N.T. EDSON'S

Improved Steam Boiler.

117159

PATENTED JUL 18 1871

Fig. 1.

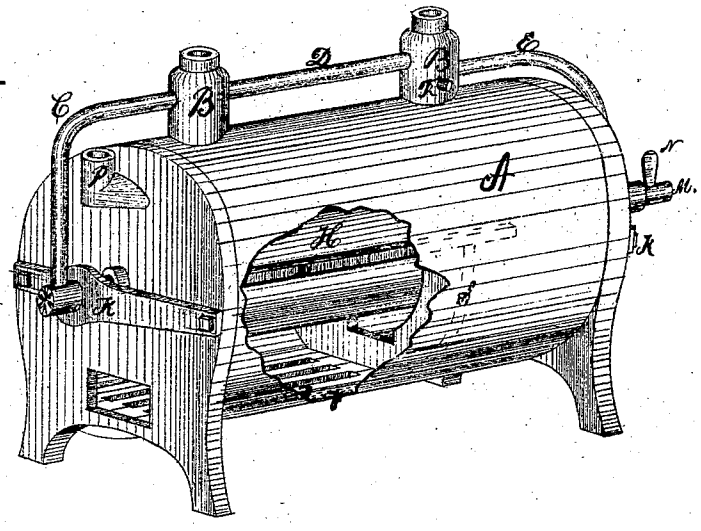
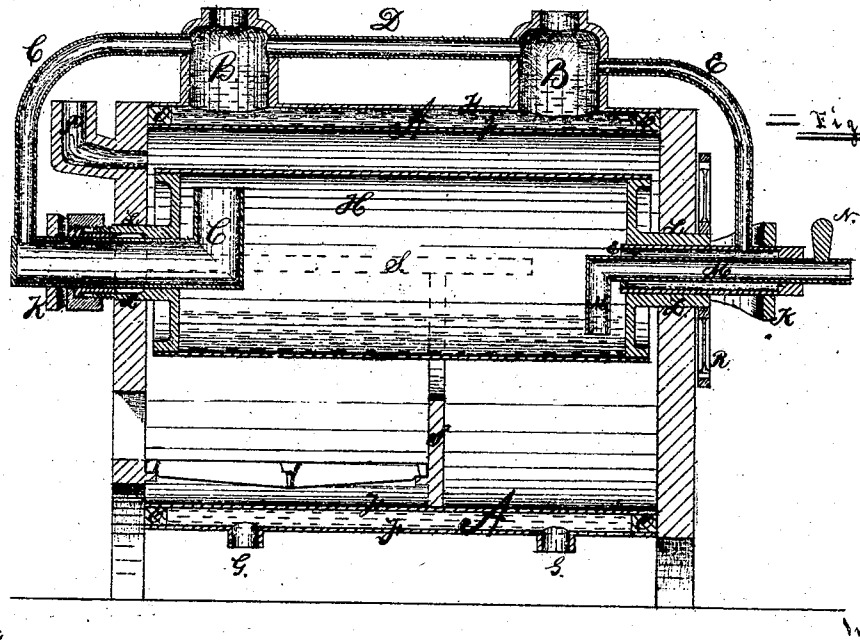


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

NATHANIEL T. EDSON, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN ROTARY BOILERS.

Specification forming part of Letters Patent No. 117,159, dated July 18, 1871.

To all whom it may concern:

Be it known that I, NATHANIEL T. EDSON, of the city of New Orleans, State of Louisiana, have invented certain Improvements in Rotary Steam-Boilers, of which the following is a specification:

The first part of my invention relates to revolving boilers, the whole or the upper part of the furnace of which is a stationary boiler provided with a dome or domes, to which the safety-valve is attached; and it consists in providing a water-supply pipe for the revolving boiler, connected to the stationary part of the boiler at an elevated point of the dome, by means of which the stationary part of the boiler will be kept full of water if a temporary suspension of its supply takes place, and an over-supply prevented by its flow off through the pipe to the revolving part of the boiler below. The second part of my invention relates to the furnace of revolving boilers, the upper part of which furnace is a stationary boiler; and it consists in providing a horizontal-division partition at a central part of the revolving boiler, by means of which the flame and heat of the fire are caused to impinge both upon the upper part of the revolving boiler and against the stationary boiler.

Figure 1 is a perspective view of my steam-boiler with a part of the water-space broken out. Fig. 2 is a vertical section of the same taken through the axes.

A is the furnace and water-space inclosure, composed of an outer and inner shell and division-rings O, of such thickness as will furnish a desirable water-space between the shells. B are domes, the lower parts of which furnish water to the inclosure during a temporary suspension of operation of the pump or injector, and the upper part of the domes space for containing steam, to the top of which domes the safety-valve and steam-pipe are attached. C is a steam-pipe leading from the rotary part of the boiler to the dome B, and D is a pipe leading from dome to dome. E is a water-pipe, attached to the dome at a lower level than the pipes C and D, which pipe E supplies water to the rotary part of the boiler and prevents the water from accumulating or rising above its connection in the dome. F is the inner and outer shell of the inclosure, to which is connected the injection and blow-off valves, at G. H is the revolving part of the boiler, which rests by its trunnions L on the ends of the furnace. K are stays, which are firmly attached to the ends of the furnace and to the steam and water-pipes C and E at their connection with the trunnions L. M is a pipe, to which the water-gauge cock is connected, and to which, also, a blow-off valve may be attached, which pipe M is turned by its handle N to ascertain the quantity of water in that part of the boiler. O are division-rings that separate the inner and outer shells of the inclosure. P is the smoke-stack. R is a cog, which is firmly attached to the trunnions L, by which the rotary part of the boiler is revolved at such a speed as is found to be desirable. S is a bridge-wall, a part of which extends forward to the front of the furnace, thereby causing the flame and heat of the fire to first pass back, and then up and forward to the smoke-stack P. T is a water-gauge cock, connected to the lower part of one of the domes, to ascertain if there is sufficient water on starting the fire or after the pump has stopped working.

I claim as my invention—

1. The water-pipe E, connecting the stationary and the revolving boiler, substantially as and for the purposes hereinbefore set forth.

2. The division-partition S, substantially as and for the purposes set forth.

Witnesses: NATHL. T. EDSON.

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