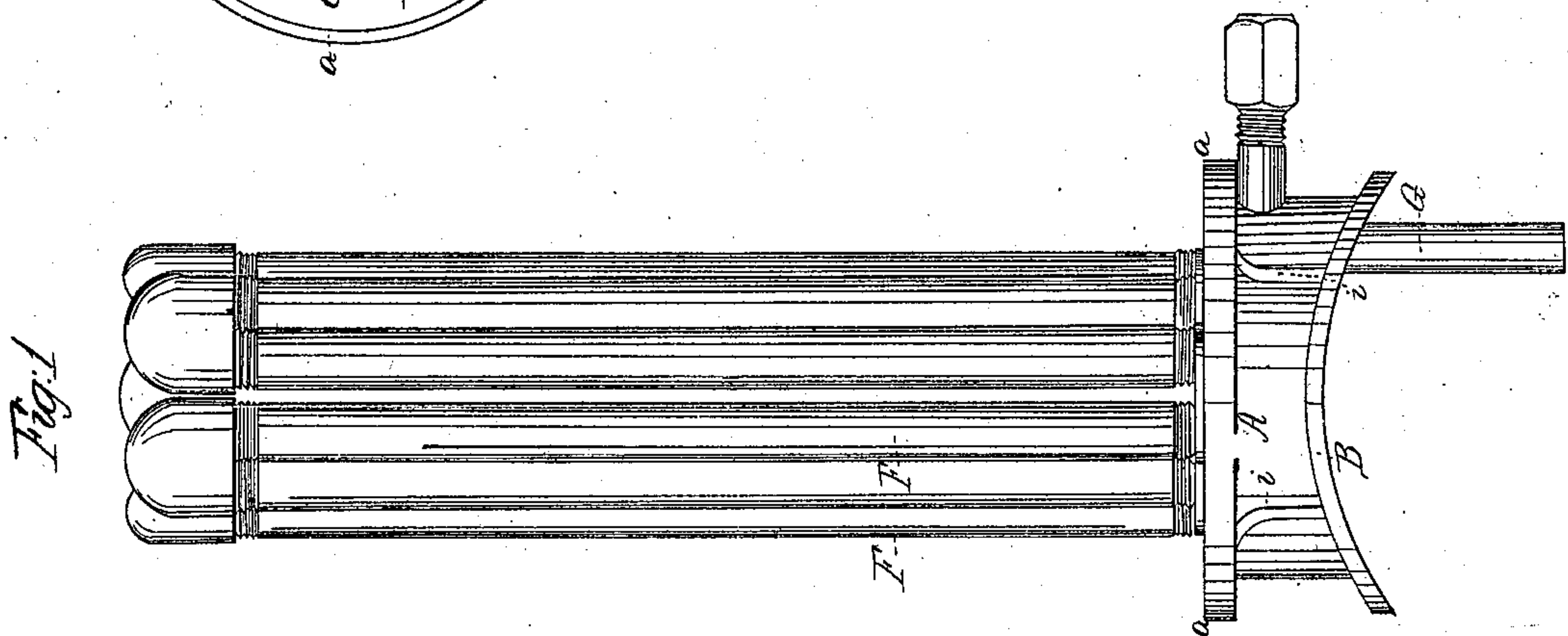
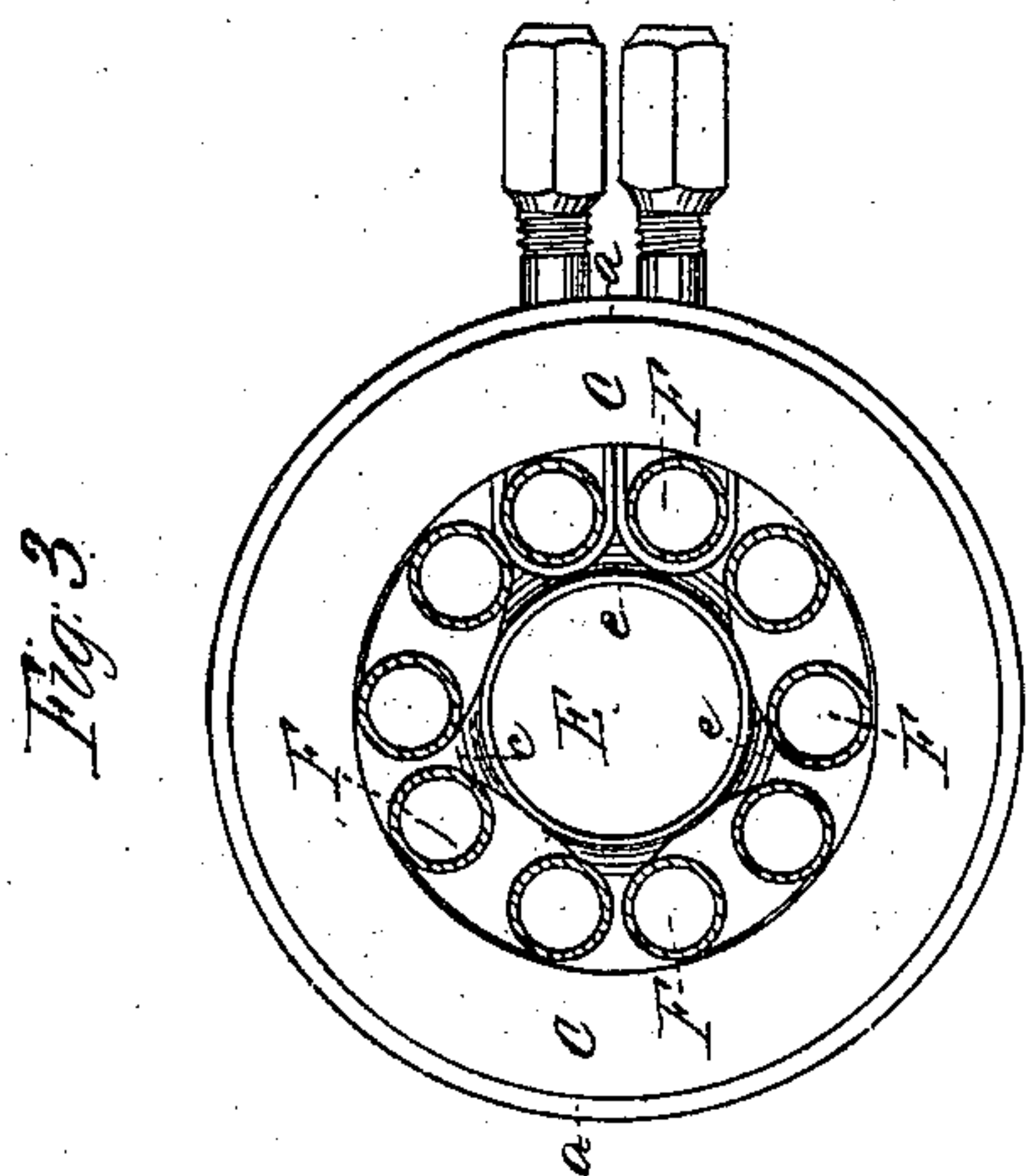
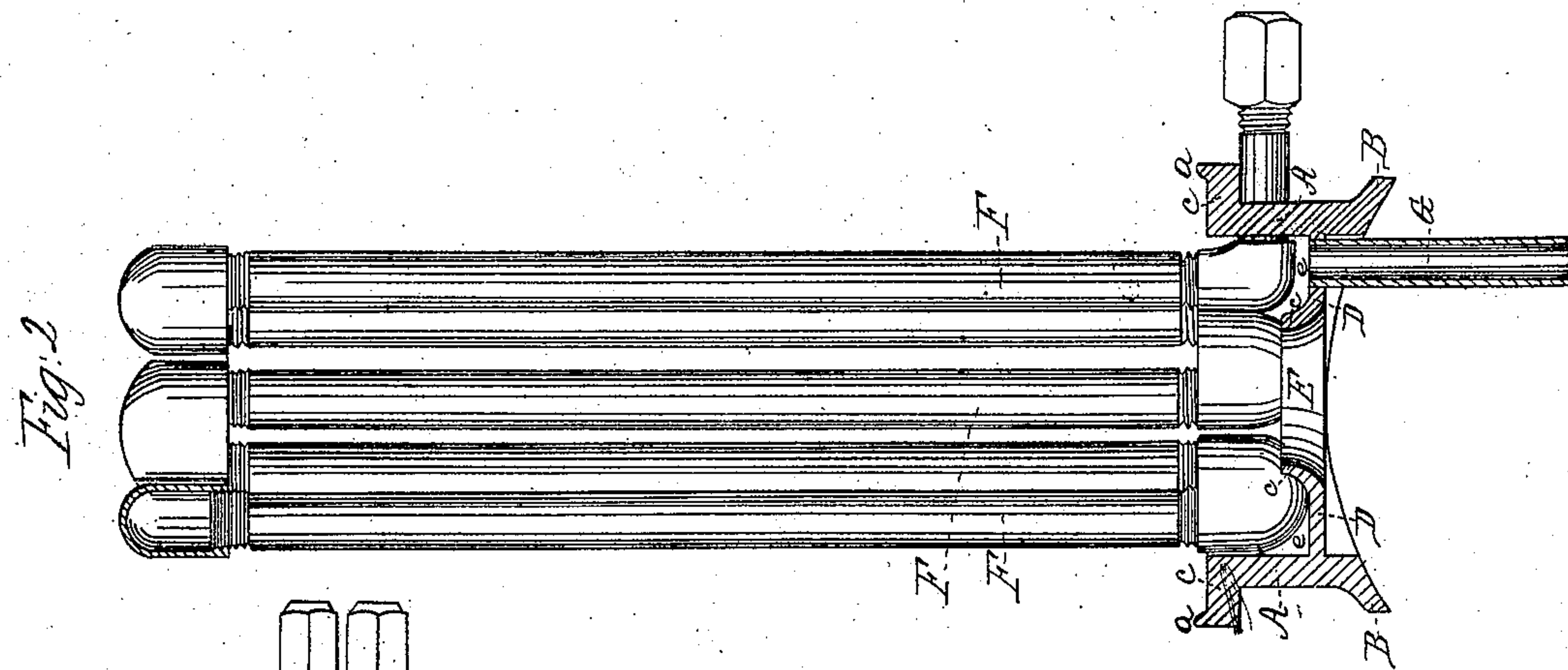


P. S. Ebbert,
Steam-Boiler Attachment.
No 15,225. Patented July 1, 1856.



UNITED STATES PATENT OFFICE.

PETER S. EBBERT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN BASE-PIECES OF LOCOMOTIVE SMOKE-STACKS.

Specification forming part of Letters Patent No. 15,225, dated July 1, 1856.

To all whom it may concern:

Be it known that I, PETER S. EBBERT, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Saddles or Base-Pieces for Locomotive Stacks or Chimneys; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents an elevation of the saddle or base-piece in question with hot-water pipes arranged therein. Fig. 2 represents a central vertical section taken through Fig. 1; and Fig. 3 represents a horizontal transverse section through the pipes, showing the top plan of the saddle or base-piece.

Similar letters where they occur in the several figures denote like parts in all.

In heating the water that is to supply the boilers of locomotives by a series of water pipes or spaces arranged in the stack or chimney thereof, there must be, of course, considerable condensation on the outside of said pipes or water-spaces. This condensed vapor, if allowed to run down into the stack, will eventually dampen the heat or fire and otherwise injure the boiler; if allowed to flow or run over the outside of the boiler, will corrode and soil the engine.

The object of my invention is to so construct the saddle or base-piece which receives the hot-water apparatus and outer shell of the stack as that it shall collect all the water which forms in the interior of the stack by the exhaust-steam coming in contact with the pipes and convey it away without allowing it to injure or damage the engine or corrode any of the parts of the stack.

To enable others skilled in the art to make and use my invention, I will proceed to describe the construction and operation thereof with reference to the drawings.

The saddle may be cast in one single piece, and its general form may be seen in the drawings. It consists, mainly, of a cylindrical center part, A, which is convex at its lower part, said lower part having upon it a similarly-shaped flange, B. The convexity of the lower

part of the saddle should be such as to neatly fit over the top of the boiler to which it is to be bolted. The upper end of the center part, A, is square, or nearly so, and has upon it, first, a horizontal flange, C, and then a small vertical flange, *a*, rising from the outside of the horizontal flange C.

A neck, D, is formed in the inside of the saddle, through the center of which is an opening, E, for the heated products of combustion and the exhaust-steam to pass through. That portion of the neck D which is nearest the opening E is turned upward, as seen at *c*, so as to form between it and the wall of the center part, A, a trough or recess, *e*, into which the condensed steam drips from the hot-water pipes F, placed around said neck. From this trough or recess *e* should lead a water-pipe, G, for conveying off and discharging in any convenient way or place the water which accumulates therein.

Ribs *i i* may be cast on the outside of the saddle, extending from the top to the bottom flanges, so that the saddle may be light and strong. The base of the outside shell of the stack rests on the horizontal flange C and against the outside vertical flange, *a*, to which it may be bolted or riveted in any of the usual well-known ways. The drawings represent the saddle as arranged for the reception of a series of pipes such as recently patented by me; but it may be differently arranged for different water-spaces without departing from the general construction thereof.

Having thus fully described the nature of my invention, what I claim therein as new, and desire to secure by Letters Patent, in the construction of saddles or base-pieces for the stacks or chimneys of locomotives in which the feed-water for the boilers is heated, is—

The trough or receiver *e* for catching the water or condensed steam that drips from the pipes, and the waste-pipe for conveying it away, substantially as described.

PETER S. EBBERT.

Witnesses:

E. R. BROWN,
ROBT. GAIRNS.