

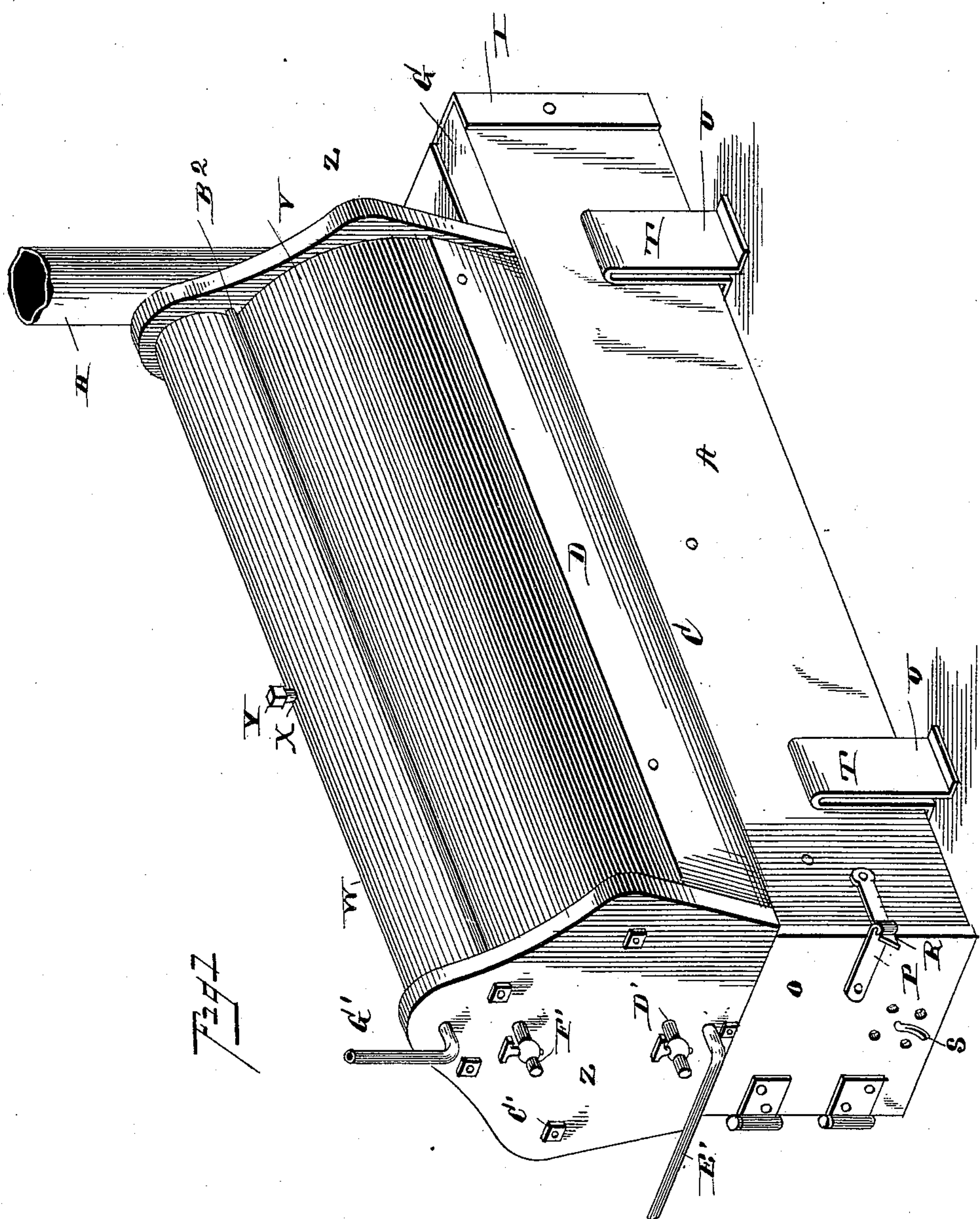
(No Model.)

2 Sheets—Sheet 1.

J. H. DULL.
WATER HEATER.

No. 405,305.

Patented June 18, 1889.



Witnesses

John Imirie
J. V. Garner

Inventor

John H. Druzz

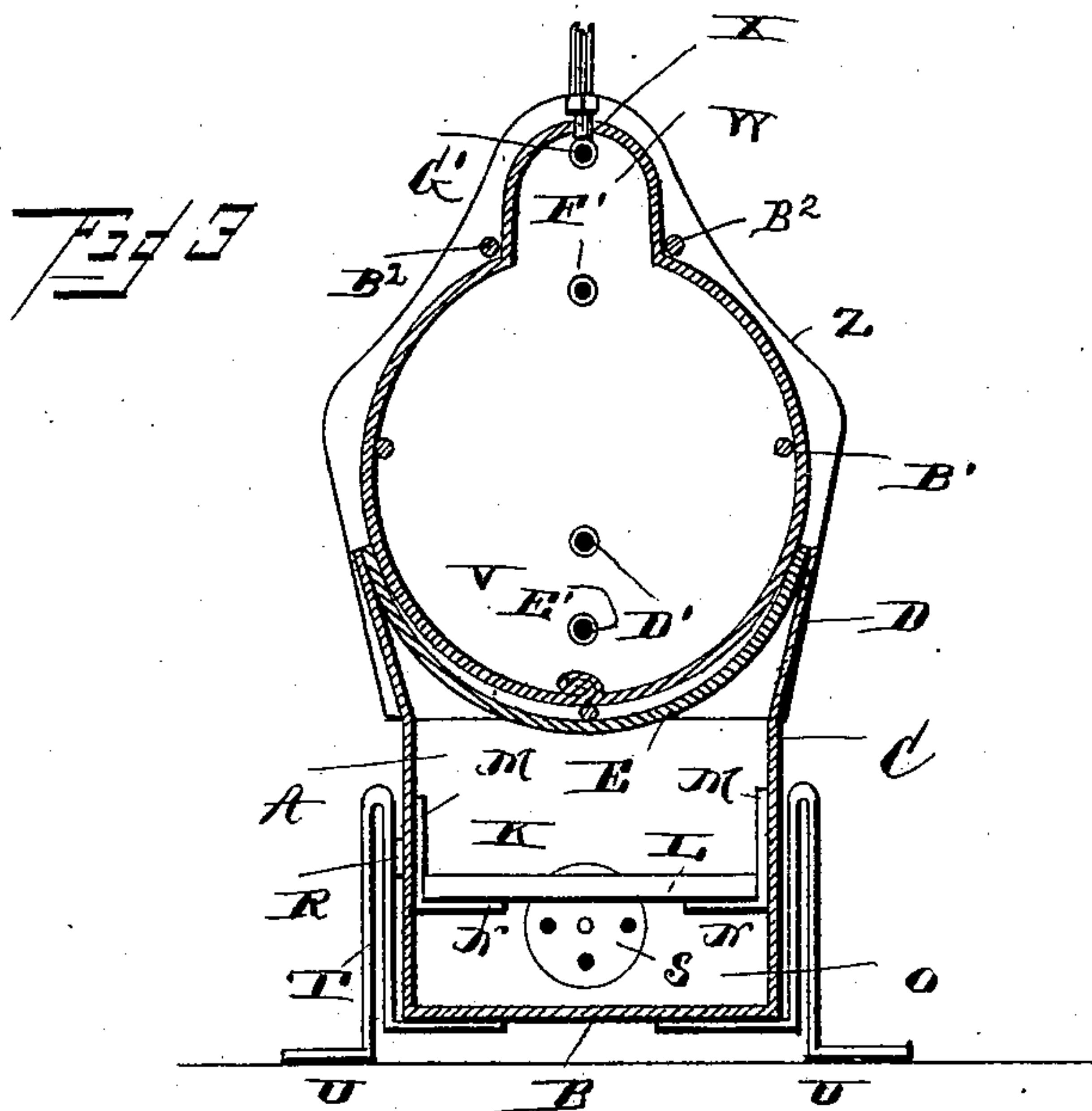
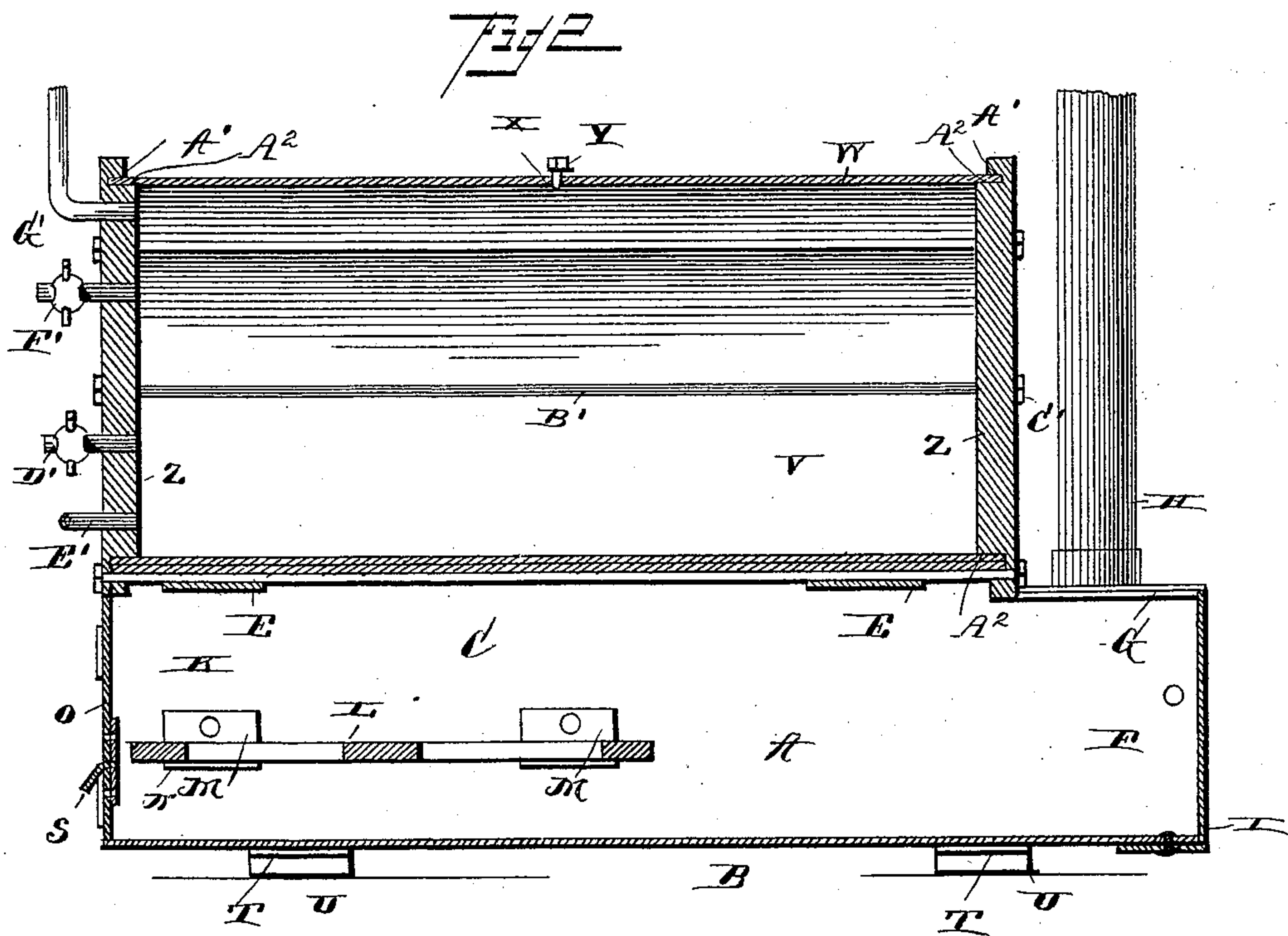
By Wm. Attorneys

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Chas. H. Snow & Co.

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UNITED STATES PATENT OFFICE.

JOHN HARNY DULL, OF RED KEY, INDIANA.

WATER-HEATER.

SPECIFICATION forming part of Letters Patent No. 405,305, dated June 18, 1889.

Application filed January 29, 1889. Serial No. 297,999. (No model.)

To all whom it may concern:

Be it known that I, JOHN HARNY DULL, a citizen of the United States, residing at Red Key, in the county of Jay and State of Indiana, have invented a new and useful Improvement in Water-Heaters and Steam Feed-Cookers, of which the following is a specification.

My invention relates to an improvement in water-heaters and steam feed-cookers; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a water-heater and feed-cooker embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view of the same.

The horizontal furnace A is composed of a sheet of rolled metal bent to form the bottom B and the sides C. The latter have their rear upper corners cut away to form the longitudinal extensions D integral with the sides, and said extensions are curved outwardly, as shown, and are connected together at their front and rear ends by curved metallic straps E, the ends of which are riveted to the said extensions.

Formed in the rear end of the furnace and integrally with the sides is a smoke-box F, the upper edges of the sides of which are turned inward to a horizontal position to form flanges G, which serve to support the smoke-pipe H. The outer end of the smoke-box is closed by a plate I, the side and lower edges of which are bent onto the sides C and bottom D and secured thereto by rivets, as shown.

A fire-box K is formed at the front end of the furnace. The grate L is supported in the fire-box by hangers M, which have hooks N formed at their lower ends and are riveted to the sides of the fire-box, the said hooks N engaging side bars of the grate, as shown.

A door O is hinged to one side of the furnace at the front end thereof, and is provided with a keeper or latch P, adapted to engage a hook R on the other side of the furnace. The said door is provided in its lower side with the usual draft-regulator S.

Straps T of suitable length have their ends

bent upward and then doubled to form supporting-legs U, and the said straps are riveted under the bottom of the furnace, near the front and rear ends thereof, and cause the legs to support the furnace at a suitable height from the ground.

The longitudinal boiler V is formed, preferably, of a single sheet of boiler or plate metal, and has a steam-dome W extending longitudinally on its upper side. The said steam-dome is formed integrally with the boiler, as shown, and is provided with an opening X, through which water may be introduced into the boiler. A plug Y is provided to close said opening.

Z represents the boiler-heads, which are of the form shown, and are provided on their inner sides with grooves A', which receive the ends of the boiler, and shoulders A², which support the ends of the boiler-casing. Rods B' extend through and connect the boiler-head, and are arranged on the outer side of the boiler, and on the ends of the said rods are nuts C', which clamp the heads firmly against the ends of the boiler and effect steam-tight joints between the said heads and the body of the boiler. Brace-rods B² are also arranged longitudinally in the outer angles between the boiler-body and the steam-dome, as shown.

To the front head C, at a suitable distance from the lower part thereof, is attached a spigot or water-valve D', by means of which hot water may be drawn from the boiler when needed. A water-pipe E' is also attached to the said boiler-head to convey hot water from the boiler to a receptacle stationed at any desired point. At the water-level of the boiler is a water valve or faucet F', and communicating with the steam-dome and extending through the front head C is a steam-pipe G', which may be employed to convey steam to any desired receptacle for the purpose of cooking feed or for any other desired purpose.

Having thus described my invention, I claim—

1. The furnace having the smoke-box F formed at its rear end, the sides of the smoke-box having their upper edges turned inward to form flanges G, for the purpose set forth, substantially as described.

2. The combination of the furnace having

its bottom and sides formed integrally of rolled
sheet metal and having the outwardly-curved
extensions D at the upper edges of its sides,
the transverse curved braces E, connecting
5 said extensions, and the smoke-box provided
with the inwardly-turned flanges G, the smoke-
stack supported upon said flanges G, and the
boiler supported upon the flanges D and
braces E, substantially as set forth.

In testimony that I claim the foregoing as 10
my own I have hereto affixed my signature in
presence of two witnesses.

JOHN HARNY DULL.

Witnesses:

CHAS. HALE,
WILLIAM SCHWERER.