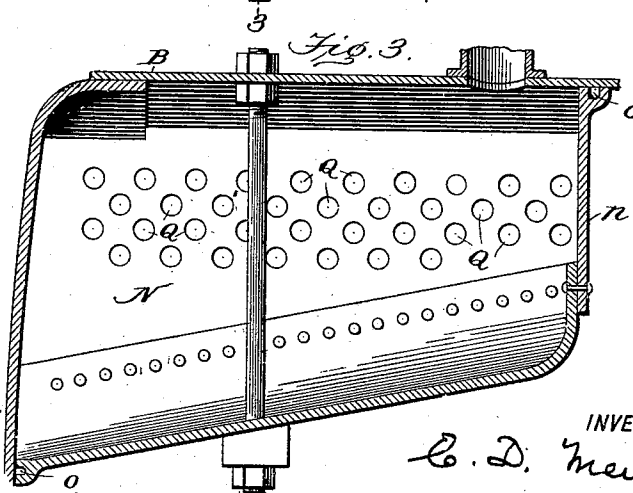
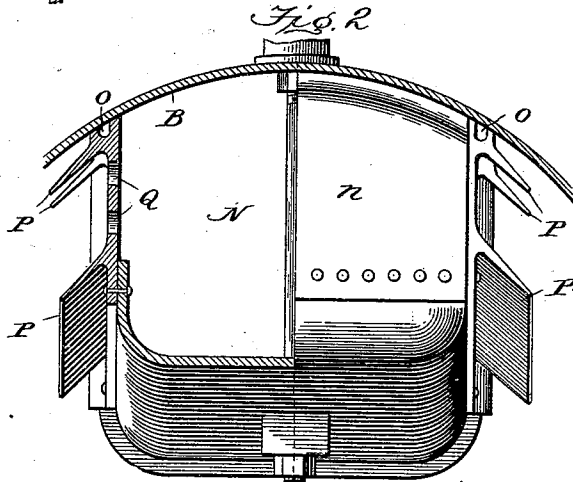
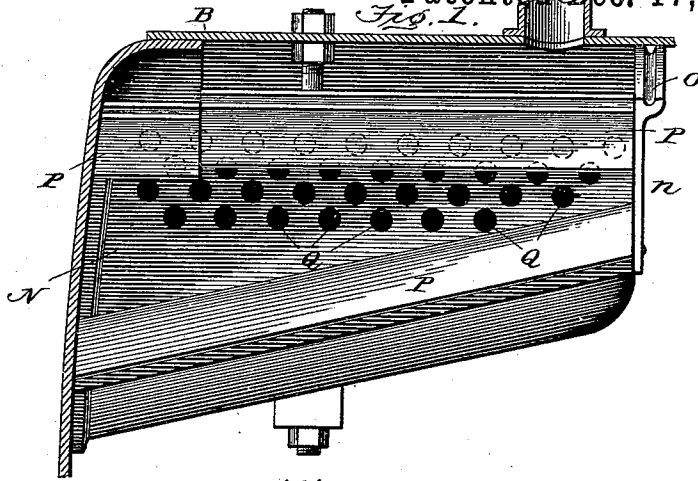


(No Model.)

E. D. MEIER.
DRY PAN FOR STEAM BOILERS.

No. 551,681.

Patented Dec. 17, 1895.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD D. MEIER, OF ST. LOUIS, MISSOURI.

DRY-PAN FOR STEAM-BOILERS.

SPECIFICATION forming part of Letters Patent No. 551,681, dated December 17, 1895.

Application filed July 19, 1895. Serial No. 556,451. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. MEIER, a citizen of the United States, residing in the city of St. Louis, Missouri, have invented certain new and useful Improvements in Dry-Pans for Steam-Boilers; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in dry-pans or separators for steam-boilers by means of which the steam in its passage from the boiler is relieved from all water and moisture.

The effectual drying of steam involves its complete separation from water. When steam is being made rapidly the violent ebullition of the water in the boiler, especially when the pressure is reduced by opening a valve or cock, or otherwise, throws up more or less spray, which, adhering to and following the walls of the boiler or drum, is liable to find its way into the dry pan or pipe and thus prevent or neutralize the action of the pan—the thorough drying of the steam.

The main object of my invention is to avoid this difficulty; and the invention consists in the means hereinafter described and claimed for accomplishing this end.

In the drawings, Figure 1 is a side view of my improved dry-pan. Fig. 2 is an end view thereof partly in section, and Fig. 3 is a longitudinal section on the line 3 3 of Fig. 2.

N is the dry-pan located at or near the top of the main shell or steam-drum B, usually at the front of said drum. It is made in the shape of a trough, which may be deeper at one end than at the other, the deeper end fitting against the head of the steam-drum and its upper edges against the cylindrical walls thereof, the inner end being closed by a head

n. This pan may be made of wrought or cast metal in one piece, or of a plurality of parts bolted or riveted together. I prefer to build it of parts, because it enables me to introduce the separate parts through the manhole to be subsequently put together and connected with the drum. In order to avoid the expense of machine-finish to secure a close joint between the edges of the pan and the shell of the drum, I form grooves *o* in the edges, as shown, for the reception of suitable packing, as asbestos rope or other heat-proof material. Openings *Q* are provided in the sides of the dry-pan, well up toward the top, for the admission of steam, and on the outside above and below these openings are provided outwardly and downwardly projecting wings or guards *P* to prevent spray or water from entering the dry-pan during violent ebullition.

Having now described my invention, what I claim is—

1. The improved dry pan herein described connected with the boiler shell, the same being provided with openings in its walls for the admission of steam, and with depending wings or plates opposite said openings to prevent the entrance of water or spray, substantially as described.

2. The combination of a boiler or steam drum and a dry pan arranged in the upper part thereof having openings in its walls for the admission of steam and outwardly and downwardly flaring wings above and below the openings to prevent the entrance of water or spray to the pan, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

EDWARD D. MEIER.

Witnesses:

E. R. FISH,

S. D. MERTON.