

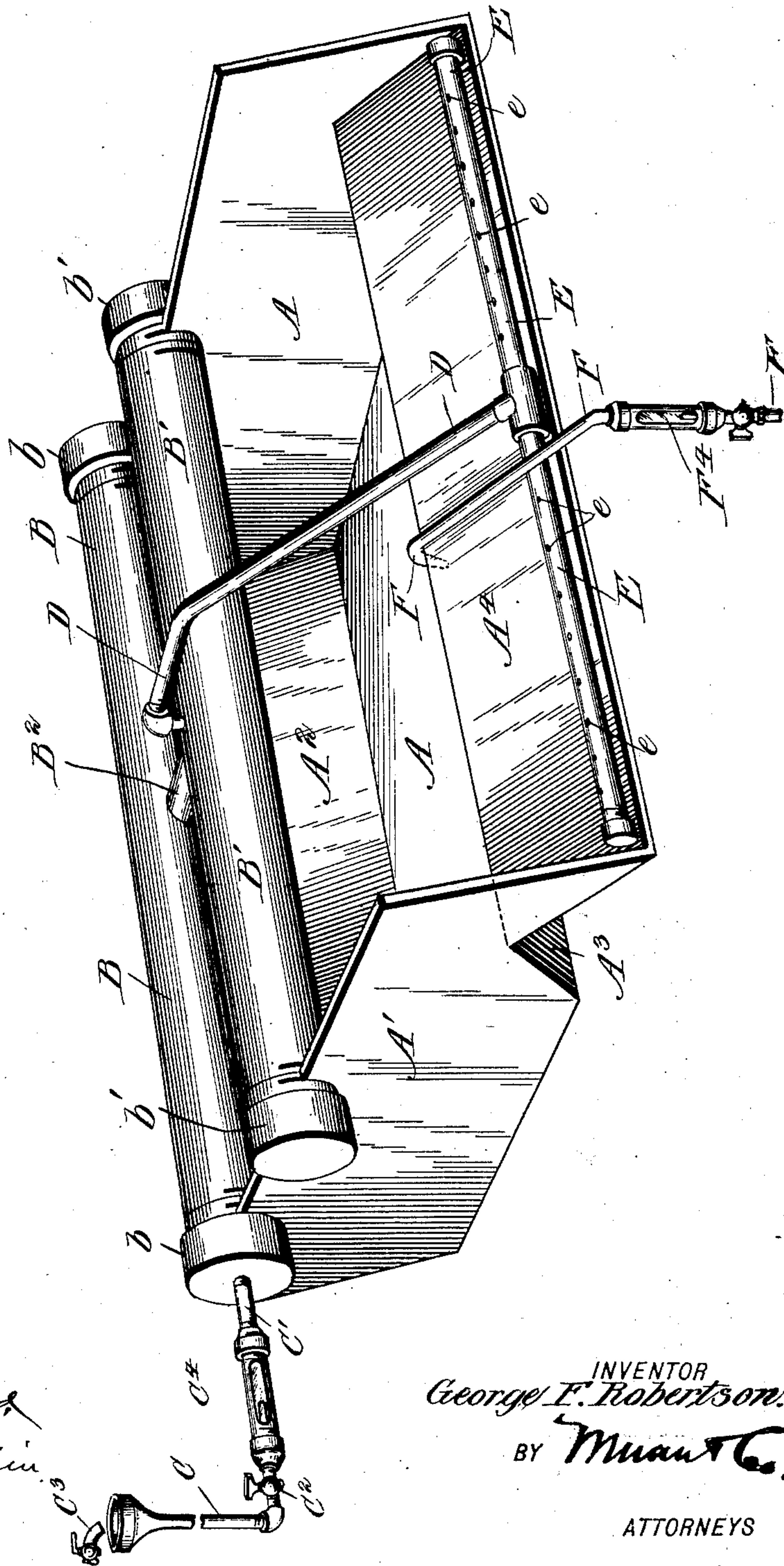
No. 715,151.

Patented Dec. 2, 1902.

G. F. ROBERTSON.
OIL BURNER.

(Application filed Apr. 9, 1902.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE F. ROBERTSON, OF BEAUMONT, TEXAS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO PERFECT DOMESTIC OIL BURNER COMPANY, A CORPORATION OF SOUTH DAKOTA.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 715,151, dated December 2, 1902.

Application filed April 9, 1902. Serial No. 102,052. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. ROBERTSON, a citizen of the United States, residing at Beaumont, in the county of Jefferson and State of Texas, have made certain new and useful Improvements in Oil-Burners, of which the following is a specification.

My invention is an improvement in oil-burners, and is particularly designed for burning crude oil, especially such as is found in the Texas oil-fields; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawing the figure is a perspective view of a burner embodying my invention.

In practice the burner may be placed in a stove, and the casing of such stove may be of any desired pattern or design.

As shown, the burner includes a basin A, which may preferably be in the form of a casting having the side plates A', the back plate A², and the front composed of the inner and outer plates A³ and A⁴, which incline in opposite directions toward their upper edges, are joined at such edges, and produce an upwardly-tapering wall at the front or open side of the basin. This produces the basin having the inner and outer inclined front plates and which will operate to hold the oil while being burned, and to provide an inner inclined plate to the surface of which the oil may be supplied, and the outer inclined plate up which the steam may be discharged from the nozzle or discharge-pipe, presently described.

The boiler is in the form of two cylinders or tubes B and B', supported upon the opposite side plates A' and which may be composed of tubes having screw-caps b and b', threaded on their opposite ends. A pipe B² connects the two cylinders B and B', and the water-feed pipe C communicates at C' with one of the end caps of the cylinder B, is valved at C², and may be supplied at C³ with water in any desired manner. In supplying the water it may be dripped from a faucet at C³, as shown, or supplied in any other suitable manner desired. The boiler-cylinders

overlie the basin and preferably slightly to the rear of the inner front wall A³, so the heat from the burning oil will operate upon the boiler to generate steam in the cylinders B and B', which steam is conducted from the cylinder B' by means of a pipe D, which also extends over the burner-space of the basin, so it will be influenced by the heat of the burning oil and connects with the steam-discharge pipe or nozzle E, which extends alongside the outer front plate A⁴, comparatively near the lower edge thereof, and has discharge-openings e, which direct the steam upwardly along the said outer front plate A⁴, so the steam will operate upon the flame of the oil burning within the basin and adjacent to the inner front plate thereof, as will be understood from the drawing. The oil-feed pipe F leads upwardly along the outer front plate A⁴ and discharges at F upon or adjacent to the inner front plate A³, at about the center of said plate, so the oil will be discharged upon the inner front plate and can distribute along the basin.

By the described construction it will be noticed that the basin is so formed as to support the boiler-sections in position to be acted upon by the heat of the burning oil and also operates to hold the heat sufficiently in contact with the boiler-sections to secure the desired generation of steam, the front of the basin being formed so the steam may be discharged in such manner as to efficiently operate upon the flame in the operation of the burner, the steam being so discharged in operation as to give a forced draft directly into the basin and in the direction of the boiler.

The water-supply pipe may be provided at C⁴ with a sight-feed and the oil-pipe be provided at F⁴ with a similar sight-feed to show at a glance the amount of oil and water passing to the burner.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The oil-burner herein described, comprising the basin composed of the base-plate, the side plates, the back plate, the inner and outer front plates inclined toward their up-

per edges and united at such edges and forming an upwardly-tapering front wall at the front or open side of the basin, the cylindrical boiler-sections supported on the side plates of the basin and connected together, means for supplying water to said boiler, a pipe leading from said boiler to the steam-discharge pipe, the steam-discharge pipe located along the outer side of the outer inclined front plate of the basin, and the oil-pipe arranged to discharge into the basin, substantially as and for the purposes set forth.

2. An oil-burner comprising the basin having a base-plate, a back plate, side plates and inner and outer front plates inclined reversely to each other toward their upper edges and united at such edges and forming an upwardly-tapering front for the basin, substantially as set forth.

3. The combination in an oil-burner, with the basin having an upwardly and inwardly tapering front wall, a base-plate and back and side plates, of the boiler supported on the side plates of the basin, the steam-discharge pipe extending along the outer side of the tapered front wall, the pipe connecting such discharge-pipe with the boiler, and the

oil-pipe for supplying oil to the basin, substantially as set forth.

4. A burner comprising the basin having a base-plate, side plates, a back plate and an upwardly-tapering front wall, the boiler-sections supported on the side plates, a connection between the sections of the boiler, the steam-discharge tube extending adjacent to the upwardly-tapering front wall, and the oil-supply tube, substantially as set forth.

5. An oil-burner comprising an open basin in which the oil may be burned and having inner and outer inclined walls, a boiler supported above said basin and in position to be heated by the flame of the oil burning in the basin, and the steam-discharge and oil-supply pipes discharging respectively to the inner and outer inclined walls, substantially as set forth.

6. The combination in a burner, of the basin having inner and outer plates, inclining upwardly and forming a tapered front for the basin, the boiler, and the steam-discharge and oil-supply pipes, substantially as set forth.

GEORGE F. ROBERTSON.

Witnesses:

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