No. 733,718. PATENTED JULY 14, 1903.

H. C. HILDEBRAND.

CURTAIN DRYING APPARATUS.

APPLICATION FILED APR. 22, 1903.

NO MODEL.

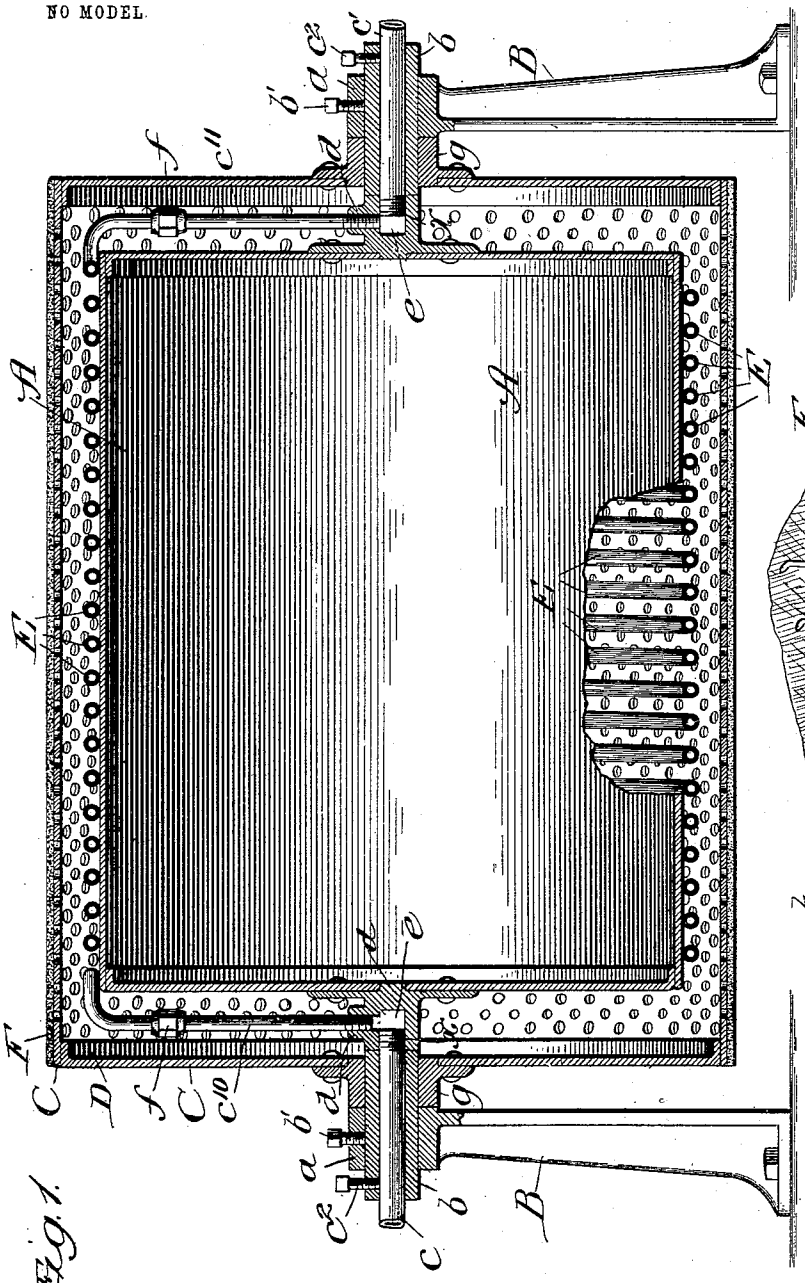


Fig. 1.

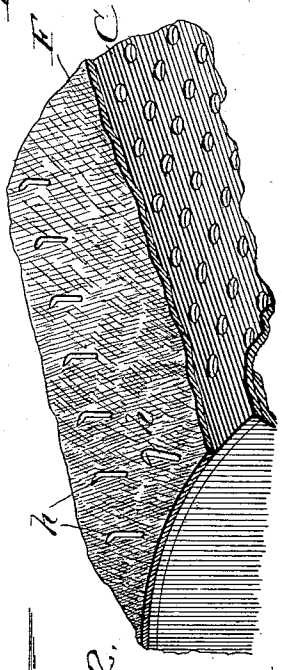


Fig. 2.

Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 733,718. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

HENRY C. HILDEBRAND, OF CHICAGO, ILLINOIS.

CURTAIN-DRYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 733,718, dated July 14, 1903.

Application filed April 22, 1903. Serial No. 153,784. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. HILDEBRAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Curtain-Drying Apparatus, of which the following is a specification.

The object of my invention is to provide a novel construction of apparatus for drying lace curtains which shall supplant the means hitherto more commonly employed for the purpose comprising a frame on which the curtain is stretched and incurring in its use an arduous and slow procedure in accomplishing the drying purpose, which is accomplished with great facility and much more rapidly by the use of my improved apparatus, illustrated in the accompanying drawings, in which—

Figure 1 is a broken vertical longitudinal section of my improved apparatus, and Fig. 2 a broken perspective view showing details.

A is a drum of sheet metal or other suitable material, stationarily supported from its heads on standards B B in the manner hereinafter described.

C is a numerously-perforated drum, which may be formed of the same material as the drum A, which it envelops to form about the inner drum the hot-air space D, containing a steam-coil E, extending about the stationary inner drum. About the drum C is wrapped a blanket F, of any suitable material.

The standards B terminate at their upper ends in annular bearings *a*, each containing a sleeve or bushing *b*, confined in it by set-screws *b'* and through which respectively extend the steam-inlet pipe *c* and steam-outlet pipe *c'*, each threaded at its inner end, as shown at *x*, and confined against movement in its bearing by a set-screw c^2. The threaded ends of the steam-pipes screw into hubs *d d* on the heads of the inner drum A, thereby stationarily supporting the latter on the standards, and threaded extensions c^{10} and c^{11} rise from the hubs *d*, in which chambers *e e* are formed, with which said extensions communicate and from which they lead, respectively, to opposite ends of the coil E, being coupled therewith, as represented at *f f*.

The outer perforated drum C is rotatably journaled on the standards at its hubs *g g*, surrounding the sleeves *b* near their inner ends and confined between the bearings *d*.

Steam admitted into the coil through the pipe *c* discharges through the pipes *c'* and in its course through the coil quickly heats air circulating about it in the drying-space D because of its comparatively small area, which prevents dissipation and undue loss of heat, such as would result were the heating-space to comprise the entire inner area of the perforated drum.

To use the apparatus for its purpose, a curtain to be dried is fastened at one end upon the blanket F, a longitudinal row of permanent pins *h* being shown in Fig. 2 for fastening it at that end, and circumferential rows of pins, one of which is indicated at *h'*, may also be provided to extend permanently from the blanket about the drum C, near its outer ends, for fastening the curtain along its longitudinal edges. Instead, however, of providing permanent pins on the blanket for the curtain-fastening purpose, the curtain may be fastened in place in any other suitable manner, as by means of ordinary pins inserted into the curtain-blanket at desired intervals. When one end of a curtain has been thus fastened, the drum C is revolved to wind lengthwise about it, (the curtain,) the opposite end of which is then fastened to the blanket. In this manner a plurality of curtains may for simultaneous drying be imposed one upon the other about the perforated drum, with their initial ends and edges fastened by the permanent pins *h h'*, if provided, or they may be pinned one to the other in their superimposed relation. The steam coursing the coil E quickly heats the air in the heating-space D, which permeates the blanket and curtain or curtains imposed thereon, rapidly and thoroughly drying them in their stretched condition, from which they may be readily released when dry, to be supplanted by one or more other curtains requiring to be dried.

The dimensions of the perforated outer drum should be such as to cause its circumference to equal or exceed the length of the longest curtain to be dried and to cause its length to exceed the width of such a curtain.

What I claim as new, and desire to secure by Letters Patent, is—

1. A curtain-drying apparatus, comprising, in combination, a stationarily-supported inner drum, a rotatably-supported and perforated outer drum enveloping said inner drum and forming an intermediate relatively narrow air-heating space, and a steam-coil surrounding the inner drum within said space.

2. A curtain-drying apparatus comprising, in combination, a stationarily-supported inner drum provided on its heads with chambered hubs, a rotatably-supported, perforated and blanket-covered outer drum enveloping said inner drum and forming an intermediate air-heating space, steam inlet and outlet pipes screwing into said hub-chambers, extensions of said pipes rising from and communicating with said chambers, and a steam-coil surrounding the inner drum within said space and with the opposite ends of which, respectively, said extensions are coupled.

3. A curtain-drying apparatus comprising, in combination with standards terminating at their upper ends in bearings and having sleeves confined in said bearings, an inner drum having chambered hubs on its opposite heads, steam inlet and outlet pipes confined in said sleeves and screwing respectively into said hubs, a perforated blanket-covered outer drum enveloping said inner drum to form an intermediate air-heating space and provided on its heads with hubs at which it is journaled to rotate on said sleeves, extensions of said pipes rising from and communicating with the chambers in the hubs of the inner drum, and a steam-coil surrounding the inner drum within said space and with the opposite ends of which, respectively, said extensions are coupled.

HENRY C. HILDEBRAND.

In presence of—
W. B. DAVIES,
WALTER W. WINBERG.