

No. 773,389.

PATENTED OCT. 25, 1904.

J. F. HECKMAN.
STEAM BOILER.

APPLICATION FILED MAR. 7, 1904.

NO MODEL.

FIG 1

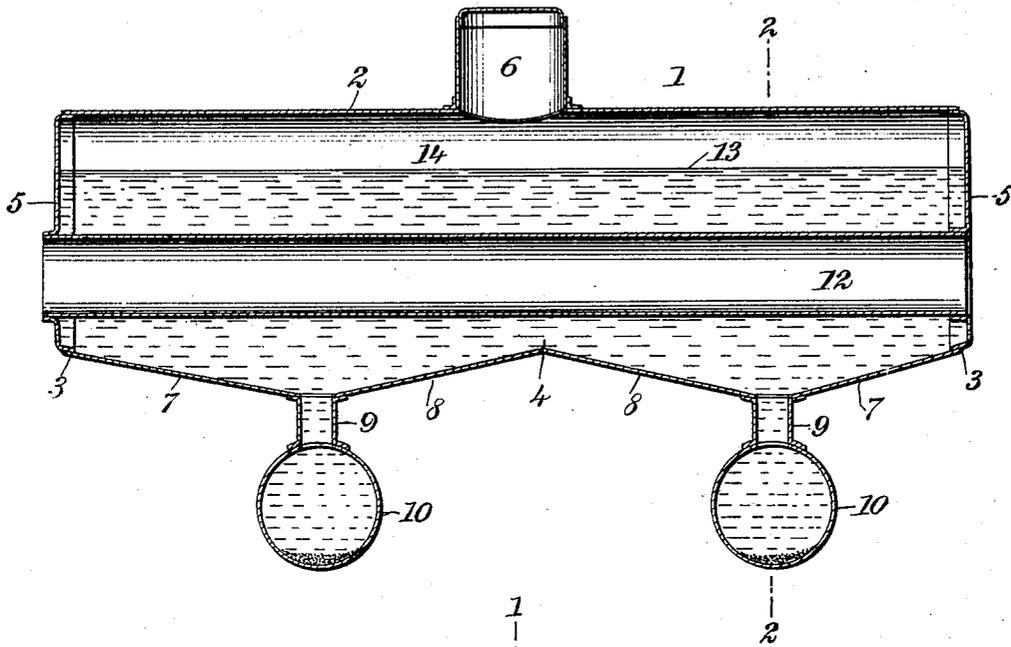
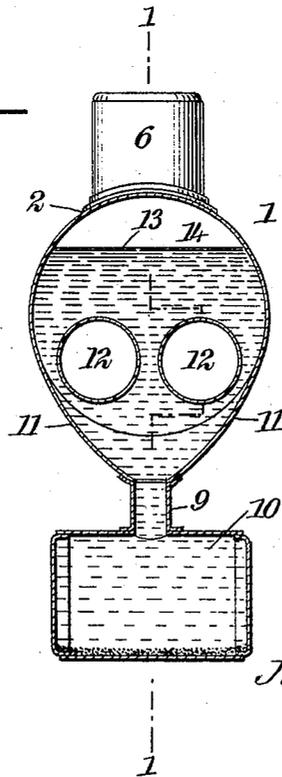


FIG 2



WITNESSES:

W. Walker
E. Ellis

INVENTOR

Julius Fred Heckman

BY *M. M. M.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

JULIUS FRED HECKMAN, OF HERMANN, MISSOURI.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 773,389, dated October 25, 1904.

Application filed March 7, 1904. Serial No. 196,937. (No model.)

To all whom it may concern:

Be it known that I, JULIUS FRED HECKMAN, a citizen of the United States, and a resident of Hermann, in the county of Gasconade and State of Missouri, have invented a new and Improved Steam-Boiler, of which the following is a full, clear, and exact description.

This invention relates to steam-boilers; and it consists, substantially, in the construction and organization of parts hereinafter particularly described, and pointed out in the claims.

The principal object of the invention is to provide a steam-boiler of a construction by which the collection and removal of all sediment or scale deposits therein are facilitated and the effectiveness and working capacity of the structure materially increased or enhanced.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal sectional view of a steam-boiler constructed in accordance with my improvements, the same being taken on the line 1 1 of Fig. 2; and Fig. 2 is a vertical transverse sectional view taken on the line 2 2 of Fig. 1.

Before proceeding with a more detailed description it may be stated that in the form of my improvements herein shown I provide the boiler preferably with two drums at the lower part thereof for the collection of sediment or scale deposits from the interior of the boiler, the latter being of special construction to cause the sediment or deposits to pass to and settle within the drums, and while I have herein represented my improvements in a certain selected embodiment it will be understood, of course, that I am not limited to the precise details thereof in practice, since immaterial changes therein may be resorted to coming within the scope of my invention.

Specific reference being had to the drawings by the designating characters marked thereon, 1 represents the boiler in entirety, the same being preferably straight longitudinally of the upper portion 2 thereof and prac-

tically cylindrical or circular in form at both of its ends 3 and at its central portion 4, each of said ends being closed by a circular head 5, while located at a suitable part of said upper portion 2 is a steam-dome 6. The bottom of the lower portion of the boiler is inclined inwardly and downwardly at 7 for a suitable distance from each end and outwardly and downwardly in opposite directions at 8 from the said central portion 4 thereof, each of said inclined portions 7 and 8 leading to a tube 9, forming communication between the boiler and a drum 10 for collecting the sediment and scale deposits from the boiler. The sides of the said lower portion of the boiler are tapered or also inclined inwardly and downwardly, as indicated at 11 in Fig. 2, and merge into or intersect with said inclined portions 7 and 8, so that funnels may be said to be thus formed leading from the boiler to the drums. From this construction it will be seen that all sediments or deposits from the water in the boiler will tend to gravitate into the drums, from which they may be conveniently removed as occasion may require, and consequently the working of the boiler is rendered much more effective.

As shown in the drawings, the boiler is provided interiorly with fire tubes or flues 12, supported in any suitable manner in the heads 5, the water-line being indicated at 13 and the steam-space at 14.

It will be understood, of course, that my invention comprehends a single collecting-drum only for the boiler, in which case but one set of inclined bottom and side portions 7, 8, and 11 will be employed to lead to the drum.

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

1. A steam-boiler provided beneath the same with duplicate drums communicating therewith for the collection of sediment, and having the lower portion thereof inclined inwardly and downwardly from each end toward one of said drums.

2. A steam-boiler provided beneath the same with duplicate drums communicating therewith for the collection of sediment, and

having the sides and lower portion thereof inclined inwardly and downwardly toward the drums.

5 3. A steam-boiler provided beneath the same with duplicate drums communicating therewith for the collection of sediment, and having the lower part thereof converging from the ends, sides and central portion toward each of said drums.

10 4. A steam-boiler provided beneath the same with a plurality of drums for the col-

lection of sediment communicating therewith, and having the lower portion thereof inclined inwardly and downwardly toward said drums.

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

JULIUS FRED HECKMAN.

Witnesses:

FRED L. WENSEL,
A. J. STOHLMANN.