United States Patent

[11] **3,613,660**

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[54] **ANDIRON**
1 Claim, 5 Drawing Figs.

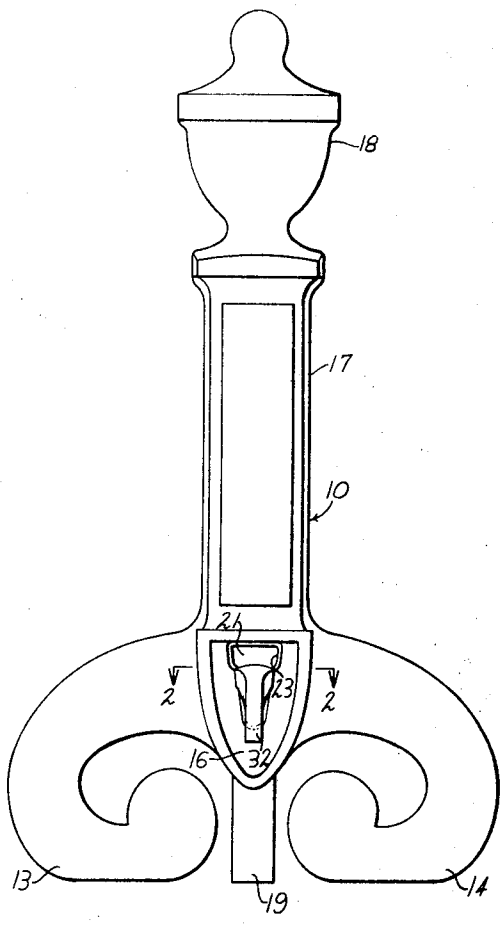
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[51] **Int. Cl.** **F23h 13/00,**
F23h 17/12, F24b 13/00
[50] **Field of Search** 126/298, 164, 165

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ABSTRACT: Upstanding front member of andiron has passageway therethrough with sides of passageway sloping downwardly and inwardly. Forward end of horizontal bar has downwardly and inwardly extending side portions corresponding to and engaging sloping sides of passageway with wedgelike fit. Cooperating stop surfaces limit forward and rearward movement of side portions of bar relative to sloping sides of passageway.



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SHEET 1 OF 2

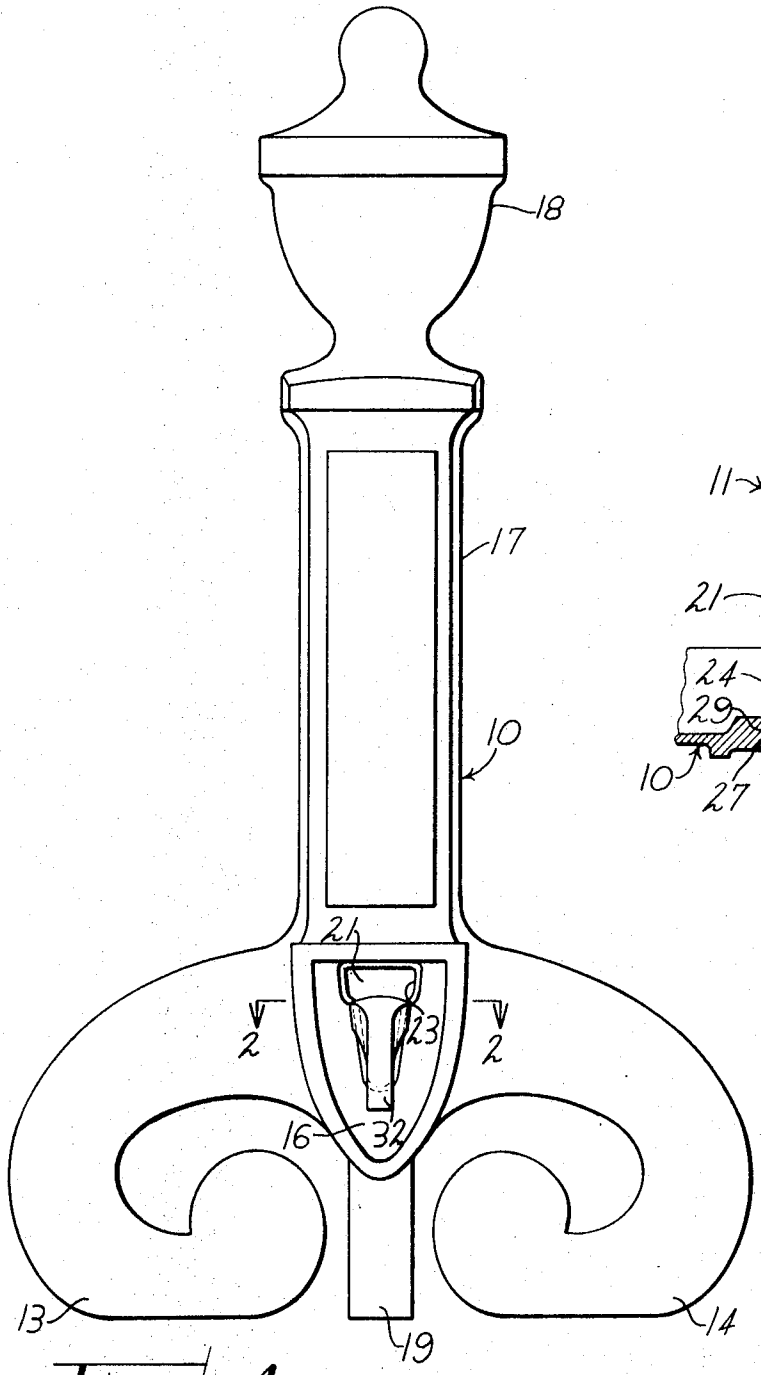


FIG 1

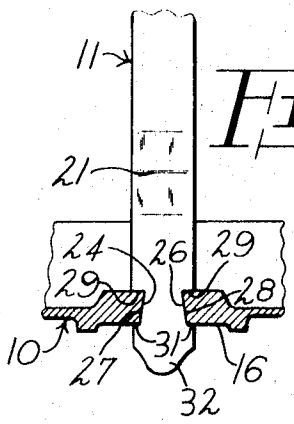


FIG 2

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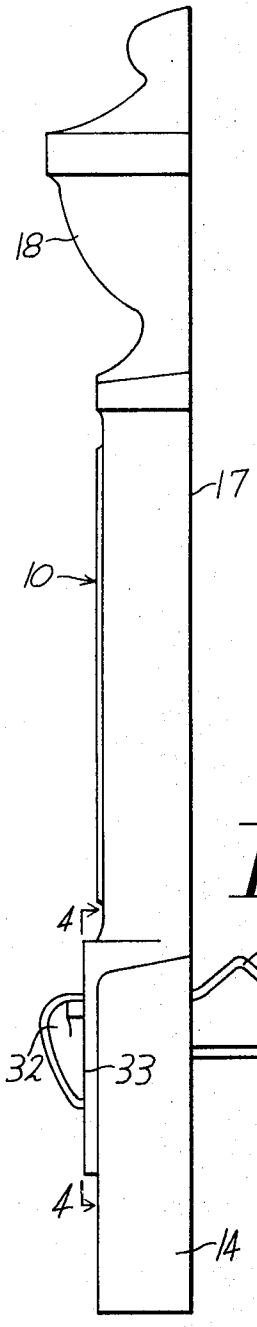


FIG 3

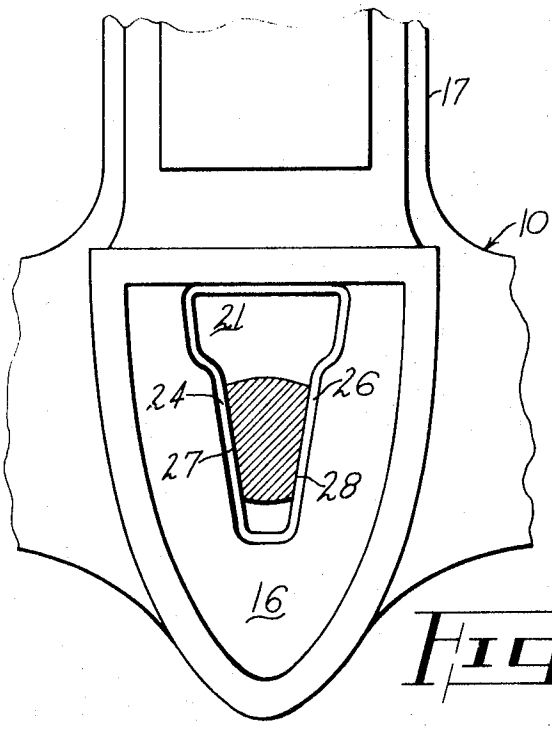


FIG 4

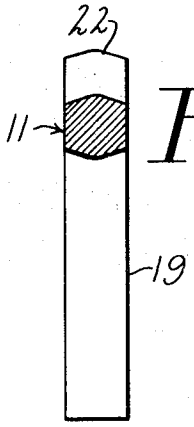


FIG 5

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ANDIRON

BACKGROUND OF THE INVENTION

This invention relates to an andiron and more particularly to improved means for connecting the upstanding front portion of an andiron to an elongated, horizontal bar extending rearwardly therefrom.

As is well known in the art to which my invention relates, various types of connecting means have been proposed for detachably connecting the upstanding front member of an andiron to its horizontal bar, such as by employing boltlike retainer elements and the like. Not only do these connecting devices add to the cost of production but also require assembly of the unit by tools and often become loose during use.

BRIEF SUMMARY OF INVENTION

In accordance with my present invention, I provide a passageway through the upstanding front member for the andiron in position to receive the forward end of the horizontal bar for the andiron. The passageway through the upstanding member has downwardly and inwardly sloping sides which engage matching surfaces adjacent the forward end of the horizontal bar which also slope downwardly and inwardly whereby the sloping surfaces on the bar engage the corresponding sloping surfaces of the passageway with a wedgelike fit. Cooperating stop surfaces are provided on the horizontal bar to limit forward and rearward movement of the bar relative to the upstanding front member. Also, the cooperating surfaces of the bar and the passageway through the upstanding member taper rearwardly and inwardly in adjacent, matching planes to thus restrain angular movement of the bar relative to the upstanding member as well as limit longitudinal movement of the bar relative to the upstanding member.

An andiron embodying features of my invention is illustrated in the accompanying drawings, forming a part of this application, in which:

FIG. 1 is a front elevational view of the andiron;

FIG. 2 is a fragmental, sectional view taken generally along the line 2—2 of FIG. 1;

FIG. 3 is a side elevational view of the andiron, partly broken away;

FIG. 4 is an enlarged, fragmental, sectional view taken generally along the line 4—4 of FIG. 3; and,

FIG. 5 is a sectional view taken along the line 5—5 of FIG. 3.

Referring now to the drawings for a better understanding of my invention, I show an andiron having an upstanding front member 10 which is detachably connected to a rearwardly extending horizontal bar 11. The upstanding front member 10 is provided with the usual depending legs 13 and 14 which are connected to a generally flat central portion 16 which in turn is connected to a vertical shaft 17 which may be ornamented as at 18.

The horizontal bar 11 is provided with a depending leg 19 at the rear end thereof which, together with the legs 13 and 14 support the assembled andiron. The upper surface of the horizontal bar 11 is preferably provided with an upstanding projection 21 adjacent the forward end thereof, as shown in FIG. 3 to limit forward movement of wood along the horizontal bar. Also, the upper end of the leg 19 is provided with an upstanding projection 22 which limits rearward movement of the wood along the horizontal bar 11.

The central portion of the upstanding member 10 is provided with a passageway 23 therethrough for receiving the forward end of the horizontal bar 11. As shown in FIG. 4, the passageway 23 through the central portion 16 of the upstanding member 10 is provided with downwardly and inwardly sloping sides 24 and 26 in position to engage corresponding surfaces 27 and 28 provided adjacent the forward end of the horizontal bar 11. That is, the surfaces 27 and 28 slope downwardly and inwardly to match the surfaces 24 and 26 whereby the forward end of the horizontal bar 11 engages the passageway 23 with a wedgelike fit.

As shown in FIG. 2, the downwardly and inwardly sloping surfaces 24 and 26 defining the sides of the passageway 23 also taper rearwardly and inwardly and engage the adjacent matching surfaces 27 and 28 adjacent the forward end of the horizontal bar 11. It will thus be seen that the surfaces 24 and 26 and their matching surfaces 27 and 28 not only extend downwardly and inwardly but also extend rearwardly and inwardly to thus restrain rotation of the horizontal bar 11 relative to the upstanding member 10. Also, by tapering the surfaces 24 and 26 and their matching surfaces 27 and 28 rearwardly and inwardly, the engagement of these matching surfaces with each other limits rearward movement of the horizontal bar 11 relative to the upstanding member 10.

As clearly shown in FIG. 2, outwardly projecting stop surfaces 29 are provided adjacent the surfaces 27 and 28 on the horizontal member 11 in position to limit forward movement of the horizontal member 11 relative to the upstanding member 10. Also, outwardly projecting stop surfaces 31 are provided at the forward end of the surfaces 27 and 28 on the horizontal bar 11 in position to limit rearward movement of the bar relative to the upstanding member 10. Preferably, the surfaces 27 and 28 are formed by cutting away the sides of the horizontal bar 11 adjacent the forward end thereof, as shown in FIG. 2.

As shown in FIGS. 1 and 3, a depending projection 32 is provided at the forward end of the horizontal bar 11. The depending projection 32 is provided with a rear surfaces 33 which extends parallel to and engages the forward side of the central portion 16 of the upstanding member 10 to further limit pivotal movement of the bar relative to the upstanding member 10.

As shown in FIGS. 1 and 4, the upper portion of the passageway 23 is enlarged for receiving the forward end of the horizontal bar 11. That is, the upper portion of the recess 23 is of a size to pass the outwardly extending projection 31 as well as the depending projection 32 through the passageway 23 whereby upon lowering the forward end of the horizontal bar 11, the depending projection 32 moves downwardly into engagement with the adjacent surface of the central portion 16.

From the foregoing description, the assembly and use of my improved andiron will be readily understood. To connect the horizontal bar 11 to the upstanding member 10, the forward portion of the horizontal bar 11 is inserted through the upper portion of the passageway 23 whereby the depending projection 32 clears the lower end of the passageway 23 and at the same time the outwardly extending projections 31 clear the sides of the passageway 23. The horizontal bar 11 is moved forward until the surfaces 27 and 28 on the horizontal bar 11 are in alignment with the surfaces 24 and 26 defining the sides of the passageway 23. The forward end of the horizontal bar 11 is then forced downwardly whereupon the depending projection 32 moves below the passageway 23 and engages the adjacent surface of the central portion 16 of upstanding member 10. Also, downward movement of the forward end of the horizontal bar 11 forces the surfaces 27 and 28 on the bar 11 into wedgelike engagement with the matching surfaces 24 and 26 at the sides of passageway 23. With the horizontal bar 11 thus connected to the upstanding member 10, the andiron is ready for use whereupon the weight of the wood placed on the horizontal bar 11 aids in forcing the surfaces 27 and 28 into firm engagement with their matching surfaces 24 and 26 at the sides of passageway 23.

From the foregoing, it will be seen that I have devised an improved andiron. By providing downwardly and inwardly extending side portions adjacent the forward end of the horizontal bar which engage corresponding sloping surfaces defining the sidewalls of the passageway 23, the weight of the horizontal bar 11 and the wood placed thereon aids in holding the andiron in assembled position. Also, by tapering the surfaces 24, 26, 27 and 28 rearwardly and inwardly as well as downwardly and inwardly, rearward movement of the horizontal bar 11 relative to the upstanding member 10 is restrained. Also, by providing the stop surfaces 29 and 31 adjacent the rear and front, respectively, of the surfaces 27 and 28, the horizontal

bar **11** is anchored firmly in place whereby there is no relative movement between the bar **11** and upstanding member **10**. Furthermore, by providing the depending member **32** having the rear surface thereof in firm engagement with the forward side of the upstanding member **10**, pivotal movement of the bar **11** relative to the upstanding member **10** is limited further.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various other changes and modifications without departing from the spirit thereof.

What I claim is:

1. In an andiron having an upstanding front member with a horizontal bar extending rearwardly therefrom, means connecting said horizontal bar to said front member comprising:

(a) there being a passageway through said upstanding front member in position to receive the forward end of said horizontal bar with each side of said passageway sloping in a downwardly and inwardly extending plane,

(b) downwardly and inwardly extending side portions adjacent the forward end of said bar corresponding to and engaging said downwardly and inwardly sloping sides of said passageway with a wedgelike fit, and

(c) outwardly and laterally projecting stop surfaces on said bar joined to the forward and rear ends of said downwardly and inwardly extending side portions on said bar engaging opposite sides of said upstanding front member limiting lateral movement of said bar relative to said upstanding front member and limiting forward and rearward movement of said side portions of said bar relative to said sloping sides of said passageway.