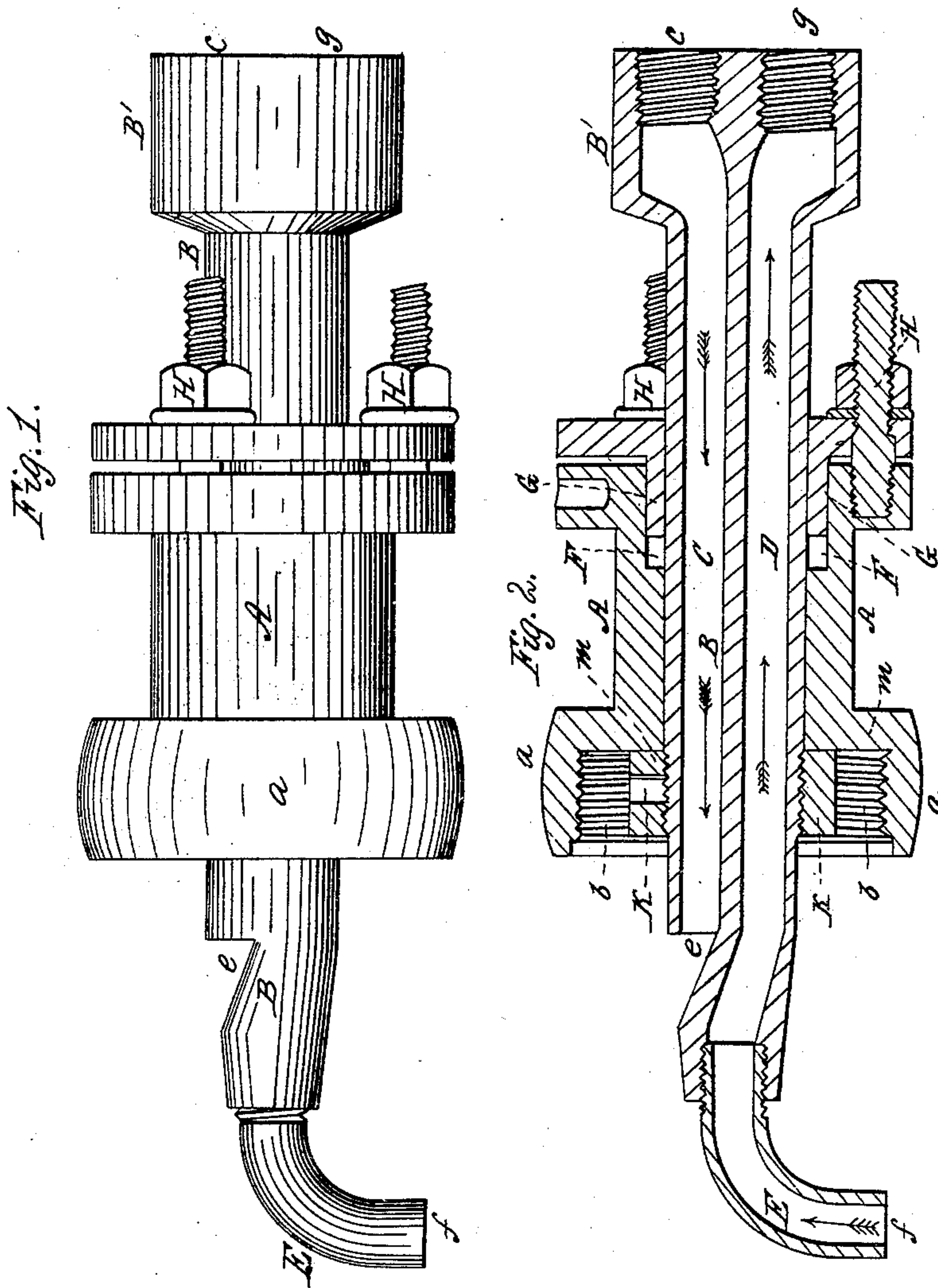


G. S. BARTON.
Steam Drier.

No. 86,350.

Patented Feb. 2, 1869,



Witnesses:
D. Miller.
Geo. H. Miller

Inventor:
Geo. S. Barton

United States Patent Office.

GEORGE S. BARTON, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO RICE, BARTON,
AND FALES MACHINE AND IRON COMPANY, OF THE SAME PLACE.

Letters Patent No. 86,350, dated February 2, 1869.

IMPROVEMENT IN STEAM-DRIERS.

The Schedule referred to in these Letters Patent and making part of the same.

Know all men by these presents:

That I, GEORGE S. BARTON, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Steam-Driers; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side view of so much of a steam-drying machine as is necessary to illustrate my improvement, and

Figure 2 represents a longitudinal central section of the same.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

The nature of my invention consists in the peculiar combination of devices for admitting steam and removing water from the drying-cylinders, as hereinafter explained.

In the drawings, the part marked A is a metallic hub, which is to be secured to the outer end of the bearing or journal of the drying-cylinder, by means of the flange *a* and screw-thread *b*.

Through a circular opening in the hub A, passes a stationary journal, B, having two openings or passages, C and D, extending through it longitudinally.

To the outer end, *c*, of the opening or passage C is fitted the end of the steam-supply pipe, and the steam is carried through the passage C and discharged into the interior of the drying-cylinder from the aperture *e* at the top of the stationary journal B.

To the inner end of the journal B is secured the siphon-pipe E, the end *f* of which should reach nearly to the bottom of the interior of the drying-cylinder, which is constructed and operated in the usual manner.

The opening of the siphon-pipe E communicates with the passage or opening D in the stationary journal B, and, through the opening D, with the exhaust or waste-pipe, which is to be attached at *g* to the enlarged end, B', of the stationary journal B.

The joint of the journal B, which passes through the hub A, is made steam-tight by means of packing F, in a stuffing-box, G, formed in the outer end of the hub A.

The packing may be tightened by the screws and nuts H.

The journal B is prevented from working out endwise by means of a collar, K, secured to the inner end of the journal B, which strikes against the face *m* of the hub A, as indicated in the drawings.

Then, again, the pressure of the steam upon the inside of the cylinder, keeps the collar K forced or pressed against the face *m* of the hub A, which renders the joint between the hub A and stationary journal B nearly steam-tight, even without the packing F.

The steam enters the cylinder from the supply-pipe through the passage or opening *c* C *e*, and the water, caused by the condensation of the steam in the cylinder, is, by the pressure of the steam, forced up through the siphon-pipe E, and the passage or opening D *g*, and passes off through the exhaust or waste-pipe.

The collar K can readily be turned up, when desired, to retain the parts in proper relative position.

In case of any derangement of the parts, the hub A can easily be unscrewed from the end of the journal of the drying-cylinder.

By my improvement or invention, the steam can be admitted and the water removed from the drying-cylinders at the same end, in a more convenient manner and with less trouble than by the modes heretofore in use.

It will be understood that the hub A turns with the journal of the drying-cylinder, while the journal B, together with the steam and exhaust-pipes, remains stationary.

By the use of a stationary journal, B, having a steam and water-passage through the same, a more firm and compact connection is formed with the cylinder and steam and exhaust-pipes than can be produced by the use of two separate pipes, as heretofore used; besides, much labor and annoyance are saved in fitting the connections, while all soldering of the pipes is obviated.

Having described my improvement in steam-driers, What I claim therein as new, and of my invention, and desire to secure by Letters Patent, is—

The combination, with the hub A and stationary journal B, having two passages C D, of the stuffing-box G and collar K, the parts being constructed and combined together, substantially as shown and described.

GEO. S. BARTON.

Witnesses:

D. L. MILLER,

GEO. H. MILLER.