

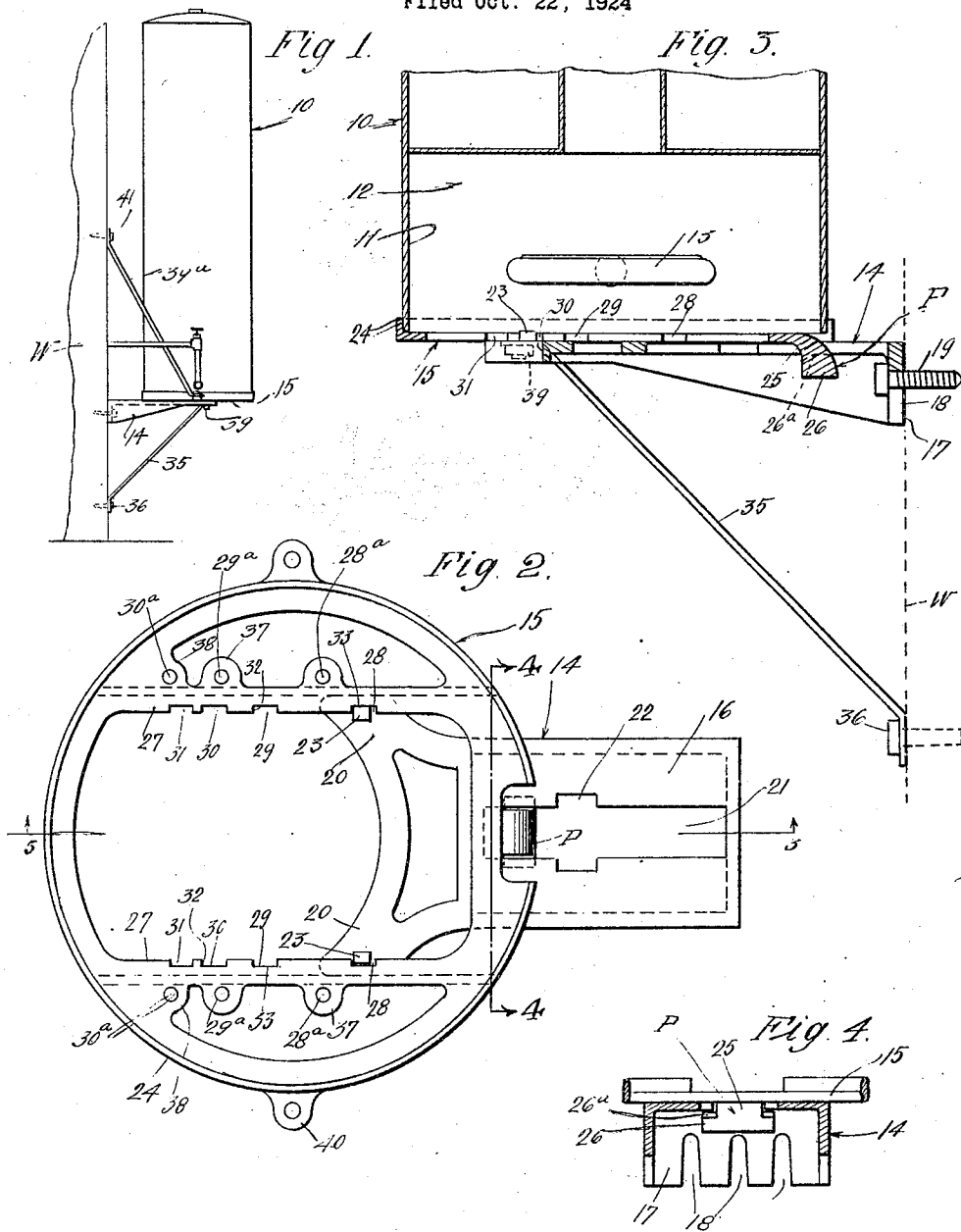
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HEATER SUPPORTING BRACKET

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HEATER-SUPPORTING BRACKET.

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This invention has to do with adjustable supporting brackets and is particularly applicable to brackets for supporting water heaters, domestic range boilers and the like, though not necessarily so limited.

In many situations it is desirable that water heaters be supported on wall carried brackets rather than upon legs or stands. This is especially true where short heaters are to be supported at such a height from the floor (to bring their burners to an easily accessible position and to leave clear floor space below) that stand legs would be of a length to appear unsightly and, unless of prohibitive weight, would not provide a support of sufficient stability.

Even when full length heaters are installed, it is sometimes preferable that they be bracket supported rather than leg supported, not only by reason of the fact that bracket supports reduce "dead" floor space, but also make for sanitation, since there are no floor contacting portions to form pockets or corners in which dirt may accumulate.

However, the different structural characteristics of rooms or compartments in which heaters are installed, and the different arrangements of heater pipes (water inlet, hot water draw, and fuel) found in different homes where installations are to be made, necessitate that heaters be set at different distances from supporting walls. Furthermore, different local ordinances call for different spacings. Therefore, it has heretofore been necessary to provide brackets of different lengths. This is, of course, undesirable both by reason of the necessity of stocking a large number of assorted brackets and by reason of the fact that the installer must either carry an assortment of brackets to the job and then choose the proper one or else make a preliminary investigation of conditions and then make the proper choice at the factory or store.

I overcome these undesirable conditions by means of a horizontally adjustable bracket which may be used irrespective of the distance (within reasonable limits) a given heater is to be from the supporting wall.

Generally described, my bracket comprises a supporting member adapted to be an-

chored to a wall, and a heater receiving plate member which is horizontally slidable over the supporting member. Then there are provided interlocking elements on the two members whereby they may be selectively held in any one of a plurality of adjusted positions without the use of screws or bolts. The plate member is also provided with a series of holes for receiving brace bolts, the holes being so spaced with relation to the interlocking elements that braces of uniform length may be installed between plate member and wall in any of the plate's adjusted positions.

Other novel features and objects of the invention will be set forth in the following detailed description, reference being made to the accompanying drawings, in which:

Fig. 1 is a side elevation of the bracket showing a heater supported thereby;

Fig. 2 is a plan view of the bracket showing it in full extended position;

Fig. 3 is a section on line 3—3 of Fig. 2 but showing the bracket partially contracted; and

Fig. 4 is a section on line 4—4 of Fig. 2.

In the drawings, numeral 10 designates generally a heater, the lower part of cylindrical shell 11 defining chamber 12 for burner 13.

My improved bracket embodies a supporting or shelf member 14, and a heater receiving member or plate 15. Member 14 includes a bed plate 16 having a downturned end flange 17 adapted to engage wall W, said flange preferably being notched at 18 to receive anchoring bolts or lag screws 19, the open ended notches making it possible to slide the supporting member vertically into or out of place by merely loosening the lags.

Bed 16 is provided with wings 20 and slot 21, the latter extending, in the direction of its length, longitudinally of the bed and having an enlarged portion or entrance mouth 22. Wings 20 carry upstanding lugs or projections 23.

Plate 15 is preferably in the form of a flat ring having an upstanding, peripheral flange 24 which is adapted to engage the lower end of shell 11 in a manner to retain the heater in position on the plate.

Depending from ring 15 is projection P, the neck 25 thereof being of a width to pass through slot 21 with clearance, and the head 26 thereof being so spaced below the under face of the plate that it engages or is just clear of the under face of bed 16 when the supporting member and ring 15 are in assembly. Slot enlargement 22 is of sufficient extent to allow the passage of head 26 there-through, and the upper faces 26^a of head 26 may be slightly arcuate in order to facilitate the assembly and disassembly of members 14 and 15 by allowing ring 15 to be slightly canted during the horizontal movement of the plate over the supporting member. This feature will be enlarged upon at a later point in this description.

Ring 15 has cross bars 27 which extend substantially parallel to the longitudinal axis of slot 21 when projection P is within said slot, and the bars have any desired number of horizontally spaced notches such as 28, 29, 30 and 31 which provide vertical shoulders 32 selectively adapted to engage lugs 23 for holding the ring against movement in the direction of the longitudinal axis of bed 16. The notches also provide vertical shoulders 33 which are adapted to coact with lugs 23 to aid projection neck 25 (in its coaction with the defining walls of slot 21) in holding ring 15 against shifting laterally over bed 16.

The notches may be equally or unequally spaced apart, but preferably the innermost notches 28 are so located that when they engage lugs 23 ring 15 is spaced but a very slight distance from wall W.

The bar notches are preferably so located that none of them register with lugs 23 when head 26 is in register with entrance mouth 22, so said head will always underlie bed 16 when the ring is in any of its adjusted positions.

By reason of the arcuate upper faces 26^a of head 26, ring 15 may be canted to clear lugs 23 when it is desired to shift the ring over the supporting member from one position to another.

It will be noted that when ring 15 is extended to such a position that the weight imposed thereon would tend to rotate it about a horizontal axis, head 26 engages the supporting member to prevent such rotation.

In most installations it is desirable to provide diagonal braces 35 which are anchored to wall W at 36 and extend upwardly toward and are attached to ring 15.

In order that braces 35 may be of standard length and fastened to wall W at a given vertical distance below the bracket irrespective of the adjusted position of ring 15, I provide a series of holes 28^a, 29^a and 30^a, there preferably being a pair of oppositely disposed holes for each pair of oppo-

sitely disposed notches, and each set of companion holes and notches being similarly located. Thus, in the drawings, the series of holes are parallel to the series of notches, and holes 28^a are perpendicularly spaced from notches 28 a distance equal to the perpendicular distance between holes 29^a and notches 29, and between holes 30^a and notches 30. Holes 28^a and 29^a are located in ears 37 which extend from bars 27, while holes 30^a are located in webs 38. Detachable bolts 39 serve to connect plate 15 and braces 35. Since the companion holes of any pair of notches which may be in register with lugs 23 are at a given horizontal distance from wall W irrespective of which position of adjustment ring 15 occupies, it will be seen that standard length braces 35 may be attached to plate 15 in several of its adjusted positions without shifting bolts 36.

In the drawings, the outermost notches 31 are so close to the annular portion of plate 15 that were companion holes to be provided for attachment of standard braces when the bracket is fully contracted, bolts 39 might interfere with shell 11 or said companion holes might weaken the plate structure. Therefore, when the bracket is fully contracted, shorter braces may be used, or standard braces may be attached to the outermost ears 37 after bolts 36 have been lowered. Or upwardly extending braces 39^a may be secured to external ears 40 on ring 15 and anchored to wall W at 41. Of course, braces 39^a may be employed in lieu of or in addition to braces 35 irrespective of the adjusted position of the bracket, but these upwardly extending braces are ordinarily used in lieu of braces 35 only when the heater is so close to the floor that lower braces cannot be employed or when the situation demands that the space below the heater be entirely clear.

It will be understood various changes in design, structure and arrangement may be made without departing from the spirit and scope of the invention, and therefore I do not wish to be limited to the appended claims except for such limitations as a fair interpretation thereof may import.

Having described a preferred form of my invention, I claim:

1. An adjustable supporting bracket embodying a support member adapted to be anchored to a wall, a slidable member on the support member and adapted to receive an article to be supported, a plurality of vertically extending shoulders on one of the members, vertically extending lugs on the other member adapted to be brought into selective engagement with said shoulders to hold said members adjustably against relative horizontal movement, and a headed projection on one of the members and adapted to extend and slide through an

elongated slot in the other member, said head being adapted to engage the other member in a manner to hold said members against relative vertical movement.

2. An adjustable supporting bracket embodying a support member adapted to be anchored to a wall, a slidable member on the support member and adapted to receive an article to be supported, a plurality of vertically extending shoulders on one of the members, vertically extending lugs on the other member adapted to be brought into selective engagement with said shoulders to hold said members adjustably against relative horizontal movement, and a projection on one of the members and adapted to extend and slide through an elongated slot in the other member, said projection having a head with arcuate faces adapted to engage the other member in a manner to hold said members against relative vertical movement.

3. An adjustable supporting bracket embodying a support member adapted to be anchored to a wall, a slidable member on the support member and adapted to receive an article to be supported, a plurality of vertically extending shoulders on one of the members, vertically extending lugs on the other member adapted to be brought into selective engagement with said shoulders to hold said members adjustably against relative horizontal movement, and a headed projection on one of the members and adapted to extend and slide through an elongated slot in the other member, said slot having an entrance mouth to allow the passage of the projection into and out of the slot when the members are in predetermined relative position, and said head being adapted to engage said other member in a manner to hold said members against relative vertical movement when the head is moved horizontally out of register with the mouth.

4. An adjustable supporting bracket embodying a support member adapted to be anchored to a wall, a slidable member on the support member and adapted to receive an article to be supported, one of said members having an elongated slot extending longitudinally thereof, a projection on the other member adapted to extend and slide horizontally through the slot, a head on the projection adapted to engage said one member for holding the two members against relative vertical movement, said slot having an enlarged portion to admit the headed projection to the slot when said members are in predetermined relative horizontal position, vertically extending lugs on one of the members, a series of horizontally spaced vertical shoulders on the other member, the series being substantially parallel with the longitudinal axis of the slot, said vertically extending shoulders being adapted to be

brought into selective engagement with the lugs to retain the members in adjusted position.

5. An adjustable supporting bracket embodying a support member adapted to be anchored to a wall, a slidable member on the support member and adapted to receive an article to be supported, one of said members having an elongated slot extending longitudinally thereof, a projection on the other member adapted to extend and slide horizontally through the slot, a head on the projection adapted to engage said one member for holding the two members against relative vertical movement, said slot having an enlarged portion to admit the headed projection to the slot when said members are in predetermined relative horizontal position, vertically extending lugs on one of the members, a series of horizontally spaced vertical shoulders on the other member, the series being substantially parallel with the longitudinal axis of the slot, said vertically extending shoulders being adapted to be brought into selective engagement with the lugs to retain the members in adjusted position, said shoulders, lugs and projection being so relatively arranged that when the lugs and shoulders are in engagement said projection is out of register with the enlarged portion of the slot.

6. An adjustable supporting bracket embodying a supporting member having an elongated slot extending longitudinally thereof, said member being adapted to be anchored to a wall, a ring plate for receiving the article to be supported, cross bars on the ring and extending in substantially parallel relation with the slot when the supporting member and ring are assembled, said ring with its cross bars being adapted to rest on said supporting member, vertically extending lugs on the supporting member, a series of vertically extending shoulders on the bars and adapted to engage said lugs selectively for holding the plate against horizontal displacement from the supporting member, and a depending headed projection on the ring plate and adapted to extend through said slot with its head in engagement with the underside of said supporting member, said slot having an enlarged portion to admit said headed projection to the slot.

7. An adjustable supporting bracket embodying a support member adapted to be anchored to a wall, a slidable member on the support member and adapted to receive the article to be supported, braces bolted to and extending diagonally from the slidable member to the wall, and means for releasably holding the slidable member in a plurality of adjusted positions on the support member, there being a plurality of brace attachment bolt holes in the slidable member

so located that one of them is spaced a predetermined horizontal distance from the anchoring wall when the slidable member is in any one of several of its adjusted positions.

8. An adjustable supporting bracket embodying a support member adapted to be anchored to a wall, a slidable member on the support member and adapted to receive an article to be supported, a plurality of horizontally alined and vertically extending shoulders on one of the members, and ver-

tically extending lugs on the other member adapted to be brought into selective engagement with said shoulders to hold said member adjustably against relative horizontal movement, said slidable member having a plurality of brace attachment holes, the holes and said shoulders being similarly spaced apart.

In witness that I claim the foregoing I have hereunto subscribed my name this 29th day of September, 1924.

FRANK E. WOOD.