

C. L. HOLDEN.
 RANGE BOILER STAND.
 APPLICATION FILED MAR. 26, 1909.

1,036,240.

Patented Aug. 20, 1912.

Fig. 1.

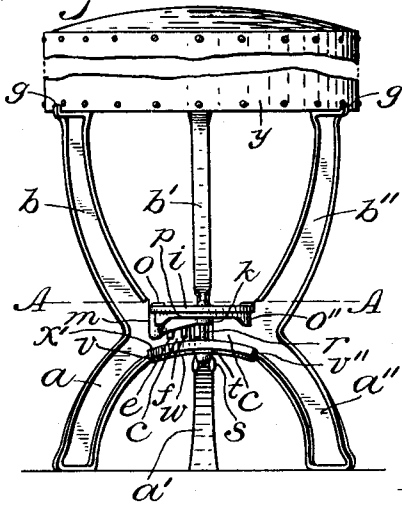


Fig. 2.

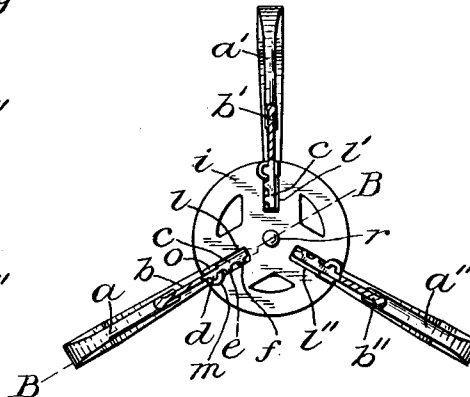


Fig. 3.

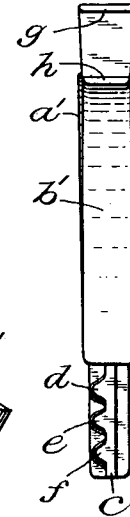


Fig. 4.

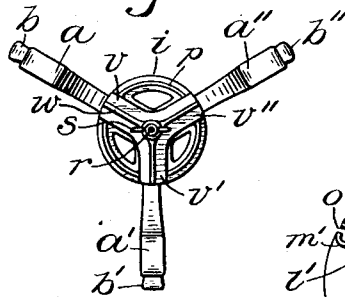


Fig. 7.

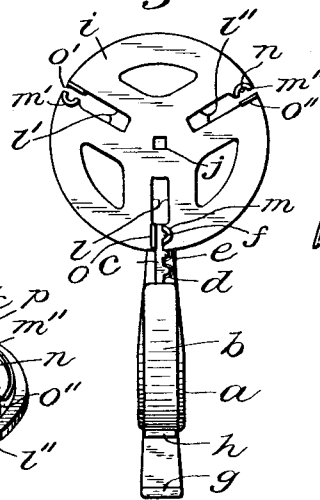


Fig. 6.

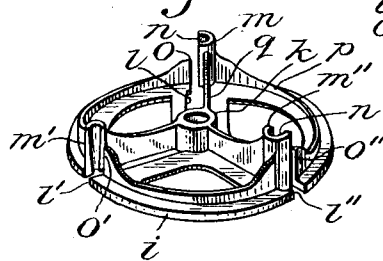


Fig. 5.

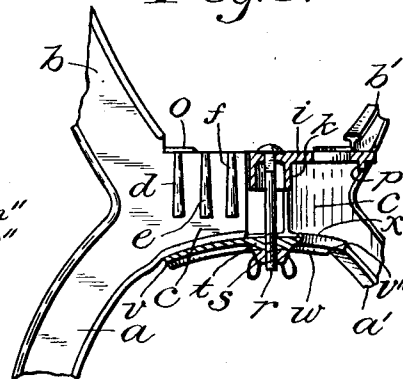
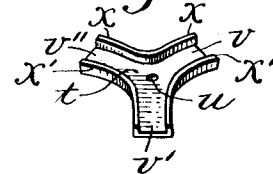


Fig. 8.



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RANGE-BOILER STAND.

1,036,240.

Specification of Letters Patent.

Patented Aug. 20, 1912.

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To all whom it may concern:

Be it known that I, CHARLES L. HOLDEN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Range-Boiler Stands; and I do declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to stands that are adapted to be adjusted so as to support range-boilers or similar vessels on end and which may be of various diameters; the invention having reference more particularly to stands that are adapted to be adjusted to suit either one of three sizes of range-boilers usually manufactured; and an object of the invention is to improve the construction in that class of adjustable stands that are adapted to be spread or contracted equally at their tops and bottoms, particularly of the knock-down variety that are composed of relatively few parts and are adapted to be quickly set up and adjusted to suit the particular size of boiler or tank that the stands support, the end in view being to provide means whereby the principal parts of the stand may be securely fastened together after having been adjusted and connected so as to be of the required size.

With the above-mentioned and other objects in view the invention consists in an improved stand having a plurality of combined leg-and-arm members provided with locking devices, and a combined connector and clamp for keying and clamping the leg-and-arm members adjustably and detachably together; and the invention consists further specifically in the novel parts, and combinations and arrangements of parts, as hereinafter particularly described and claimed.

Referring to the drawings, Figure 1 is an elevation of the improved stand with a range-boiler thereon partly broken away; Fig. 2, a horizontal sectional view on the line A A in Fig. 1; Fig. 3, a top plan of one of the combined leg-and-arm members; Fig. 4, an inverted plan view of the stand; Fig. 5, a fragmentary vertical sectional view approximately on the line B B in Fig. 2; Fig. 6, an inverted perspective view of the main

part of the combined connector and clamp; Fig. 7, a top plan of the main part of the connector and clamp with which one of the leg-and-arm members is connected; and Fig. 8, a perspective view of the clamp-plate.

Similar reference characters in the different figures of the drawings indicate like parts or features of construction.

As preferably constructed the improved stand comprises three supporting legs *a*, *a'*, *a''*, and three arms *b*, *b'*, *b''*, for supporting the boiler or similar vessel, a leg and an arm being cast together as one piece and having an extension *c* thereon at the junction of the leg and the arm, all comprising one combined leg-and-arm member, the members being of identical construction. On one side of each extension a suitable number of tapering keys, as *d*, *e*, *f*, are cast so as to project laterally, the keys being vertical in use and are less in diameter at their upper ends than at their lower ends. The keys are spaced apart to suit the requirements for the different usual sizes of boilers. The top of the extensions are straight and are at right angles to the keys so that when in use the tops of the extensions are in a horizontal plane. The top of each arm has a pair of upwardly extending lips *g* and *h* to guide the boiler.

The combined connector and clamp comprises an apertured plate *i* which preferably has a central squared bolt hole *j* therein, and the plate has on the under side thereof an annular boss *k* extending about the bolt hole. In the plate are three slots *l*, *l'*, *l''*, extending inwardly from the periphery of the plate toward the center thereof, and in the slots near the periphery of the plate are projections *m*, *m'*, *m''*, each projection having a tapering keyway *n* therein which is greater in diameter at its lower end than at its upper end, the projections extending a considerable distance beyond the bottom of the plate and also extending slightly above the plane of the top of the plate. In the slots are also projections *o*, *o'*, *o''*, which are arranged oppositely to the other projections at the opposite sides of the slots and extending both downward and upward beyond the under and upper sides of the plate, the projections that extend upward from the plate being adapted to withstand gentle hammering when connecting the parts of the stand together. The plate has strengthening ribs

p on the under side thereof that extend near the periphery of the plate between the projections, and also ribs *q* are formed on the under side of the plate that extend along one side of each slot from the boss *k* to the projection that has the keyway therein. A carriage bolt *r* is preferably inserted in the bolt hole *j* and has a thumb-nut *s* thereon. A clamp plate *t* is cast with a central hole *u* therein to receive the bolt, and the plate has three radially extending arms *v*, *v'*, *v''*, adapted to engage the under sides of the extensions *e* of the combined leg-and-arm members, each arm and plate having a downwardly extending strengthening rib *w* on the under side thereof and two opposing flanges *x*, *x'* on the top thereof, the flanges engaging opposite sides of the extensions *e* so as to assist in holding the leg-and-arm members rigidly in case the stand is shifted when it is supporting the boiler. The bolt *r* extends through the hole *u* and the nut *s* engages the under side of the plate *t*.

When the boiler *y* is of the smaller size in diameter the keys *d* are placed in the keyways *n* with the extensions *e* in the slots that are formed in the plate *i*, and in order to adjust the stand to suit the larger sizes of boiler the leg-and-arm members are moved outward or apart so that the keys *e* or *f* may be placed in the keyways. The plate *i* is preferably composed of malleable iron, and inasmuch as the openings between the projections in the slots and also the thickness of the extensions *e* may vary slightly, it will be apparent that the plate may yield slightly while being driven down into engagement with the extensions *e*, the object being to bring the top of the plate flush with the tops of the extensions which will indicate that the leg-and-arm members will stand at the correct predetermined angles. It will be observed that when the arms are spread apart for the larger boiler the legs also will be spread apart so as to firmly support the boiler, and in order to enable the stand to be shifted about when setting up the boiler so as to bring it in proper position for connecting pipes thereto, the clamp plate *t* being tightened will prevent the leg-and-arm members from becoming loose in

the connector plate, the plate *t* also reinforcing the legs.

The plate *i* which serves with the keys on the extensions *e* to indicate the degree of adjustment of the leg-and-arm members required, and positively and accurately keys the members together, may be formed otherwise than as shown in detail, variations in structure being contemplated within the scope of the claims, without sacrificing the advantages of maintaining uniform degree of angularity of the members in the different adjustments thereof.

Having thus described the invention, what is claimed as new, is—

1. In a range-boiler stand, the combination with a plurality of supporting members having extensions thereon provided with tapering side portions, of the herein-described connector consisting of a plate having on one side thereof a plurality of pairs of opposing projections engaging said tapering side portions, the opposite side of said plate having projections thereon that are each substantially an extension of one of each pair of opposing projections, a bolt engaging said plate, and a plate connected to said bolt and engaging said extensions opposite the larger ends of said tapering portions.

2. In a range-boiler stand, the combination of a plurality of supporting members having wedging devices, a plate having wedging devices coöperating with the wedging devices of the supporting members, said wedging devices permitting said members to be adjustably moved bodily each toward or from the middle of said plate and holding said members when adjusted in substantially parallel position relatively each to the other, and means coöperating with said plate and said members acting to force relative sliding movement of said wedging devices for rigidly and securely holding said members in adjusted position.

In testimony whereof, I affix my signature in presence of two witnesses.

CHARLES L. HOLDEN.

Witnesses:

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