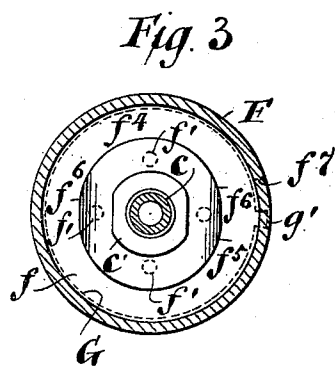
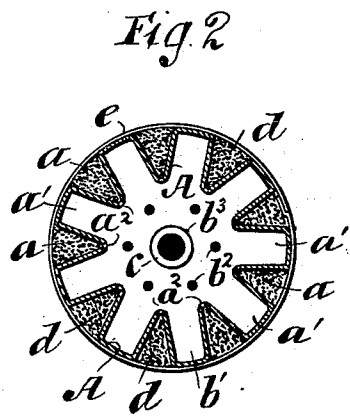
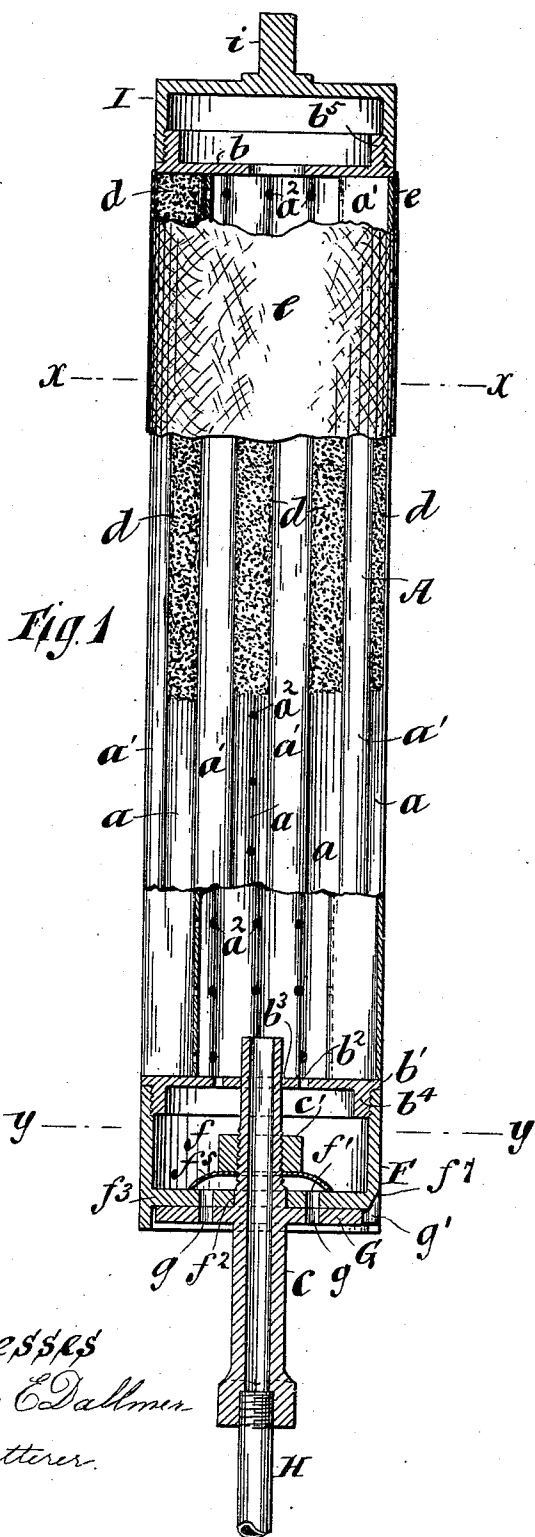


(No Model.)

R. K. COLSON.
CLOTH SPONGING CYLINDER.

No. 523,107.

Patented July 17, 1894.



Witnesses
John E. Dillman
E. Gatterer.

Inventor
Robert K. Colson
By his attorney
Geo. Wadman

UNITED STATES PATENT OFFICE.

ROBERT K. COLSON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO HANS ERICH DALLMER, OF SAME PLACE.

CLOTH-SPONGING CYLINDER.

SPECIFICATION forming part of Letters Patent No. 523,107, dated July 17, 1894.

Application filed March 20, 1894. Serial No. 504,387. (No model.)

To all whom it may concern:

Be it known that I, ROBERT K. COLSON, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented a new and useful Improvement in Cloth-Sponging Cylinders, of which the following is a specification.

The object of my improvement is to provide a steam cloth sponging apparatus capable of depriving the steam passing through it into the cloth to be treated, of all superfluous moisture and produce comparatively dry steam.

By this improvement the tendency of steam to damage the fabric by reason of its excessive moisture is obviated.

In the accompanying drawings Figure 1 is a longitudinal section partly in elevation of a cloth sponging cylinder embodying my improvement. Fig. 2 is a transverse section of the same taken at the plane of the line $x x$, Fig. 1. Fig. 3 is a transverse section of the same taken at the plane of the line $y y$, Fig. 1.

A designates a hollow fluted cylinder preferably made of sheet metal bent to form a series of longitudinal grooves a , and a series of hollow ribs a' . The respective ends of this cylinder A, are secured by solder or other means to disks or plates $b b'$; the latter being provided with a number of perforations b^2 , for the passage of water of condensation, and a central opening b^3 , for the reception of the nozzle of a steam inlet pipe c , which thereby aids to support the cylinder vertically. The bottoms of the grooves a , contain a row of perforations a^2 , and the grooves themselves are filled their entire length between the disks $b b'$, with a suitable material, such as jute or burlap d , for absorbing the moisture of steam passing from the perforations a^2 .

e is a layer of woven material such as muslin, or cotton flannel wrapped around the cylinder between the disks $b b'$, to inclose and secure in place the material d .

F is a hollow cylindrical extension of the cylinder A, and contains a chamber f , for the reception and storage of water of condensation. This extension has a screw threaded connection with a flange b^4 , of the disk b' , and is provided with a head f^3 , containing aper-

tures f' , and a central opening f^2 , fitting a neck portion of the pipe c ; and around which, the cylinder A, and extension F, are free to turn.

G is a circular valve plate secured to or forming a part of the inlet pipe c . This valve plate is provided with apertures g , corresponding in number and position with the apertures f' , whereby they may be brought in line to form an outlet for the discharge of water accumulated in the chamber f , after suitable intervals, during the process of sponging a roll of cloth wrapped around the cylinder.

The inlet pipe c , is adapted at its lower end, to be connected to a steam pipe H, containing a suitable steam valve for admitting steam within the cylinder A. The upper portion of the pipe c , is screw threaded to receive a nut c' , between which, and the head f^3 , is interposed a spring washer f^5 , having two opposite portions f^6 , of its circumference bent downwardly to bear on the head f^3 , and thereby hold the adjacent faces of the head f^3 , and plate G, in close contact.

g' is a finger fitted to work in a notch f^7 , and limit the extent of rotation of the cylinder A, in order to bring the apertures g , and f' , into, or out of alignment when opening or closing the valve.

I is a cap having a screw threaded connection with a flange b^5 , of the disk b , and is provided with a pin i , by which the cylinder may be supported horizontally in suitable notches of a rack when not in use.

By this construction the water of condensation passes out of the fluted cylinder and live steam is therefore prevented from coming in contact with it and condensing. The fluted construction of the cylinder also affords a large area of heating surface to which the material d , is advantageously exposed, and which tends to convert the moisture already absorbed by the material into steam again.

I claim—

1. A cloth sponging cylinder having suitable inlet and outlet openings, valves controlling the same, said cylinder consisting of a hollow longitudinally fluted shell, and having upper and lower end plates secured thereto, the fluted portions or grooves of the shell

being perforated and filled with absorbing material confined therein, substantially as described.

2. A cloth sponging cylinder, a steam inlet
5 nozzle vertically supporting the same, said
cylinder consisting of a hollow longitudinally
fluted or grooved shell, and having upper and
lower end plates secured thereto, the fluted
10 portions or grooves of the shell being perfo-
rated and filled with absorbing material, a
waste water receptacle communicating with
the cylinder and having a discharge outlet
and a valve operated by the movement of the
cylinder for controlling said outlet.

15 3. In a cloth sponging apparatus, the com-
bination of a hollow fluted or grooved cylin-
der A, end plates secured thereto, said cylin-
der having its grooves, *a*, perforated and filled
with absorbing material confined therein the
20 hollow cylindrical extension F, detachably

connected to the cylinder A and having its bot-
tom *f*³, perforated and fitted to turn on a neck
portion of the pipe *c*, the vertical pipe *c*, hav-
ing a disk G, to support the apparatus and
containing perforations to coincide with the 25
perforations of the bottom *f*³, the spring
washer *f*⁵, and nut *c*' fitted to the pipe *c*, and
adapted to hold the disk G and bottom *f*³ to-
gether, the finger *g*', working in a notch in
the extension F, and the end plate *b*' having 30
its central portion perforated and adapted to
fit and turn on the pipe *c*.

In testimony that I claim the foregoing as
my invention I have signed my name, in pres-
ence of two witnesses, this 16th day of March, 35
1894.

ROBERT K. COLSON.

Witnesses:

GEO. WADMAN,
JOHN E. DALLMER.