

F. PACZIGA.
BOILER.

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1,015,065.

Patented Jan. 16, 1912.

Fig. 1.

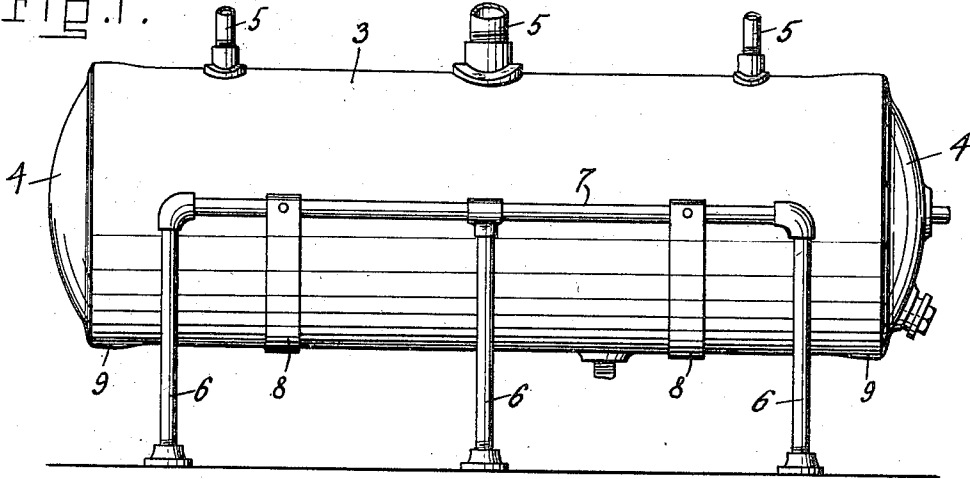
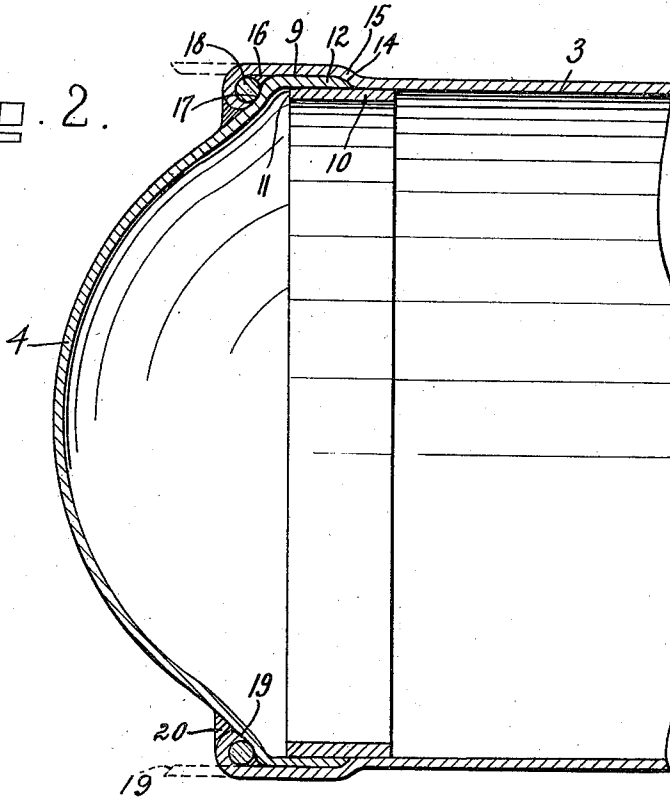


Fig. 2.



WITNESSES
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FRANK PACZIGA, OF NEW YORK, N. Y.

BOILER.

1,015,065.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK PACZIGA, a citizen of the United States, and resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Boilers, of which the following is a specification.

The present invention relates to boilers, and more particularly to an improvement in uniting the heads of the boilers to the body or shell thereof.

One of the objects of the invention is to provide a joint between the head and the body of the boiler without the use of rivets.

Another object of the invention is to produce a joint of this character which is simple in construction and efficient in operation, producing a perfectly tight joint between the two parts mentioned.

With these and other objects in view, which will more fully appear as the nature of the invention is better understood, the same consists in the combination, arrangement and construction of parts hereinafter fully described, pointed out in the appended claims and illustrated in the accompanying drawings, it being understood that many changes may be made in the size and proportion of the several parts and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

One of the many possible embodiments of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of a boiler constructed in accordance with the present invention, and Fig. 2 is a central longitudinal section of the joint.

In the drawings a hot-water boiler is shown arranged horizontally, comprising a cylindrical shell or body 3 of any suitable material and size, to which the heads 4, 4 are attached in a manner hereinafter to be described. Pipes 5, 5 are connected with the boiler for the well known purpose. The boiler is supported by standards or legs 6, 6, which are connected by substantially horizontal bars 7, 7, to which bridges or saddles 8, 8 are attached. The shell of the body rests upon these bridges or saddles.

While the boiler has been shown in horizontal position, it is obvious that the invention can be applied to vertical boilers just as well.

The body 3 of the boiler is enlarged in diameter at its ends, as shown at 9, 9, whereby sockets are formed, the lengths of which vary according to the requirements. Since the joints between the heads and the body of the boiler are exactly alike in construction, only one of the same will be described herein. A sleeve 10 is soldered or otherwise attached to the inner surface of the shell 3, its outer edge 11 projecting into the socket 9, whereby an annular recess is formed in said socket. Into this recess is placed the flange portion 12 of the head 4, and driven into it until its inner end 14 contacts with the shoulder 15 upon the body 3, which shoulder is formed by enlarging the end of the shell. The two parts are then soldered together at 16, care being taken that a layer of solder of substantial thickness should be formed. Upon this layer of solder and the shoulder 17 of the head 4 is then placed a ring 18 of any suitable material and cross section, its outer diameter being somewhat larger than the inner diameter of the socket 9, so that said ring will have to be forced into said socket and remain securely in position upon its seat during the further operations, which will be presently described. After the ring is in its place, the free end of the socket 9, which is originally in the form shown in dotted lines in Fig. 2 of the drawings, is then by means of a beading tool beaded over the ring 18 until its outer edge 19 contacts with the head 4. After this operation, the annular space between the bead, so formed, and the head 4 is filled with solder, as shown at 20, making a perfectly tight joint between the body and the head.

It will be observed that instead of the solder layer 16, a packing ring of lead or other soft material may be used with the same result.

It is obvious that the inner pressure upon the boiler head tends to compress the solder layer 16, and makes a tight joint. The bead upon the outer end of the socket 9 prevents effectively the opening of the joint and strengthens both the head and the body of the boiler.

What I claim is:

The combination with a boiler body enlarged in diameter at its end, of a sleeve attached to the inner surface of said body projecting into said enlarged end, whereby an annular recess is formed, a head having

a flange located in said recess, said head and body being united by soldering, and a ring placed upon said head and contacting throughout its peripheral portion with said boiler body, the outer portion of said boiler body being beaded over said ring and the annular space between said bead and head being filled with solder.

Signed at New York, in the county of New York and State of New York, this 15th day of June, A. D. 1911.

FRANK PACZIGA.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."