

D. HESS.
Boiler Feeder.

No. 214,565.

Patented April 22, 1879.

Fig. 1.

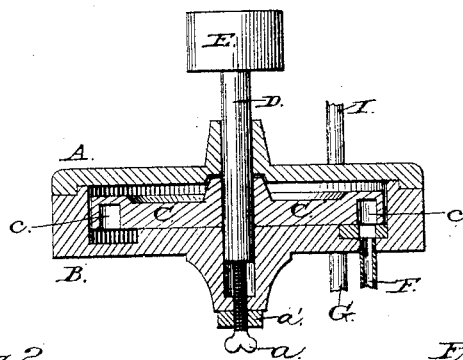


Fig. 2.

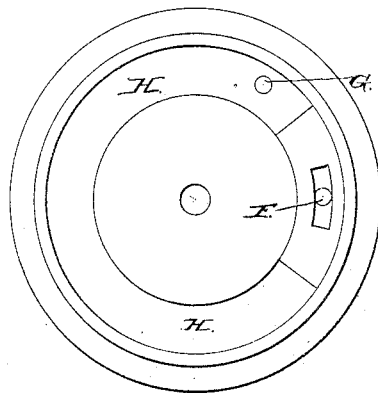
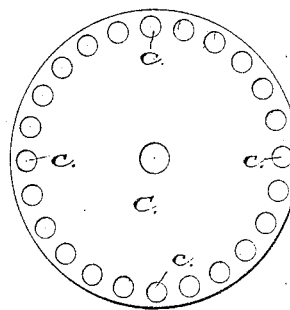


Fig. 3.



WITNESSES
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DANIEL HESS, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN BOILER-FEEDERS.

Specification forming part of Letters Patent No. **214,565**, dated April 22, 1879; application filed March 19, 1879.

To all whom it may concern:

Be it known that I, DANIEL HESS, of Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Boiler-Feeders; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a sectional elevation of my invention. Fig. 2 is a plan view of the lower half of the casing; and Fig. 3 is a bottom plan of the revolving cup-disk.

This invention has relation to devices for heating and automatically feeding the water to steam-boilers; and it consists of certain improvements in the construction and operation of the same, hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings similar letters of reference indicate like parts of the invention.

A is the upper half, and B the lower half, of a circular box-casing fitted together in such a manner as will make the joints steam-tight. In this circular casing A B is contained a circular revolving disk, C, fitted to and receiving its motion from a shaft, D. The shaft D is provided at its upper end with a pulley or band wheel, E.

Where the shaft D enters the casing A it is suitably packed with an ordinary stuffing-box and gland. The lower end of the shaft D is journaled in the bottom of the case B, and is perpendicularly adjustable by means of the set-screw *a* and lock-nut *a'*.

The disk C, on its lower side, is provided with a series of cups, *c*, which, as they revolve, pass over the end of the cold-water-supply pipe F, and are thereby filled with wa-

ter, which, as the revolution continues, is discharged into the gutter or reservoir H. Here it comes in contact with, and is heated by, the live steam from the boiler through the steam-pipe I, and in this heated condition finds its way to the boiler through the pipe G.

By placing the improved feeder at such a height that the face of the disk C is on a line with the water-level of the boiler, the action of the feeder then becomes automatic, requiring no attention whatever from the attendant, for unless the water in the boiler is below the level of the face of the disk C the water will not enter the boiler, nor will the cups *c* empty themselves, but the disk C will continue to revolve around without discharging its contents. As soon as the water-level in the boiler falls below that of the feeder then the feed-water finds its way into the boiler.

The face of the disk C is a ground or steam-tight joint with the mouth of the feed-pipe F.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. In a combined heater and feeder for steam-boilers, the cupped wheel C, in combination with the casing B, having the heating gutter or reservoir H, substantially as and for the purpose set forth.

2. In a boiler-feeder, the case A B, having induction or eduction pipes or openings, pipes or tubes F G I, the disk or wheel C, provided with cups *c* on its under face, and the shaft D, the several parts constructed and relatively arranged to operate substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

DANIEL HESS.

Witnesses:

PETER MAIER,
I. A. COLEMAN.