

(No Model.)

A. A. BRIGHAM.
CYLINDER FOR DRYING MACHINES.

No. 267,666.

Patented Nov. 21, 1882.

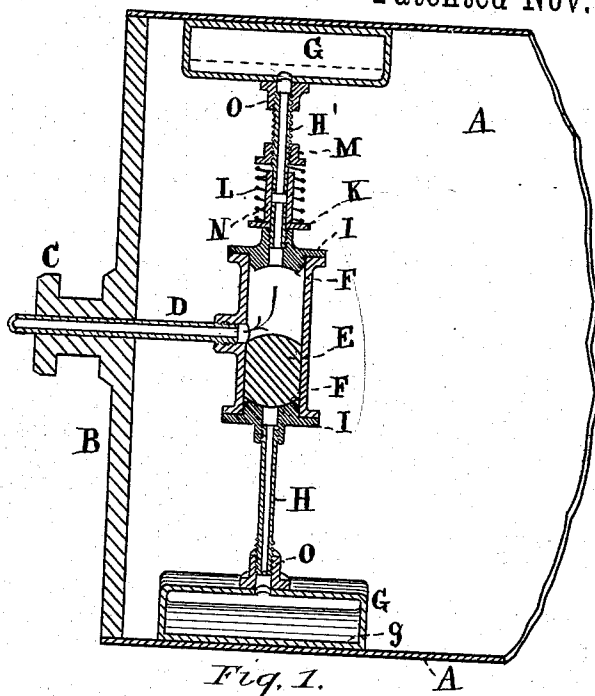


Fig. 1.

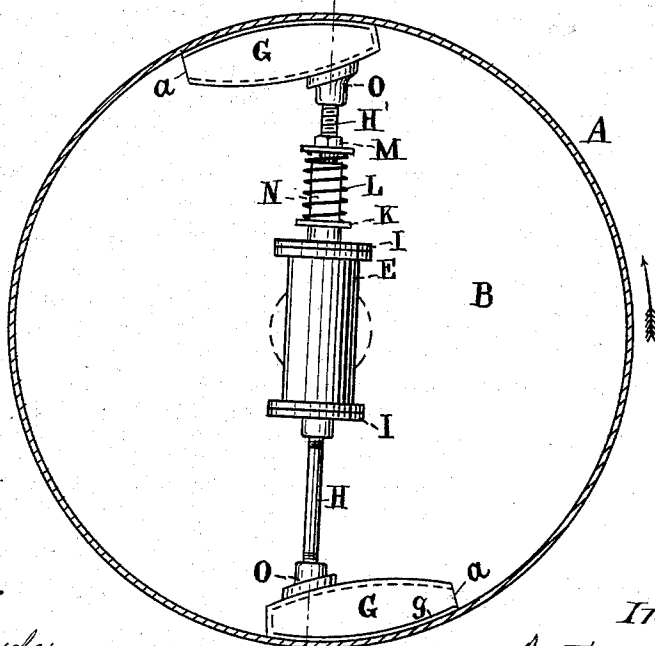


Fig. 2.

Witnesses.

Benja P. Ryder,
Hugh Galvin

Inventor.

Arthur A. Brigham
by J. H. Adams
Atty.

UNITED STATES PATENT OFFICE.

ARTHUR A. BRIGHAM, OF BOSTON, MASSACHUSETTS.

CYLINDER FOR DRYING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 267,666, dated November 21, 1882.

Application filed August 30, 1882. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR A. BRIGHAM, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Cylinders for Drying-Machines, of which the following is a specification.

My invention relates to an improvement in revolving cylinders employed for drying textile fabrics.

The buckets used in this class of cylinders, as ordinarily constructed, are attached to the inner surface of the cylinder by means of solder, or bolted to the head of the cylinder, the inner surface of the cylinder forming the bottom of the buckets. The objections to this mode of construction and attachment are that the solder becomes corroded by contact with the steam, thus requiring renewal, and the use of bolts is liable to cause leakage, and in replacing or renewing the said buckets it is necessary to remove the cylinder-heads in order to gain access to the parts. Furthermore, both buckets, as ordinarily constructed, are constantly open for the escape of steam and water.

It is the object of my invention to obviate these objections; and the invention consists in constructing the buckets with a bottom forming a part of the bucket, and held against the inner sides of the cylinder, without being permanently attached thereto, by means of a spring, with other appliances, which forces the buckets against the cylinder and holds them in place, thus dispensing with the use of either solder or bolts.

The invention further consists in the employment of a valve so constructed and connected with the buckets and outlet as to prevent the passage of steam from one bucket and allow the escape of water from the other.

In the accompanying drawings, Figure 1 is a sectional view of a portion of a cylinder, buckets, &c., embodying my invention. Fig. 2 is an elevation of the same.

A represents a cylinder, B the head of the same, and C the journal adapted for proper bearings.

D is the outlet for the water of condensation.

G G are buckets, provided each with a bottom, *g*, forming a part of the buckets, and bearing against the inner surface of the cylinder, as shown, each bucket having an opening at one end, as at *a*, and closed at the opposite end. The upper sides of the buckets G are connected to pipes H H' by means of flanges O, the said pipes leading to a check-valve arranged between the two buckets. More than one valve may be used, if desirable.

E is a check-valve, acting as a ball-valve, the casing of which is connected at each end to the pipes H H' by means of the heads I. F F are the valve-seats.

Surrounding the pipe H', extending from one end of the valve cylinder, is a coupling-pipe, N, and surrounding the pipe N is a spring, L, which bears upon a step, K, at one end, the opposite end bearing against a nut, M, on the pipe H', so that by turning the nut M the spring L will be compressed and force the buckets against the sides of the cylinder, so as to hold the buckets securely in place.

The whole apparatus may be applied and adjusted to any cylinder through a man-hole in the cylinder-head, and thus do away with the necessity of entering the cylinder or removing the whole head.

The operation is as follows: As the cylinder revolves the water of condensation enters the bottom bucket at the opening *a*, and is carried up in the same until it reaches a point above the horizontal line of the pipes H H', when the valve E drops to its lower seat, thus allowing the water to pass out through outlet D and preventing the steam from entering the valve.

What I claim as my invention is—

1. The combination, with the cylinder A of a drying-machine, of the buckets G, provided with permanently-attached bottoms *g*, as and for the purpose set forth.

2. In a drying-machine, the check-valve E, in combination with the pipes H H' and buckets G, substantially as and for the purpose specified.

3. In a drying-machine, the spring L and coupling N, interposed between the check-valve E and a bucket, G, substantially as and for the purpose set forth.

4. In a drying-cylinder, the combination of the buckets G G, pipes H H', check-valve E, and outlet-pipe D, substantially as and for the purpose set forth.

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

ARTHUR A. BRIGHAM.

Witnesses:

JOS. H. ADAMS,
E. PLANTA.