Edward Judge Barnes

By Richard K. Stevens

Attorney

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UNITED STATES PATENT OFFICE

1,976,422

STAND FOR IRONING BOARDS AND THE LIKE

Robert Van Seyle, Leslie Leroy Smith, and Edward Judge Barnes, Takoma Park, Md., assignors to Washington Missionary College, Takoma Park, Md., a corporation of the District of Columbia

Application January 21, 1933, Serial No. 652,876

6 Claims. (Cl. 68—10)

This invention relates to folding tables or stands, and more particularly to ironing boards and their folding supporting stands.

In the ironing of various materials in the past, the well known hand iron has been commonly used in conjunction with a cloth covered board supported adjacent each end upon any convenient means, such for instance as the backs of chairs and the like. The objections to such practice have long been recognized and attempts have been made to construct ironing stands or tables wherein the ironing board portions of the same were adapted to be supported on attached legs, which legs were capable of being folded against the board when not in use to thereby form a compact unit requiring only a relatively small space for storage. So far as we are aware such attempts to overcome the disadvantages encountered by the use of various independent articles as supports for ironing boards have been objectionable either because of the lack of sturdiness of the stand or because of the employment of numerous and comparatively complicated parts which resultantly increased the cost of manufacture of the same and, in some instances, increased the weight thereof to a prohibitive extent.

Furthermore, so far as we are aware, the folding stands for ironing boards heretofore provided have not been formed with the pivots for the legs and tie rods arranged on common axes, nor have the stands been of a simple and yet sturdy construction in which the movement of one of the pivoted members from the board causes the other elements of the stand to move to such relative positions with respect to the board that the stand is rendered operative to support the board.

It is the object of the present invention to overcome the objections heretofore found in tables such as ironing stands, and the invention contemplates the formation of an ironing stand having an ironing board portion and folding leg portions secured thereto wherein only relatively few parts are utilized and a structure is provided which has a degree of sturdiness not heretofore attainable in an ironing table of comparable simplicity.

The invention also contemplates the formation of an ironing table in which legs are provided adjacent the rear end of the ironing board and another leg extends from a point adjacent the center thereof, in which the legs are pivoted and are foldable in a forwardly direction against the underside of the board, and in which a pair of tie bars extend in a diverging manner from adjacent each end of the centrally arranged leg to a common pivot axis on the rear legs.

It is another object of this invention to construct an ironing table having the arrangement of legs and tie bars as specified above with the uppermost pair of tie bars being formed of corresponding pivoted sections proportioned with respect to the common pivot points of the tie rods on the rear legs and the pivot point about which the rear legs fold so that the sectioned tie rods will fold and lie adjacent each other and also adjacent to the legs in a closely contacting relation to the underside of the board.

The invention further contemplates the formation of an ironing stand in which the rear legs are maintained in a constantly diverging relation whether the stand is in the folded or supporting position, and in which the rearwardly extending tie rod sections connecting the upper end of the front leg with the rear legs are maintained with their respective rods in a constantly diverging relation, although the corresponding rods of the respective sections may be folded so as to diverge in an opposite direction when the stand is placed in the inoperative position.

The invention contemplates additionally the formation of a structure as specified above wherein the diverging character of the rods of the respective upper tie rod sections permits the employment of permanent stops on the smaller section, which stops are engaged by the ends of the rods of the main section when the legs are extended but lie out of contact with the rods of the main section when the parts are folded to render the stand inoperative.

Other objects and advantages will be apparent from the following detailed description when considered in connection with the accompanying drawings wherein:—

Fig. 1 is a side elevation of an ironing board table or stand made in accordance with this invention,

Fig. 2 is a bottom plan view of the ironing table as illustrated in Fig. 1,

Fig. 3 is a side elevation of the table in folded position,

Fig. 4 is a bottom plan view of the table in folded position,

Fig. 5 is a detailed sectional view taken on line 5—5 of Fig. 1,

Fig. 6 is a detailed sectional view of the pivot and stop mechanism of the upper tie rod sections,

Fig. 7 is a plan view of the rear leg unit,

Fig. 8 is a detailed view of the main unit of the upper tie rods, and

Fig. 9 is a detailed view of the supplemental unit of the upper tie rods.

Now referring to the drawings in detail the numeral 10 designates an ironing board supported upon folded front and rear legs 11 and 12 respectively. Front leg 11 is pivoted to the underside of the board 10 in bearing blocks 13 by means of a shaft 14 on which the leg is adapted to pivot. Shaft 14 extends through the blocks 13 and is rotatably mounted in the blocks although close fitting bearings are provided. Beyond the blocks 13 the shaft 14 is extended as at 15 and has angularly disposed bars 16 secured to its respective ends, said bars being secured by means of fastening elements 17.

Bars 16 are tightly fitted on shaft 14 and due to the angular positioning of the same on the shaft they diverge in the direction of their free ends and are secured in this position by a brace bar 18 so as to form a main tie rod unit indicated generally at 19. This unit 19 together with a supplemental unit 20 pivoted thereto form a locking tie rod connection between the shaft 15 and corresponding stub shafts 21 mounted on the rear legs 12. Supplemental unit 20 of the locking tie rod connection is formed with a connecting shaft 22 which is arranged perpendicular to the longitudinal center of the main unit 19 and which is adapted for rotation in the opening in the bars 16 through which it extends. The divergence of the bars 16 is such that the bars 23 of the supplemental unit 20 extend substantially in line with bar 16 to the stub shafts 21 when the stand is in the unfolded or operating position. In this position a stop 24 carried on and extending from the outer surface of each of the bars 23 is engaged by a beveled portion 25 on the underside of the respective bars 16, and the elements are preferably proportioned so that the bars 16 and 23 respectively of the units assume an angle slightly greater than 180° when the table is in operative position whereby the units are locked in this position until pressure is applied upon the shaft 22 in an upwardly direction.

Legs 12 diverge outwardly in a fixed position with respect to each other and they are secured in this position by braces 26. The legs 12 formed into the unit are adapted to be pivoted about an axis 27 formed by means of screws or the like passing through the upper ends thereof and into a block 28 which in turn is secured to the board 10 adjacent its rear end.

A pair of rods 29 preferably formed of wood and of a cross section only slightly less than the cross sectional area of the legs 11 and 12 are connected at their lower ends by means of a common shaft 30 which passes through the end of the leg 11 adjacent its lower end and these rods 29 are secured to shafts 30 in an angular relation so that they diverge toward the rear end of the stand and are each secured to one of the stub shafts 21 whereby the rods 29 pivot about an axis on the rear leg unit common with the axis about which the bars 23 of the supplemental unit 20 pivot. The front leg 11 has been so designated notwithstanding the fact that it is shown in the drawings as terminating out of contact with the floor or other surface upon which the unfolded stand is supported. In the specific preferred form as illustrated, the extending ends of the rods 29 act as feet for the leg 11 but it is to be understood that the leg, if desired, may be extended sufficiently to engage the floor.

In adjusting the stand as shown in Figs. 3 and 4, the free end of one of the rear legs 12 is drawn outwardly from the board 10 so as to swing about the axis at 27. This movement causes the leg 11 to be pivoted outwardly through the medium of the tie rods 29. The movement of legs 12 also tends to partially pivot the supplemental tie rod section 20 with respect to section 19 and to cause the section 19 to swing outwardly from the board about the axis of the rotating shaft 14. When the tie rod sections 19 and 20 have been fully extended the further movement of the legs and bars is prevented whereupon the stand upon being placed in its operative position will be held rigid by the tie rod sections moving downwardly until the stops 24 are engaged by the beveled under surfaces 25 of the bars 16. In this position the stand will be retained locked until the sections 19 and 20 are pivoted upwardly beyond the plane of a straight line between stub shafts 21 and shaft 14. When the stand is in the folded position the legs and tie rods lie back against the under surface of the board 10 in a manner which causes the same to be quite securely retained in that position until the rear leg section is swung outwardly.

We have discovered that if the tie rods and legs are proportioned as shown, they permit of ready folding without binding, and that while it is possible to construct the stand to cause the legs 11 and 12 to extend in a different angular position away from the board 10 when the stand is in the operative position, the distance between shaft 22 and stub shafts 21 should be equal to the distance between axis 27 and stub shafts 21 minus the distance between axis 27 and shaft 22 when the section 19 is folded against the board 10. Furthermore, the distance between shaft 14 and shaft 30 should be equal to the distance between axis 27 and stub shafts 21 plus the distance between stub shafts 21 and shaft 30.

The angular disposition of the rear legs and bars upon the shafts, as above referred to resulting in the bars diverging or being angularly disposed with respect to each other, is accomplished by arranging the respective bore openings to extend at desired angles through the legs and bars.

Tight fitting joints therefore exist at the various connections making it possible to eliminate the employment of joints which must permit of side movement in addition to the particular pivoted motion intended, and this permits the formation of a sturdy construction. Preferably the sturdiness of the construction is increased by the beveling of the extending ends of the bars and legs adjacent the pivot points to provide additional contacting surfaces without undue binding. The bars and legs are beveled in the manner indicated at A.

Although but one embodiment of this invention has been specifically shown and described, it will be understood that numerous details of the construction may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

What we claim is:

1. In a folding stand for ironing boards and the like a top board, a rear leg unit pivoted adjacent the end of the board and adapted for swinging movement toward and away from the same, a front leg pivoted to the board in spaced relation to the rear leg unit and adapted for

swinging movement toward and away from the board, a connecting member pivoted to the rear leg unit and to the board at substantially the same axis as the front leg, means for holding the front leg in an adjusted position when the legs are extended, said connecting member comprising pivoted sections each of which sections is formed of diverging bars fixed against movement with respect to each other corresponding ones of which are arranged parallel with portions overlapping when the legs are extended and which diverge with respect to the other when the legs are folded, and means cooperating with the sections when the legs are extended to maintain the sections in the unfolded operative position.

2. In a folding stand for ironing boards and the like, a top board, a rear leg unit comprising relatively fixed legs pivoted adjacent the end of the board and adapted for swinging movement toward and away from the same, a front leg unit pivoted to the board in spaced relation to the rear leg unit and adapted for swinging movement toward and away from the board, a connecting member pivoted to the rear leg unit and to the board at substantially the same axis as the front leg unit, and another connecting member pivoted to the rear leg unit at substantially the same axis as said first connecting member with its opposite end pivoted to the front leg unit adjacent the free end thereof, said member connecting the board with the rear leg unit being formed of pivoted sections each including fixed correspondingly diverging bars which lie substantially parallel when the leg units are extended but diverge with respect to each other when the leg units are folded, the bars of one of the sections being provided with a stop which is engaged by an end of one of the bars of the other section which overlap with the bars of the first section when the bars are parallel and which stop is received between corresponding bars of the respective sections when they are folded.

3. An ironing board and stand comprising a top board, a rear leg unit formed of relatively fixed legs pivoted adjacent the end of the board and adapted for swinging movement toward and away from the same, a front leg unit pivoted to the board in spaced relation to the rear leg unit and adapted for swinging movement toward and away from the board, a connecting member pivoted to the rear leg unit and pivoted to the board at substantially the same axis as the front leg unit, said connecting member including two sections each formed of relatively diverging bars with the corresponding bars of each section lying parallel when the stand is in open position but lying in a relatively diverging position when the stand is folded, another connecting member pivoted to the rear leg section at substantially the same axis as the first connecting member having its opposite end pivoted to the front leg unit adjacent the free end thereof, and stops carried by one section of said first connecting means adapted to engage with the other section thereof when the stand is unfolded but to lie between the corresponding bars of the sections when the stand is folded, the axes of the pivotal connections for the diverging bars being parallel and said pivotal connections being so formed that each of said bars is capable of movement in but a single plane.

4. In a folding stand for ironing boards and the like a top board, front and rear leg units pivoted to the top board in spaced relation and adapted to fold thereagainst, means connecting the front and rear leg units to cause them to move together, and connecting means between the rear leg unit and the board for holding the same in unfolded position, said last mentioned connecting means including a section pivoted to the rear leg unit in spaced relation to its pivotal connection to the board, and another section pivoted to the first section and to the board at substantially the same axis as pivot between the board and the front leg unit, said sections being formed of diverging bars corresponding ones of which lie parallel when the stand is unfolded but diverge with respect to each other when the stand is folded, said pivotal connections for the ends of the respective sections being arranged on parallel axes with the respective bars angularly disposed in fixed position with respect to the particular axis about which each pivots.

5. An ironing board and stand comprising a top board, a rear leg unit formed of relatively fixed legs pivoted adjacent the rear end of the board and adapted for swinging movement toward and away from the same, a front leg unit pivoted to the board in spaced relation to the rear leg unit and adapted for swinging movement toward and away from the board, a connecting member pivoted to the rear leg unit and pivoted to the board at substantially the same axis as the pivot of the front leg unit to the board, said connecting member including two sections each section formed of a pair of bars fixed against movement with respect to each other with the attached ends of the bars of the section pivoted to the rear leg unit spaced apart a greater distance than the attached ends of the bars of the section pivoted to the board, and another connecting member pivoted to the rear leg unit substantially at the same axis as the pivot of the first mentioned connecting member to the rear leg unit having its opposite end pivoted to the front leg unit adjacent the free end thereof.

6. An ironing board and stand comprising a top board, a rear leg unit formed of relatively fixed legs pivoted adjacent the rear end of the board and adapted for swinging movement toward and away from the same, a front leg unit pivoted to the board in spaced relation to the rear leg unit and adapted for swinging movement toward and away from the board, a connecting member pivoted to the rear leg unit and pivoted to the board at substantially the same axis as the pivot of the front leg unit to the board, said connecting member including two sections folded one within the other when the stand is collapsed but constructed to assume an unfolded position when the stand is in its operative position, and means for maintaining the sections in unfolded position, each of the said sections of the connecting member being formed of bars fixed against movement with respect to each other with the attached ends of the bars of the section attached to the rear leg unit spaced apart a greater distance than the attached ends of the bars of the section pivoted to the board.

ROBERT VAN SEYLE.
LESLIE LEROY SMITH.
EDWARD JUDGE BARNES.