July 7, 1964 J. F. WHITE 3,139,882

FIREPLACE CRANE

Filed Aug. 17, 1962

Fig. 1

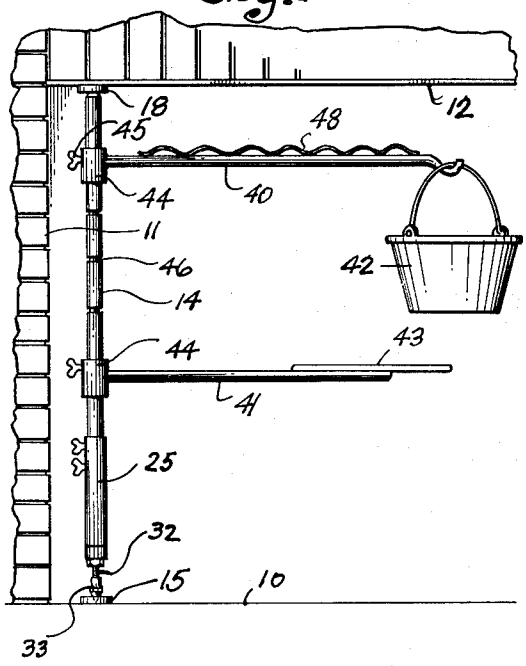


Fig. 3

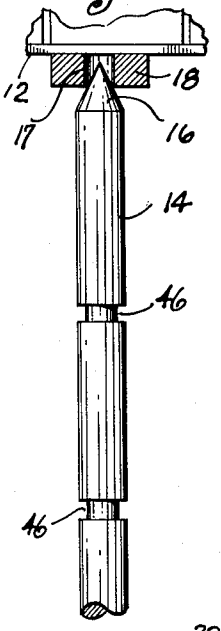


Fig. 2

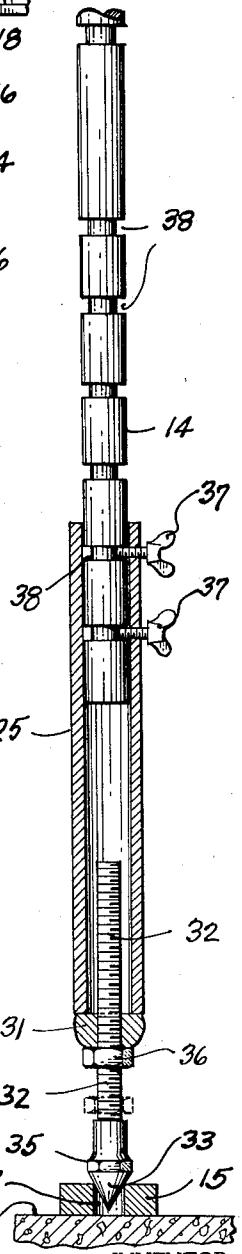


Fig. 4

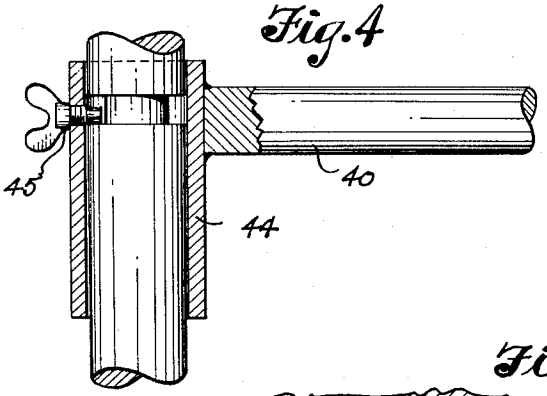
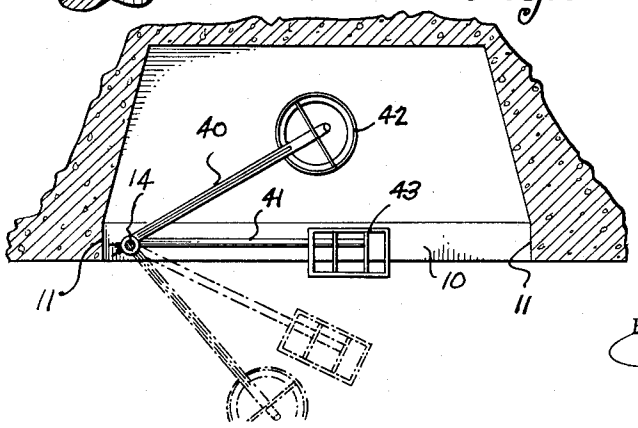


Fig. 5



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FIREPLACE CRANE

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This invention relates to accessories for open fireplaces, and more particularly to an improved form of what I have herein designated to be a "fireplace crane"; which crane comprises a standard assembly that is adapted to be removably secured vertically in place by and between the hearth surface and top lintel of the fireplace opening, and from which standard assembly one or more article supporting arms are extended for radial swinging adjustment for the movement of whatever articles are supported thereby, into and from the fireplace chamber.

The object of the present invention is to provide a fireplace crane of the above stated character that is featured by a standard assembly that can be readily applied and secured for use within the front wall opening of the typical residential fireplace; that can be easily and readily removed if and when such as desired; that comprises a standard assembly that can be adjusted to fit within fireplace openings of various heights and by which radial arms, as used for the support of pots, kettles, grills or other utensils, may be vertically adjusted to and selectively secured at different positions of adjustment for swinging the carried articles into and from the fireplace.

It is the primary object of this invention to provide a fireplace crane of the above stated character that is featured by a standard assembly comprised by a main standard and an adjustable extension therefor with novel and improved means for the adjustment and securement of the assembly in functional position and which adjusting means is such that the holding pressure as applied thereby for effecting the securement will not mar or be otherwise damaging to the hearth or lintel.

Furthermore, it is an object of this invention to provide pressure sustaining pads for resting the ends of the standard assembly, which pads will automatically adjust themselves to the level, incline, or to other irregularities of the surfaces against which they are seated, to sustain the pressure without detriment thereto and without requiring any additional supporting means.

It is also an object of this invention to equip the standard assembly between its ends, for the swinging support thereon of one or more radial arms, selectively at various elevations, according to desires or special requirements.

Further objects and advantages of the present invention reside in the details of construction of its various parts; in their combination and relationship and in the mode of use of the crane, as will hereinafter be fully described.

In accomplishing the above mentioned and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein:

FIG. 1 is a front elevational view of a portion of a typical open fireplace, showing the crane of the present invention as functionally applied, for use, within the front wall opening.

FIG. 2 is an enlarged view of the lower end portion of the standard assembly as engaged with the hearth of the fireplace opening; the extension member being shown in longitudinal section for explanatory purposes.

FIG. 3 is an enlarged view of the upper end portion of the standard as seated in its pad against the top lintel.

FIG. 4 is a view, in vertical section, of the mounting hub portion of the one of the radial arms as applied to the standard.

FIG. 5 is a horizontal section on line 5—5 in FIG. 1.

Referring more in detail to the drawings:

In FIG. 1, I have shown the fireplace crane of the present invention as applied for use in the front wall opening of a typical residential fireplace; the opening being defined by the hearth surface 10, opposite sidewalls 11—11, and the horizontal arch or lintel portion 12. Preferably, the crane is applied within the fireplace opening, as in FIG. 1, adjacent the front and usually closely adjacent one of its sidewalls 11, as illustrated.

The crane comprises, as a principal part of its structure, the standard assembly which is made up of a vertical rod 14 of any suitable metal such as stainless steel, aluminum or iron, round in cross-section and of a length lesser than the height of the fireplace opening as measured between hearth and lintel. This rod is equipped with a length adjusting sleeve at its lower end and at both ends with special seating and securing means, as presently explained.

At its lower end the assembly rests upon a pressure sustaining plate or pad 15 that is disposed flatly against the top surface of the hearth, as shown in FIG. 1. This pad preferably is of disk-like form, but may be of any other shape that permits the standard to be positioned on and supported thereby close to the wall 11, as indicated in FIG. 1.

At its upper end, the rod 14 terminates in a conical point 16, as well shown in FIG. 3, and this pointed portion is seated in a hole 17 that is bored through a metal disk-like pad 18 that is disposed flatly against the bottom surface of the lintel as seen in FIG. 1.

The pads 15 and 18 preferably are alike, in that each comprises a metal disk, bored axially to provide a hole therethrough wherein the corresponding conical end portions of the assembly are received, for pivotal support. The holes 17 as bored in the pads are of lesser diameter than the base portions of the conical points applied thereto and the vertical thickness of the pads is such that the points of the conical portions as seated therein cannot engage against the pad seating surfaces of hearth or lintel, as has been clearly shown in FIGS. 2 and 3.

In the event that either pad 15 or 18 is rested flatly against a tilted or an inclined surface, it automatically adjusts itself in such way as not to disrupt the vertical positioning of the standard. The greater bearing areas of the pads protect the supporting or seating surfaces which they engage from the pointed ends and maintain the standard against slippage at its ends.

In order that the standard assembly may be adjusted in length to serve fireplace openings of different heights, I have applied a tubular extension member 25 to the rod 14, at its lower end, as best shown in FIGS. 1, 2 and 3, thus to adapt the standard assembly for use in fireplace openings of different heights. The rod 14 as presently provided is approximately 20" long and is telescopically contained at its lower end within the extension member which is preferably about 8" long. This tubular sleeve is closed at its lower end by a secured nut 31 through which a vertical stem 32 is threaded for extension or retraction into and from the sleeve. At its lower end this stem, 32 which is about ¼" in diameter, and 3" long, terminates in a downwardly tapered conical head 33 of ¾" diameter adapted to be seated in the hole 17 bored in the pad 15 as in FIG. 2. The larger end of the cone is formed with a wrench head 35 for use in effecting stem adjustment and it is shown also that a lock nut 36 is threaded onto the stem for tightening adjustment against the nut 31 for securing any length adjustment of the assembly that has been made.

The upper end of the extension sleeve 25 may be secured on the lower end portion of the standard selectively at different positions of extension by one or more set screws 37 that are threaded through the upper end portion of the

sleeve to seat at their inner ends in channels **38** that are formed in and which encircle the standard at spaced intervals therealong, as shown in FIG. 2. Preferably, I employ two set screws **37** at a vertical spacing of 1¼"; the channels **38** being similarly spaced along the lower end portion of the rod **14**. For securement of the sleeve, the screws **37** are adjusted tightly against the channel bottoms as in FIG. 2.

Assembled with the rod **14** are radial arms **40** and **41** designed for swinging support of utensils used for cooking. For example, I show a pot or kettle **42** supported by the arm **40** at its outer end and a rod **41** is equipped at its outer end with a grill **43** at the outer end of arm **41**. Each arm is equipped at its inner end with a sleeve like hub **44** that receives the rod **14** slidably therethrough and each sleeve has a set screw **45** threaded therethrough to be received selectively in one of a plurality of encircling grooves **46** formed at spaced intervals in and along the upper end portion of rod **14**; these set screws are so formed at their inner ends as to prevent their being tightened against the bottoms of the grooves, thus to leave the arms **40** and **41** freely swingable from and into the fireplace while held at the selected elevation.

The standard assembly may be adjusted to various lengths as may be desired or required and it is anticipated that one or more arms, as at **40** and **41** in FIG. 1, may be swingingly applied to the standard, as in FIG. 1, for movement into and from the fireplace as in FIG. 5.

It has also been shown in FIG. 1 that the radial arm **40** has a metal bar or strip **48** of vertical undulating formation extended along and fixed by welding to its top surface thus to provide a succession of seats for retaining the kettle or other suspended utensil at any position along its length.

The grating or grill **43** as fixed to the outer end of arm **41** may serve as a support for a skillet, coffee pot or the like, and may serve also as a holder for a steak or other meat for grilling or frying.

I have observed that many devices of this general character, as disclosed in the prior art, are objectionable primarily because of the inconvenience of their adjustment, attachment or securement in place of use. Also, by reason of the fact that the holding or clamping pressure required to secure them in place invariably is not effective, or if effective, is damaging to the hearth and lintel surfaces and it has been the purpose in the present invention to overcome these noted objectionable features, in a simple, readily adjustable and easily installed assembly of parts.

In applying the crane to a fireplace, the extension sleeve is first telescopically applied to the lower end of rod **14** and secured in the desired adjustment. Then the upper end point of the rod is seated in the hole **17** of pad **18** and the pad engaged with the lintel as shown. The lower pad **15** is placed in position and the stem **32** is adjusted downwardly to seat in the hole **17** of the pad. It may be

adjusted as required to exert the necessary pressure to hold the standard in position.

The two radial arms, which are applied to rod **14** before its placement, are then placed at the desired elevation and secured by their set screws **45**.

What I claim to be new is:

1. A fireplace crane comprising a vertical standard of uniform circular cross-sections formed with encircling grooves at spaced intervals therealong, a tubular extension with one end portion thereof telescopically fitted on the lower end portion of said standard, a closing nut fixed over the other end portion of said tubular extension, a rod threaded adjustably through said nut coaxially of the tubular extension, and formed at its lower end with a wrench including a head that terminates in a conically tapered point, a supporting plate for said standard, formed with a vertical bore seating the tapered point of said wrench head therein, a rod adjustment securing lock nut threaded onto said rod for tightening against said closing nut; at least one set screw threaded through the upper end portion of said tubular extension adapted to be tightened against said standard to secure the telescopic adjustment of the tubular extension, a radial arm equipped with a mounting hub at its inner end that is fitted on said standard for longitudinal adjustment therealong and for its axial turning adjustment, a set screw threaded through a wall of said hub and selectively applicable to any one of said annular grooves to establish the elevation of use of said radial arm on said standard and adapted to be tightened further against said groove to hold the arm against swinging on said standard.

2. A fireplace crane according to claim 1 wherein said standard terminates at its upper end with a conical point, and a bearing plate formed with a vertical bore pivotally seating said point thereon and wherein the adjustment of either conical point from its seat in the corresponding plate is effected by adjustment of said threaded rod in said closing nut.

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