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SELF SUPPORTED FIREPLACE TONGS

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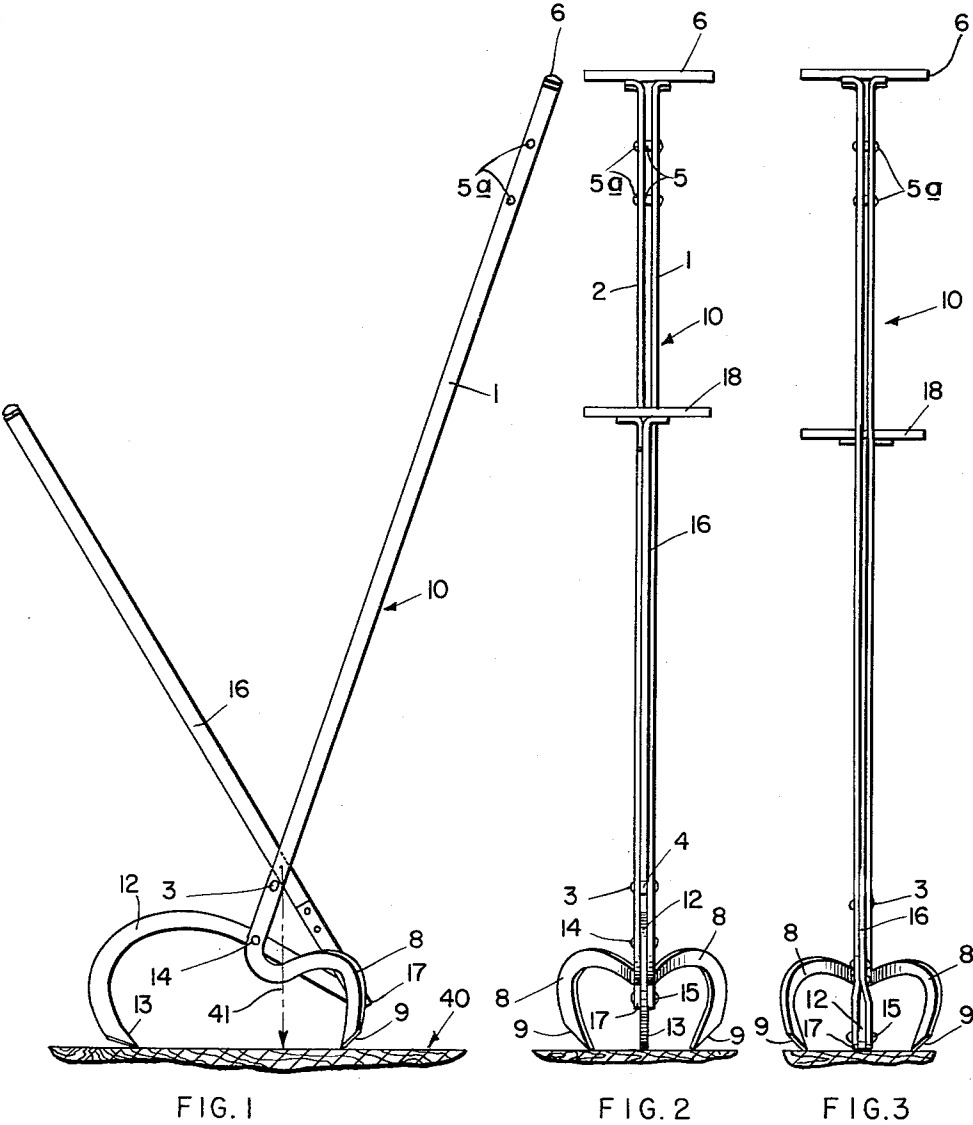


FIG. 1

FIG. 2

FIG. 3

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SELF-SUPPORTED FIREPLACE TONGS

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This invention relates to fireplace tongs of the type which is provided with three spaced pointed ends, two of which are adapted to bite into one side of a log and the other into the opposite side of the log, thus to grip the log and hold it while it is lifted and swung into place on the fire.

The form of an embodiment of such fireplace tongs which had been sold for more than twenty years before the present invention was made consisted of three main elements which are pivotally secured together, namely, an elongate handle member, an elongate actuating member and a hook member, one end of which forms one of the three above-mentioned pointed ends. The handle member is formed with a pair of claws which diverge outwardly from one side of its lower end and each of which terminates in a pointed end for gripping the side of a log. The intermediate portion of the hook member is pivotally secured to the lower end of the handle member with the pointed end of the hook member located on the opposite side of the handle member from said claws and with its other end located between the claws. The actuating member extends through an elongate slot in the handle member so that it can be operated to rotate the hook member about its pivotal connection to the handle member either to force the pointed end of the hook into the side of the log or to release it from log gripping position. This form of tongs is disclosed in United States Patent 2,096,104, dated October 19, 1937.

While such prior art construction has met with commercial acceptance, users have objected to the difficulty of storing the tongs near the fireplace without exposing any of the pointed ends at locations where they engage or are engaged by brooms, dust mops, vacuum cleaners or the like. Such tongs was sometimes stored by placing it on its side on the floor but this exposed all three pointed ends and also made it necessary for the user to bend over to grip the handle when the tongs was to be used. It was also sometimes stored by leaning the upper end of the handle member against the wall near the fireplace. This was unsatisfactory because one pointed end projected outwardly near the floor and when it was engaged by a dust mop or vacuum cleaner the tongs was knocked down and frequently scratched or marred the floor or the wall or both.

The principal object of this invention is to provide a fireplace tongs which is self supported when stood erect with a plurality of its pointed ends contacting the floor.

Other objects are to provide such a self supported fireplace tongs which is of simple design, durable in construction, has but three basic parts and which may be manufactured and assembled at a relatively low cost.

I have found that the prior art tongs disclosed in said United States patent can be made self supported by simply relocating the pivotal connection between the lower end of its handle member and its hook member. For example, to provide tongs which is self supported from the floor said pivotal connection is located about two thirds of the distance between the pointed end of the hook member and the pivotal connection of the actuating member with its other end. When said pivotal connection is so located a line which extends downwardly from the center of mass of the tongs perpendicular to the floor intersects the floor substantially at the center of the por-

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tion of the surface of the floor which is located between lines connecting the pointed ends of the claws and of said hook member with said pointed ends contacting the floor and with the mass of the tongs supported by said pointed ends. This causes the force of gravity acting upon the mass of the tongs to render them self supporting in such a position that the handle is where it can be grasped for use without bending over and also with all three pointed ends contacting the floor so they will not be caught or engaged by dust mops or other cleaning devices.

The present invention has solved the long felt want for such a fireplace tongs which can be easily and safely stored in a readily accessible place and position. It has also solved that want with a tongs which costs no more to manufacture than the prior art tongs.

Further advantages will be apparent from a consideration of the following description and the accompanying drawings, wherein:

FIGURE 1 is a side elevation of a pair of tongs constructed in accordance with the present invention, the tongs being shown self supported in erect position solely by the contact of the pointed ends of the hook member and of the claws with the floor;

FIGURE 2 is a front elevation looking from left to right at the tongs shown in FIGURE 1; and

FIGURE 3 is a front elevation looking from right to left at the tongs shown in FIGURE 1 but with the lower end of the actuating member lowered from the position shown in FIGURE 1 into contact with the floor.

The embodiment chosen for the purpose of illustration comprises an elongated handle member 10, hook member 12 and an actuating member 16.

The handle member comprises a pair of spaced metal strips 1 and 2 secured together adjacent to their lower ends by a rivet or headed pin 3 which passes through a spacer 4 and adjacent to their upper ends by spacers 5 and rivets or headed pins 5a, thus providing an elongated slot which extends throughout the major portion of the length of the handle member 10.

Beyond the uppermost spacer the ends of the bars 1 and 2 are bent outwardly and a handle 6 is secured there-to as by welding.

The lower end of each of the bars 1 and 2 is bent outwardly and downwardly thereby to provide a pair of claws 8 having pointed ends 9 adapted to bite into a log. Thus these claws 8 diverge outwardly from one side of the lower end of the handle member 10 and when the tongs is in the self supported position shown in the drawings their pointed ends 9 all contact the floor 40.

The hook member 12 is pivotally secured to the bars 1 and 2 by a rivet or headed pin 14. One end of the member 12 is pivotally secured by a rivet or headed pin 15 to the bifurcated lower end 17 of the actuating member 16. The main body portion of this actuating member passes through the said slot between the bars 1 and 2.

The upper end of the actuating member 16 is provided with a handle 18 by means of which it may be manipulated so as to open and close the pointed end 13 of the hook member 12 relative to the pointed ends 9 of the claws 8.

The lower spacer 4 provides a stop for limiting the closing movement of the hook member 12 relative to the claws 8, and the bifurcated lower end 17 of the member 16 and its handle 18 prevent the ends of the actuating member from passing through the slot between the bars 1 and 2.

In use the handle 18 may be manipulated by a simple upward pull movement to force the pointed end 13 into engagement with the side of a log the opposite side of which is gripped by the pointed ends 9. Then the log may be lifted and swung above the fire or the andirons by

lifting and swinging of the handle 6. The log then may be released upon the fire or andirons by pushing the handle 13 downwardly and this swings the pointed end 13 away from and releases the log from its gripping engagement.

As shown in FIGURES 1 and 2 the tongs is self supported. The dot dash line 41 in FIGURE 1 extends downwardly from the center of mass of the tongs perpendicular to the floor 40 and it intersects the floor substantially at the center of the triangular portion of the surface of the floor which is located between the lines connecting pointed ends 9 of the claws and the pointed end 13 of the hook member. Consequently the tongs stands erect and is self supported because of the substantially uniform distribution of the force of gravity of its mass intermediate the points of contact of said pointed ends with the floor.

For the specific lengths and shapes of the handle member 10, actuating member 16 and hook member 12 shown in the drawing I have discovered that the tongs is self supporting with the pivotal connection 14 located about two thirds of the distance between the pointed end 13 of the hook member and the pivotal connection 15 near its other end. However the proper location of the pivotal connection 14 on the hook member 12 to accomplish the desired new self supporting result will vary depending upon the shapes, lengths and weights of the members 10, 12 and 16, and to the best of my present knowledge this location must be determined by trial and error.

In FIGURE 3 the handle 18 has been pushed downwardly so that the lower end 17 of the actuating member 16 also touches the floor. This provides a four point contact with the floor and which does not detract from and under some conditions may enhance the three point contact self support of FIGURES 1 and 2.

While I have shown and described one embodiment of the invention, it is to be understood that this disclosure is for the purpose of illustration only and that various changes in shape, arrangement and proportion of parts, as well as the substitution of equivalent elements for those herein shown and described, may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. Fireplace tongs comprising an elongate handle member, an actuating member and a hook member, the handle member having a pair of claws which diverge outwardly from one side of its lower end, each claw terminating in

a pointed end adapted to bite into a log, said hook member being pivotally secured to the lower end of said handle member, the first end of said hook member extending outwardly from said one side of the lower end of said handle member and the second end of said hook member extending outwardly from the opposite side of the lower end of said handle member and having a pointed end adapted to bite into a log, said first end of said hook member being pivotally connected to the lower end of said actuating member, said actuating member extending upwardly across said handle member, said handle member having guide means that defines an area of limited movement for the actuating member along and transverse to the handle member, said actuating member lying across the handle member in all positions that it is free to occupy, the axis of the pivotal connection between the hook member and the handle member being so constructed and arranged at a locality intermediate the ends of the hook member so that, when the tongs is placed on a horizontal floor surface with the pointed ends of the hook and handle members resting on said surface and the actuating member resting on said guide means, a line which extends downwardly from the center of mass of the tongs perpendicular to the floor surface intersects the floor surface substantially at the center of the triangular portion of the floor surface which would be defined by lines connecting the pointed ends of said claws, whereby the tongs is self supported when stood erect with said pointed ends of the claws and of the hook member contacting the floor surface.

2. Fireplace tongs according to claim 1 wherein the axis of the pivotal connection between the hook member and the handle member is located at a point on the hook member which is approximately two thirds of the distance between the pointed end of the hook member and the pivotal connection of the actuating member to its other end.

3. Fireplace tongs according to claim 1 wherein the axis of the pivotal connection between the hook member and the handle member is located on the hook member at a point which is less than one half the distance between the pivotal connection of the actuating member to the hook member and the pointed end of the hook member.

References Cited in the file of this patent

UNITED STATES PATENTS

2,096,104 Green ----- Oct. 19, 1937