Aug. 23, 1966 O. S. NIELSEN 3,268,194

SURFACE CONFORMING FOOT FOR IRONING TABLES

Filed Jan. 4, 1965 2 Sheets-Sheet 1

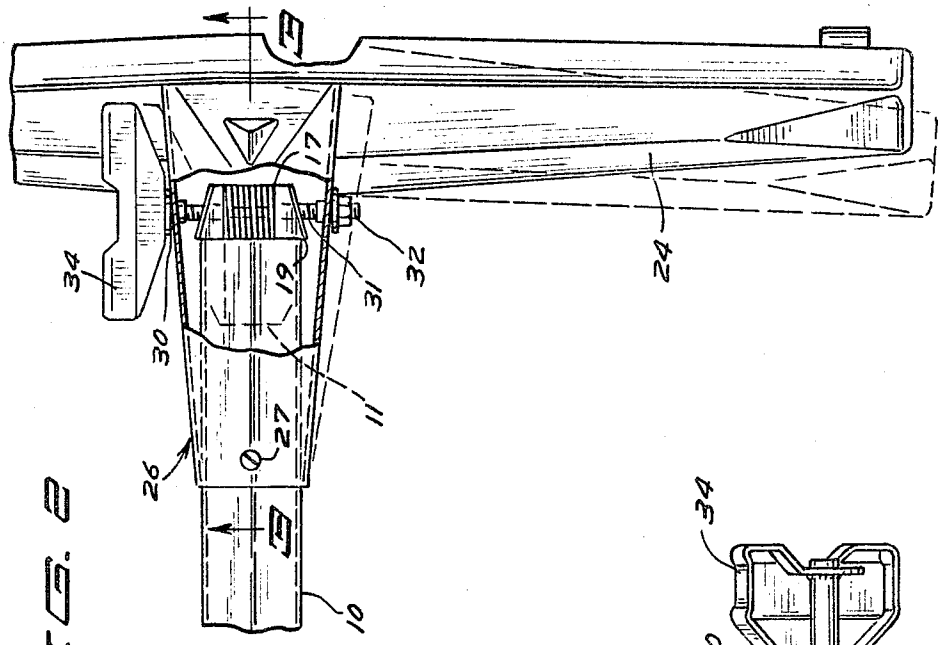


FIG. 2

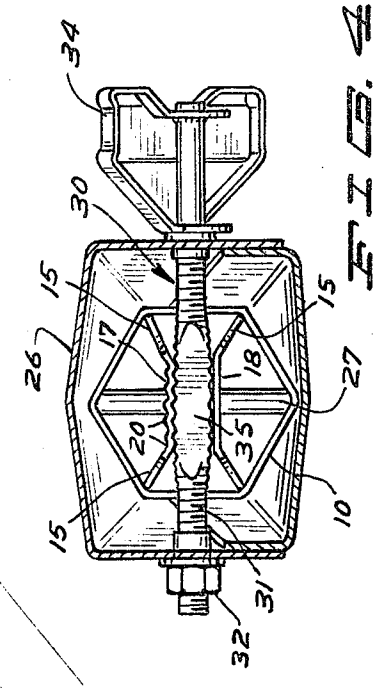


FIG. 4

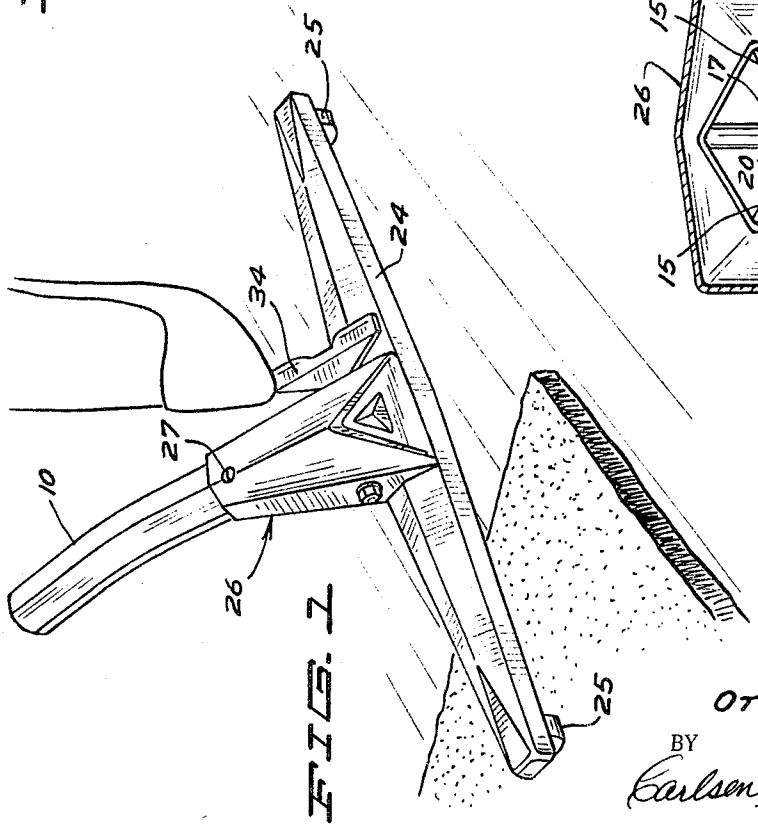


FIG. 7

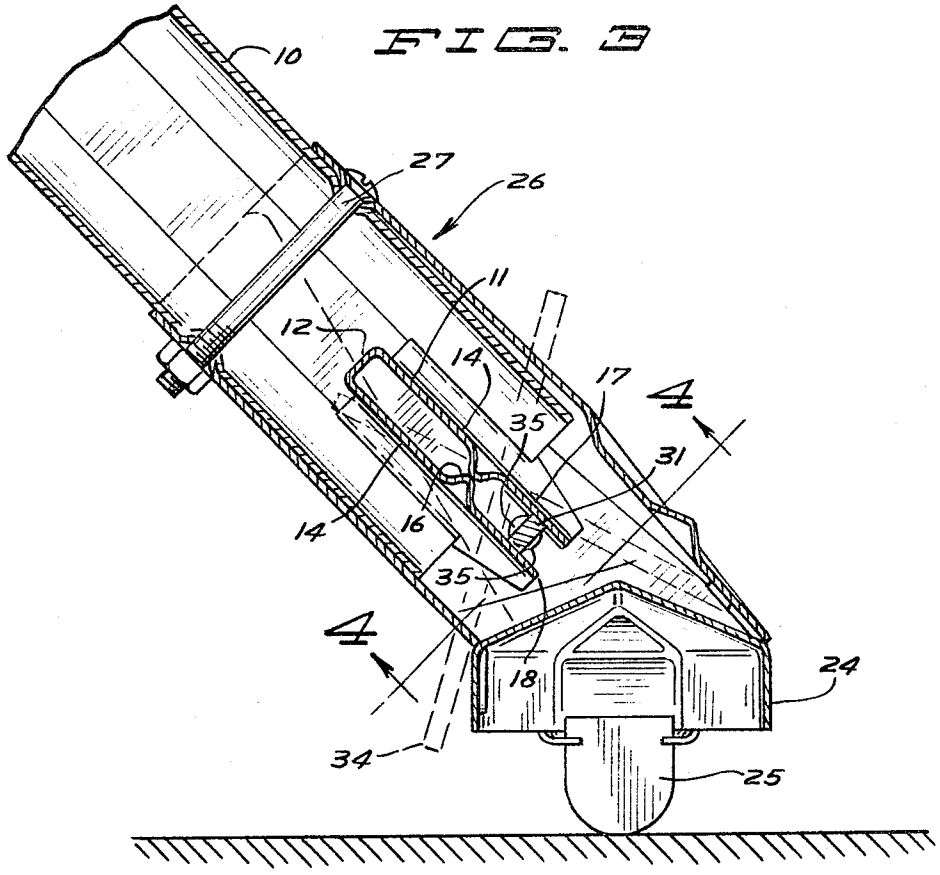
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FIG. 3



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SURFACE CONFORMING FOOT FOR IRONING TABLES

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8 Claims. (Cl. 248—188.2)

This invention relates generally to the understructure for ironing tables or the like and particularly concerns a cross foot at the bottom of the leg structure adapted to automatically adjust to conform to the floor surface and having means for locking the foot in such adjusted position.

In modern ironing table design utilizing longitudinally intercrossing legs, it is desirable to provide each leg with two floor surface contact points for maximum stability of the ironing table top. Four point surface contact, however, frequently results in table wobble where the floor surface is slightly irregular or where there are structural imperfections in the leg structure itself.

One attempted solution is to provide a pivoted foot at the lower end of one of the legs which will automatically conform to the floor surface. Examples of such structure are found in United States Patent No. 2,546,097 to Hild; No. 2,663,101 to Olander; and No. 2,854,770 to Munson. These structures, however, have not been completely satisfactory in providing a commercially acceptable self-conforming foot with positive locking.

The object of the present invention is to provide an adjustable cross foot for ironing tables which will automatically conform to the floor surface and which can then be simply and positively locked in adjusted position to there remain until released by the operator.

With this and other objects in view the invention broadly comprises a cross foot unit pivotally mounted at the lower end of a leg on a horizontally elongated ironing table for transverse surface conforming movement of the unit about an axis extending generally lengthwise of the table, locking means acting between the foot unit and leg for releasably locking the foot relative to the leg in any adjusted position, and said locking means including a control operable by the foot of an operator for selectively locking or releasing the locking means.

The above mentioned and still additional objects of the invention will be brought to light during the course of the following specification, reference being made to the accompanying drawings, in which:

FIG. 1 is a perspective view of the foot on the lower end of an ironing table leg with the foot engaging an irregular floor surface.

FIG. 2 is a fragmentary plan view of the foot taken partially in section to show the foot locking mechanism.

FIG. 3 is a longitudinal vertical section through the lower leg and foot taken on line 3—3 of FIG. 2 and with the foot locked.

FIG. 4 is a transverse section through the foot taken on line 4—4 of FIG. 3.

Referring now more particularly to the drawing, reference characters will be used to denote like parts or structural features in the different views. The numeral 10 denotes generally the lower diagonally disposed end portion of one of a pair of leg members arranged in conventional longitudinally intercrossing relation under an elongated ironing table top. The leg is here shown as being of hexagonal tubular construction but the present invention may also obviously be used with a round tubular leg. A locking clip or bracket designated generally at 11 is press fit within the lower open end of the leg portion 10 and projects outwardly beyond the end thereof.

This clip is generally U-shaped with the bight portion 12 thereof interconnecting substantially parallel legs 14 (FIG. 3). The side edge portions of each leg 14 are bent diagonally outward, as at 15, away from the opposing leg to form wings which will seat in the corners of the leg portion 10 as shown in FIG. 4. The legs have opposing inwardly stamped dimples 16 near their longitudinal centers to prohibit relative closure thereof, the dimples being disposed within the leg. Beyond the dimples 16 and at the open end of clip 11 the legs form a pair of opposing jaws 17 and 18. Wings 15 extend along the sides of jaws 17 and 18 and are provided with slight projections 19 (FIG. 2) which limit insertion of the clip 11 into the leg 10.

The jaws 17 and 18 lie on parallel planes which are spaced apart along the longitudinal vertical plane of leg 10 and forming a socket therebetween. The upper jaw is serrated in a direction longitudinally of the clip as at 20 (FIG. 4). These serrations are at a slight angle to the longitudinal vertical plane of leg portion 10 to serve as pitched threads for receiving the threads of a screw disposed transversely to the leg as will be subsequently explained.

An elongated cross foot 24 has floor engaging antifriction tips 25 mounted adjacent its ends and on the underside thereof. The foot 24 has a mounting bracket 26 integrally connected to the central portion thereof to extend in a perpendicular direction from the foot. This bracket has an elongated gradually tapering hollow construction with the larger end suitably secured to the foot 24 and the reduced end pivotally connected to the leg portion 10 as by bolt and nut assembly 27 which extends through the portion 10 perpendicular thereto on the longitudinal vertical plane of the leg. Accordingly the foot 24 and bracket 26 assembly is free for limited pivotal movement about the bolt 27. It will thus be understood that when the ironing table is set upon a floor surface with the foot 24 resting upon an irregularity therein, as shown in FIG. 1, the foot will automatically conform to the surface about the pivot 24.

A locking member, designated generally at 30, is mounted on the bracket 26 to provide a releasable locking connection between the foot assembly 24 and leg 10. This member, best shown in FIGS. 2 and 4, comprises a bolt or shaft 31 journaled in the side walls of the bracket 26 and being held therein by a nut 32 at one side and a foot pedal 34 at the other side of the bracket. The bolt extends transversely between the jaws 17 and 18 and is externally threaded. The central portion of the bolt, however, which lies between the jaws 17 and 18 has diametrically opposing sides which are flattened as at 35 with the spacing between said flattened sides being somewhat less than the spacing between the jaws. The threaded sides of the central portion of the bolt lying circumferentially between the flats 35, however, are spread wider than the normal spacing between the jaws.

Accordingly when the bolt is positioned with the flats parallel to the jaws 17 and 18, the foot 24 is freely adjustable about pivot 27 with the bolt sliding between the jaws. The pedal 34 is secured to the bolt to be forwardly tilted as in FIG. 1 when the bolt is in this position. When the bolt is rotated a quarter turn, however, by depression of the rear end of pedal 34, which is about to occur in FIG. 1, the bolt is turned to the position shown in FIGS. 3 and 4 wedging the jaws 17 and 18 apart and bringing the bolt threads into meshing engagement with the serrations 20 in the jaw 17. This will lock the bracket 26 and foot 24 attached thereto against movement about pivot 27.

In operation, when the ironing table is to be erected and set upon the supporting floor surface, the foot 24 will be unlocked with pedal 34 tilted forwardly as in

FIG. 1. Foot **24** and bracket **26** are then free to pivot about bolt **27** and will automatically adjust transversely thereabout to conform to the floor surface.

When the rear foot and both of the contact members **25** are in firm engagement with the supporting surface, the pedal **34** is actuated by depressing the rear end thereof which rotates bolt **30** one quarter turn to the position shown in FIGS. 3 and 4. This brings the bolt into locking engagement with the jaw **17** prohibiting any further movement about the pivot **27**.

When the forward end of the pedal **34** is depressed the bolt is rotated to its original position releasing the foot for self adjusting movement about the pivot. The invention accordingly economically and effectively carries out the aforementioned objective.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims. Having now therefore fully illustrated and described my invention, what I claim to be new and desire to protect by Letters Patent is:

1. In an ironing table leg structure having a downwardly extending leg, a cross foot pivoted to the lower end portion of the leg to conform to a floor surface against which it is placed, a latch means on the foot below the pivot, a movable locking element on the cross foot positioned to slidably engage the latch means during pivotal movement of the foor, and a control on the locking element for moving said element into locking engagement with the latch means at any position of the foot about the pivot to prohibit any further movement of the foot about the pivot.

2. The subject matter of claim **1** wherein said locking element is a rotary member journaled on the foot and said control is a pedal for rotating the locking element between locked and release positions relative to the latch means.

3. The subject matter of claim **2** wherein said latch means is provided with serrations and said rotary member has screw threads adapted to be brought into meshing relation with said serrations as it is rotated to a locked position.

4. A surface conforming foot for an ironing table leg extending downwardly in a longitudinal vertical plane of the table, an elongated foot member extending transversely of the leg and having its central portion pivoted to the leg on an axis lying on said plane and perpendicular to the leg for automatic adjustment of the foot about the pivot for firm engagement of the foot with a floor surface, and manually controllable means on the foot for releasably locking the foot to the leg to lock the foot against movement about said pivot.

5. The subject matter of claim **4** wherein said manually controllable means includes a foot pedal movably mounted on the foot member for movement between locking and release positions.

6. In an ironing table having a downwardly extending leg, a cross foot pivoted to the lower end portion of the leg for conforming about the pivot to the floor surface, a locking element on the foot slidably engaging a socket on the leg, a foot pedal connected to the locking element for moving the element between locked and release position relative to the socket.

7. In an ironing table leg structure having a leg extending downwardly along a longitudinal vertical plane of the table, a pair of parallel jaws mounted on the leg and spaced apart along said plane, a cross foot extending crosswise of said plane, bracket means on the center of said foot being pivotally connected to the leg above said jaws and on an axis lying on said plane for automatic transverse adjustment of the foot about the pivot to conform to a floor surface against which it is placed, a rotary shaft extending parallel to the foot and having its ends journaled in the bracket, said shaft having its central portion lying between said jaws, said central portion having a diametrical thickness in one direction sufficiently narrow to allow the shaft to slide freely between the jaws when the foot moves about the pivot and a greater diametrical thickness in another direction sufficient to wedge the jaws apart and come into frictional locking engagement therewith when the shaft is rotated, and a control on one end of the shaft for manually rotating the shaft between said sliding and locked positions relative to the jaws.

8. The subject matter of claim **7** wherein one of the jaws is provided with serrations and said shaft has external threads adapted to come into meshing relation with said serrations during such wedging action.

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