L. STOCKSTROM. HYDROCARBON BURNER. APPLICATION FILED JUNE 25, 1903.

UNITED STATES PATENT OFFICE.

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HYDROCARBON-BURNER.

SPECIFICATION forming part of Letters Patent No. 747,799, dated December 22, 1903.

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To all whom it may concern:

Be it known that I, LOUIS STOCKSTROM, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Hydrocarbon-Burners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

o My invention relates to that class of hydrocarbon-burners in which there is a vaporizing-bowl surmounted by a pair of perforated tubes inclosed by an imperforate drum, which is open at top and bottom for the passage of air.

The object of my invention is to simplify the construction and arrangement of this kind of a burner by having as few parts as possible, which are readily fitted over the vaporizing-bowl.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of the outer drum of my improved burner. Fig. II is a vertical section of the burner, parts of the inner and outer perforated tubes being shown in elevation. Fig. III is a transverse section taken on line III III, Fig. II. Fig. IV is a perspective view showing one of the ribs carried by the outer drum and part of the supporting band or ring.

Referring to the drawings, 1 represents the vaporizing-bowl of the burner, which has an inner shoulder 2 and an outer shoulder 3. The general form of this bowl is well known to those versed in the art and needs no specific description. Resting upon the shoulder 3 is an outer perforated tube 4, and resting upon the shoulder 2 (with an interposed ring 5, if desired) is an inner perforated tube 6. As shown in the drawings, the inner tube is closed at top, while the outer tube is open. The two tubes are connected together by means of one or more cross rods or wires 7, the ends of which project beyond the tube 4.

8 represents a drum surrounding the outer tube 4 and which is open at top and bottom

for the passage of air; but the top and bottom are somewhat contracted by bending in 50 the material of the drum, as shown at 9. Within the drum is a number of ribs or wings 10, the inner edges of which (when the drum is in place) extend nearly to the tube 4, so that the drum is held in a concentric position 55 around the tube. The ribs or wings 10 are secured to the drum 8, preferably by means of ears 11 formed thereon and which fit in slots formed in the drum and the outer ends of which are bent up against the outer sur- 60 face of the drum and ears 12, that are bent over and fit against the inner face of the drum. The inner lower corners of the ribs 10 are tapered off to clear the upper edge of the vaporizing-bowl, and the drum is supported and 65 held from vertical movement by means of a ring or band 13 fitting in notches formed in the inner faces of the ribs 10, which ring when the drum is in position rests upon the extreme ends of the cross-rod 7, as shown in 70 Fig. II.

In adjusting the perforated tubes and outer cylinder on the vaporizing-bowl the tubes are placed in position within the cylinder, and then the parts are placed on the bowl, and as 75 this is done the lower tapered ends of the wings 10 come against the vaporizing-bowl and center the parts, so that the inner and outer perforated tubes will come to a rest upon their respective shoulders.

The burner is cheaply constructed and is readily put together.

I claim as my invention—

1. In a hydrocarbon-burner, the combination of a vaporizing-bowl having inner and 85 outer shoulders to receive inner and outer perforated tubes, an inclosing drum, longitudinally-extending wings secured to said drum, a band carried by said wings, and a pin carried by said perforated tubes, upon the ends 90 of which pin said band is adapted to rest.

2. In a hydrocarbon-burner, the combination of a vaporizing-bowl, inner and outer perforated tubes supported by the bowl, an inclosing drum, wings secured to the drum, a 95 band carried by the wings, and a removable

pin passing through said perforated tubes and on the projecting ends of which said ring is adapted to bear, substantially as set forth.

3. In a hydrocarbon-burner, the combina-5 tion of a vaporizing-bowl, inner and outer perforated tubes carried by the bowl, an inclosing cylinder, and wings secured to the interior of the cylinder, the lower ends of said

wings being tapered off and adapted to impinge against the vaporizing-bowl to center to the tubes and cylinder as they are placed upon the bowl, substantially as set forth. LOUIS STOCKSTROM.

In presence of— NELLIE V. ALEXANDER, E. S. KNIGHT.