E. C. MEIER.

BOILER.

APPLICATION FILED APR. 30, 1915.

1,166,619.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

FIG. 1.

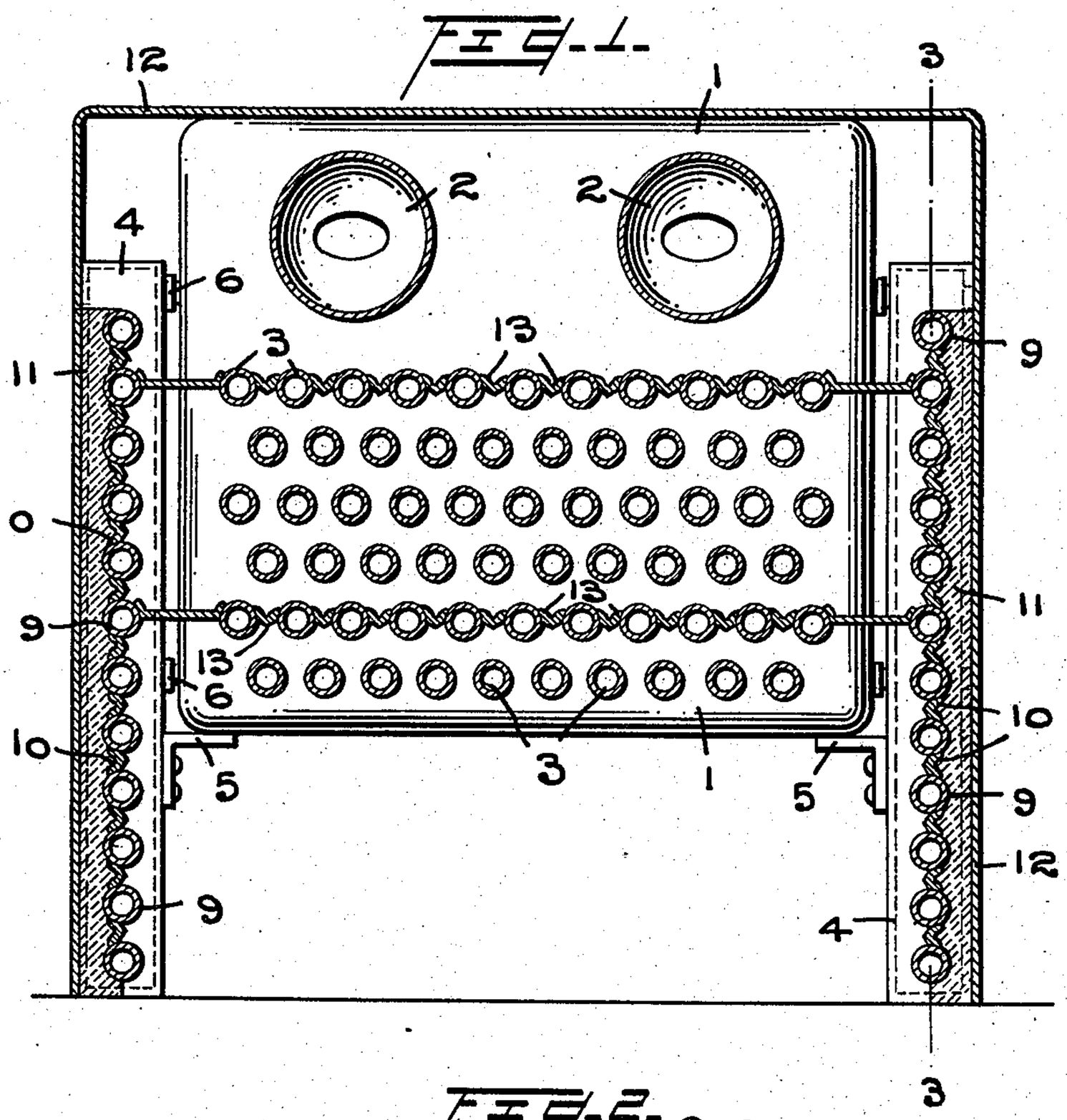
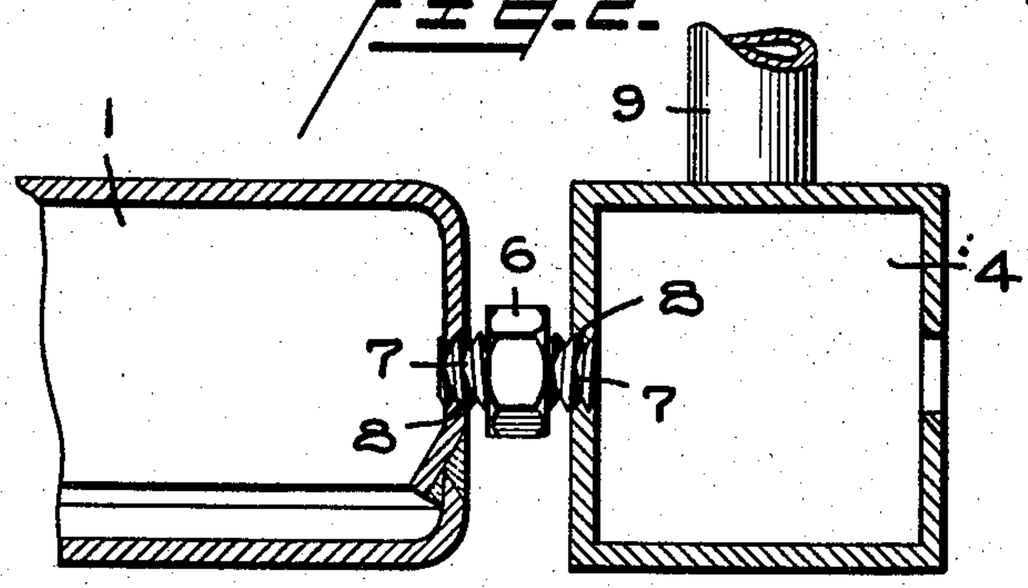


FIG. 2.



Witnesses

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2 SHEETS—SHEET 2.

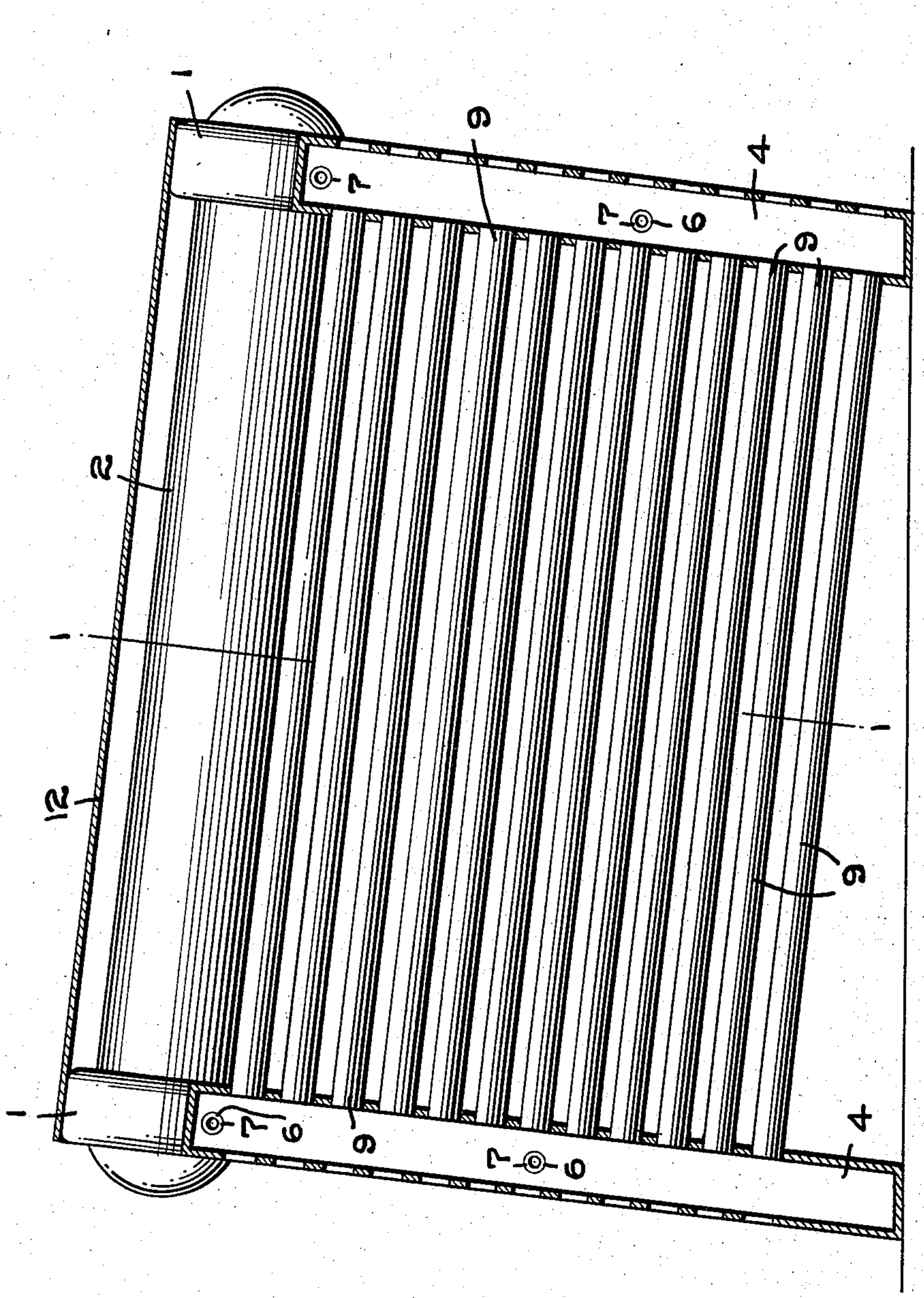

FIG. 2.

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EDWARD C. MEIER, OF PHOENIXVILLE, PENNSYLVANIA.

BOILER.

1,166,619. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed April 30, 1915. Serial No. 24,900.

To all whom it may concern:

Be it known that I, EDWARD C. MEIER, a citizen of the United States, residing at Phoenixville, in the county of Chester and State of Pennsylvania, have invented certain new and useful Improvements in Boilers, of which the following is a specification.

My invention relates to improvements in boilers, and more particularly to marine boilers, the object of the invention being to provide a plurality of separable water legs connected to and communicating with the boxes or water legs of an ordinary type of boiler, which especially adapts the boiler for marine uses, and by varying the length of said legs, any incline of boiler tubes may be had.

A further object is to provide a boiler of the character stated in which the water legs supporting the boiler structure are connected by water tubes at the sides of the boiler, and said water tubes support tile and cement surfacing to form the side walls of the boiler.

A further object is to provide an improved marine boiler which can be readily assembled, and which will be comparatively cheap to manufacture, neat and attractive in appearance, and strong and durable in use.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in transverse section illustrating my improved boiler, the section being taken on the line 1—1 of Fig. 3. Fig. 2 is an enlarged fragmentary view in horizontal section illustrating the coupling device connecting the supporting water leg with the box of the boiler. Fig. 3 is a view in longitudinal section on the line 3—3 of Fig. 1.

1, 1 represent boxes or water legs of an ordinary type of boiler, connected at their upper ends by a casing 2, and at their lower portions by water tubes 3.

While I have illustrated a boiler construction of considerable width, having two casings 2, I would have it understood that the number of such casings and the width of the boiler will be varied to suit conditions, and that in this case I make no claim to the special type of water box and casing.

At the ends of the water boxes 1, I provide supporting water legs 4. While the parts 1 are frequently referred to as the water legs of the boiler, to distinguish them from the supporting water legs 4 I shall hereinafter refer to the parts 1 as "boxes," and the parts 4 as "legs," because the latter support the boiler, and the parts 1 merely constitute chambers or boxes containing water and steam.

The water legs 4 are preferably rectangular in cross section, and of substantially the same width as the boxes 1. The legs 4 are provided on their inner faces with angle brackets 5, rigidly secured to the legs and supporting the lower ends of the boxes 1.

The legs 4 and boxes 1 are connected by couplings 6, preferably of the type shown in Fig. 2, in which the intermediate portion of the coupling is made angular to receive a wrench, and the ends 7 are oppositely screw-threaded to engage threaded openings 8 in the boxes and legs respectively.

The legs 4 at the sides of the boiler are connected by water tubes 9, and between the water tubes 9, tile 10 is positioned, and a cement coating or other material 11 is located against the tubes 9 and tile 10 to form an outer wall, and I have illustrated these outer walls as confined within a hood or casing 12, although this latter detail is not essential.

Supported on the tubes 3 and 9, are baffles 13 which are preferably made up of tile as shown, and these baffles may be located wherever desired to utilize to best advantage the heat units of the fuel.

As shown clearly in Fig. 3, the water legs 4 at one end of the boiler are appreciably shorter than the water legs 4 at the opposite end of the boiler, so that the boiler tubes are located at an angle. In most types of boiler it is desirable to so position the tubes, and my invention readily lends itself to this idea as I can vary the length of the water supporting legs to suit the trade.

By reason of my improved construction above described, I am enabled to utilize a type of boiler for marine as well as other uses, and by the provision of the water legs 4 with their connecting tubes 9, and devices connecting the water legs with the boxes 1, I can change the boiler ordinarily used in connection with brick walls, for marine uses.

Various slight changes might be made in the general form and arrangement of parts

described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. A boiler, comprising boxes spaced apart, tubes connecting the boxes, water legs at the ends of the boxes, said water legs extending below the boxes and supporting the latter at an elevation, brackets secured to the legs and supporting the boxes, couplings connecting the legs and the boxes, and water tubes connecting the legs and forming a vertical series of tubes operating as a wall support, substantially as described.

2. A boiler, comprising boxes spaced apart, tubes connecting the boxes, water legs at the ends of the boxes, said water legs extending below the boxes and supporting the latter at an elevation, brackets secured to the legs and supporting the boxes, couplings connecting the legs and the boxes, water tubes connecting the legs and forming a vertical series of tubes operating as a wall support, tile between said last-mentioned tubes, and a plastic wall formed against said tile and tubes, substantially as described.

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

EDWARD C. MEIER.

Witnesses:

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