

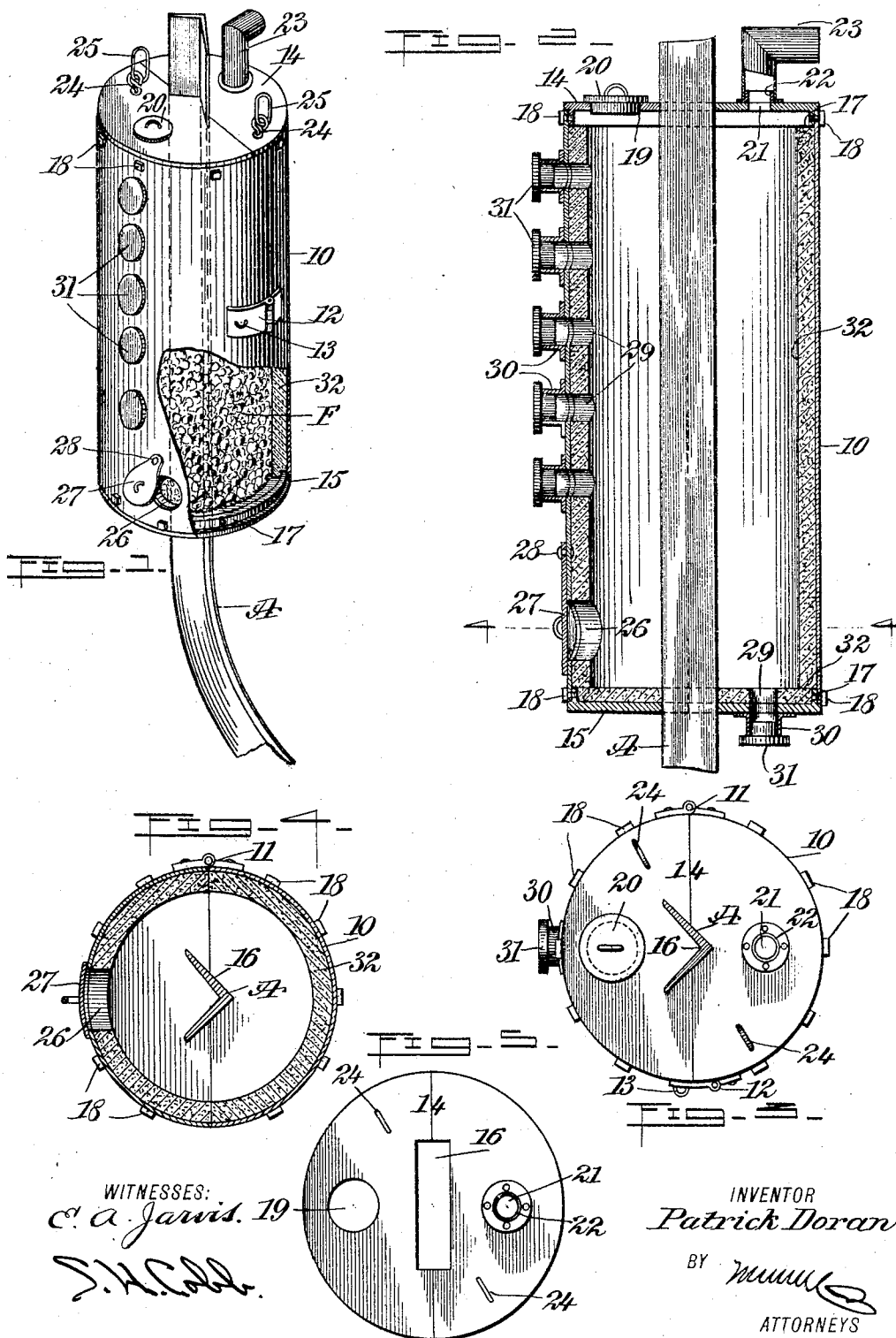
No. 778,016.

PATENTED DEC. 20, 1904.

P. DORAN.  
HEATER.

APPLICATION FILED MAR. 26, 1904.

NO MODEL.



# UNITED STATES PATENT OFFICE.

PATRICK DORAN, OF BAYONNE, NEW JERSEY.

## HEATER.

SPECIFICATION forming part of Letters Patent No. 778,016, dated December 20, 1904.

Application filed March 26, 1904. Serial No. 200,080.

*To all whom it may concern:*

Be it known that I, PATRICK DORAN, a subject of the King of Great Britain, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented a new and Improved Heater, of which the following is a full, clear, and exact description.

My invention relates to heaters, and is particularly designed for the heating of portions of the frame members of such structures as steel vessels and the like.

It has for its principal objects the provision of a convenient and effective apparatus for this purpose; and it consists in the various features hereinafter described and particularly claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of one embodiment of my invention in place upon a frame member, parts being broken away. Fig. 2 is an enlarged central vertical longitudinal section therethrough. Fig. 3 is a top plan view. Fig. 4 is a transverse section on the line 4 4 of Fig. 2, and Fig. 5 shows a top plan view of a casing-head having another form of opening than that illustrated in the previous figures.

10 designates a casing, preferably of cylindrical form and of sheet-iron. It is shown as divided into two longitudinal sections in a plane extending through the axis of the cylinder, these sections being connected at one side by hinges 11, while at the opposite side is provided a securing device consisting of a hasp 12, pivoted at the edge of one of the sections, this hasp being movable to engage a staple 13, fixed to the adjacent edge of the other section.

At the upper and lower ends of the casing are heads 14 and 15, respectively, each of which is formed in two sections corresponding to those of the casing, the line of division between them being a diameter of the cylinder. Each of these heads is provided with a substantially central opening 16 of a suitable form to permit the passage through it of the member to be heated, this being shown in the first four figures of the drawings as an angle-

iron A. Each of the openings lies adjacent to the meeting-line between the head-sections so that its walls are included in both said sections, thus enabling the casing to be opened upon its hinges and then closed in place about the member to be heated. The heads are preferably removably secured in place, they being provided with an annular flange 17, fitting within the casing, to which they may be secured by screws 18 or the like. In the upper head is a feed-opening 19, which may be provided with a closure or cover 20, and also in this head, here shown as in the other section, is an outlet-opening 21, to which is secured a flange 22, serving to receive a flue-pipe 23. Each head-section may carry a supporting member 24, from which is shown extending a section of chain 25, by which the heater may be supported from any part of the structure to which it is applied.

Near the lower portion of the casing is an inlet or draft opening 26, which may have operating over it a damper or adjustable closure 27, conveniently pivoted at 28. Extending along the length of the cylinder is a series of openings 29. These may have secured about them flanges 30, into which fit plugs or closures 31. If desired, the lower head may also be provided with one of these openings. The cylinder-walls, this preferably including the lower head, may be covered with an insulating-lining 32 of asbestos, fire-clay, or the like.

In the use of my apparatus the casing is furnished at each end with a head having an opening corresponding in form to the frame member which it is desired to heat. Two forms are here illustrated, the first, previously described, being for an angle-iron, and that shown in Fig. 5 being for such rectangular members as are commonly used for the stems of vessels. The casing is now opened and placed about the member which has been bent or distorted or which for any other reason it may be desired to heat. The casing is then locked together by the hasp and staple and supported in the proper position by the chain extending from its upper head over some convenient portion of the frame. The casing may now be supplied with fuel through the feed-door 19, this fuel being indicated at F in

Fig. 1, and ignited through the inlet-opening. The draft is now regulated by the adjustment of the damper, and upon the fuel attaining combustion throughout the member  
5 will become heated, this being allowed to continue until the desired temperature is obtained. The hasp is now disengaged and the casing removed, when the frame member may be straightened in the customary manner.

10 If desired, instead of supplying solid fuel to the interior of the casing hydrocarbon-burners may be introduced through the openings 29 and their flames directed upon the frame member. This will effect the heating in a  
15 similar manner.

By the use of my invention metal members may be thus speedily heated at the exact point desired while they are still assembled, and the lightness of the apparatus enables it to be  
20 readily moved from one place to another and supported in its operative position without difficulty.

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

25 1. A heater comprising a casing having a head at each end and formed in longitudinal sections dividing both the casing and heads, said casing being provided with feed, inlet and outlet openings and also with a series of openings extending along its length, and closures  
30 for the feed and inlet openings and the series of openings.

2. A heater comprising a casing having a head at each end and formed in longitudinal sections dividing both the casing and heads, 35 said casing being provided with feed and outlet openings near its upper portion, an inlet-opening near its lower portion and a series of supply-openings extending along its length, closures for the feed and supply openings, and 40 an adjustable closure for the inlet-opening.

3. A heater comprising a casing provided with a feed and inlet opening and having a head at each end and formed in longitudinal sections dividing both the casing and heads, 45 each head being provided with an opening the walls of which are included in both sections, and supporting means carried by the upper head-sections, the head carrying the supporting means also having an outlet-opening. 50

4. A heater comprising a cylinder divided into two sections in a plane extending longitudinally through its axis, a removable flanged head-section for each of the casing-sections, and separate securing means extend- 55 ing through the casing into the flanges.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PATRICK DORAN.

Witnesses:

SYLVANUS H. COBB,  
JNO. M. RITTER.