

(No Model.)

J. SCHARR.
Apparatus for Bleaching Yarn, Wool, &c.
No. 238,973.
Patented March 15, 1881.

FIG. 1.

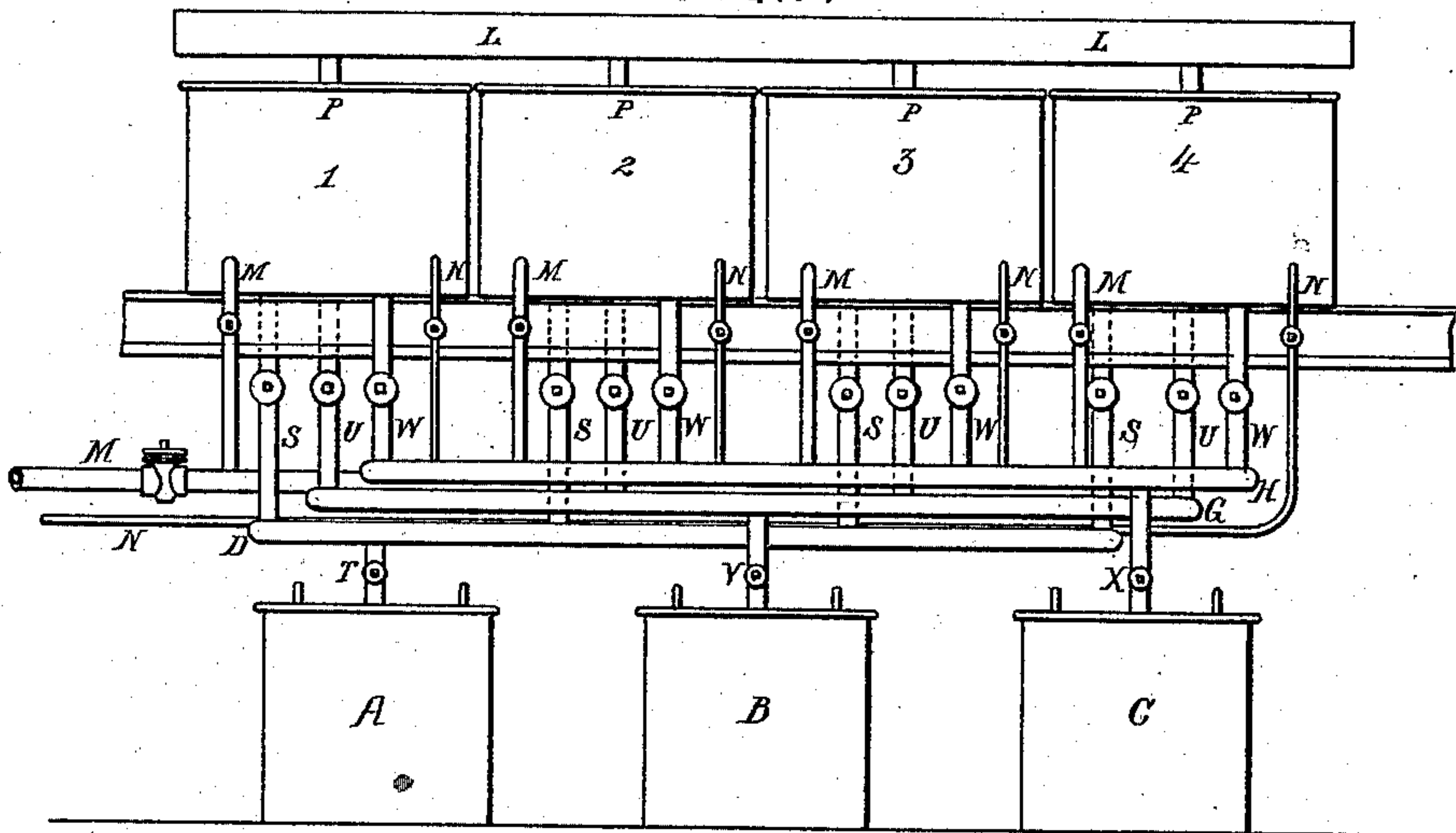


FIG. 3.

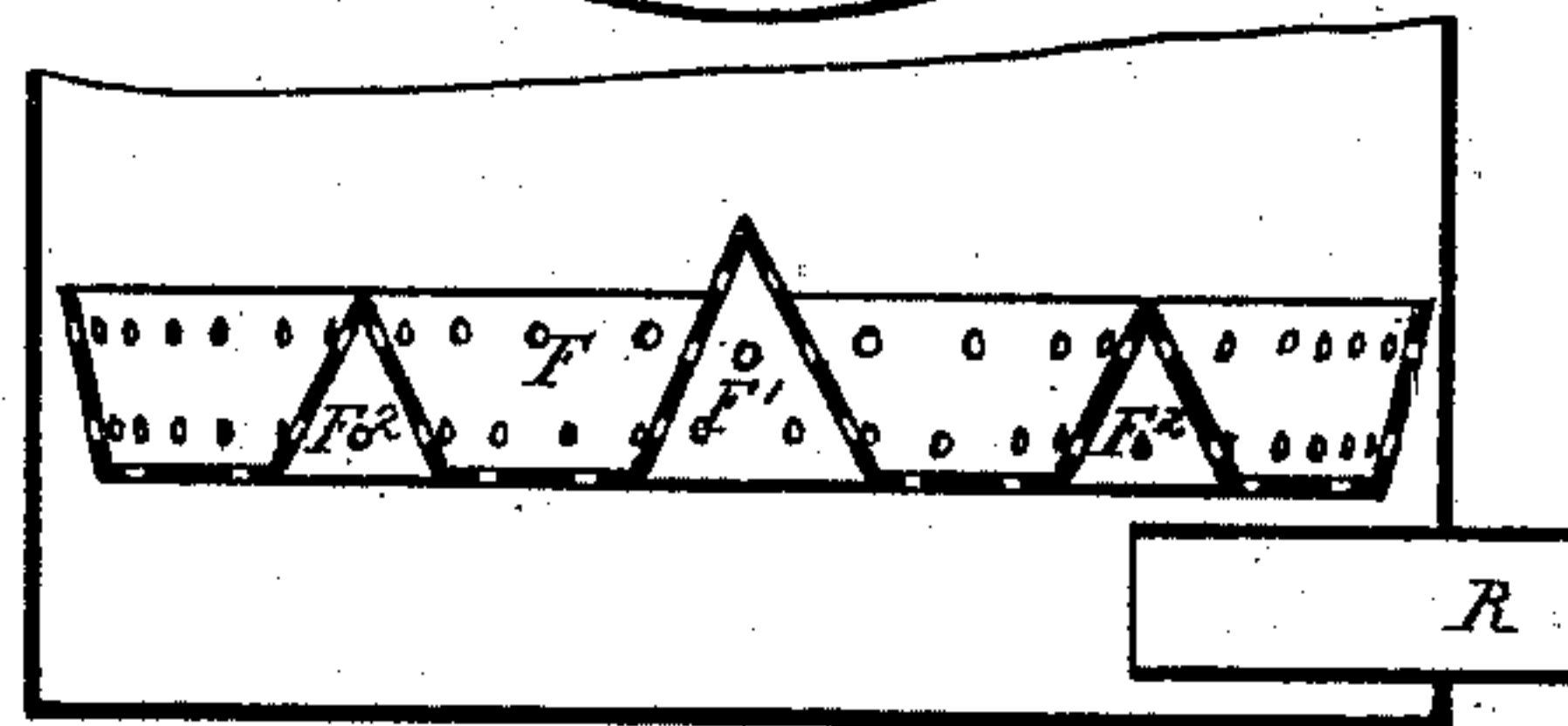
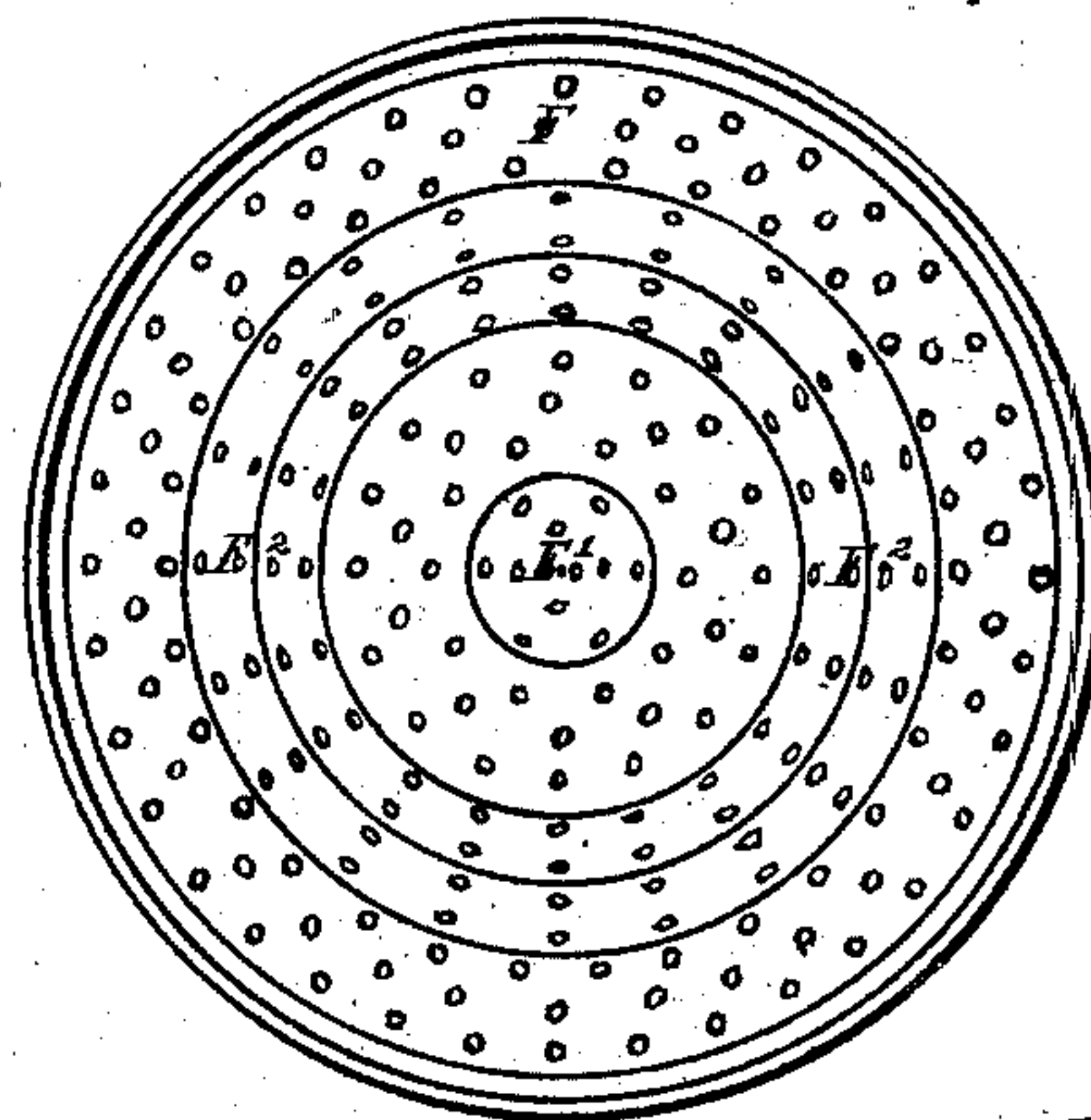


FIG. 4.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JONATHAN SCHARR, OF BRADFORD, COUNTY OF YORK, ENGLAND.

APPARATUS FOR BLEACHING YARN, WOOL, &c.

SPECIFICATION forming part of Letters Patent No. 238,973, dated March 15, 1881.

Application filed May 20, 1880. (No model.) Patented in Great Britain October 7, 1879.

To all whom it may concern:

Be it known that I, JONATHAN SCHARR, a subject of the Queen of Great Britain and Ireland, and residing at Bradford, in the county of York, England, have invented certain Improved Apparatus for Bleaching, Washing, and Treating Yarn, Wool, &c., (for which I obtained a patent in Great Britain, No. 4,052, October 7, 1879,) of which the following is a specification.

The object of this invention is to so construct a receptacle in which to bleach, wash, dye, or otherwise treat yarn, wool, and other fibrous material that the liquor may readily penetrate through all parts of the material under treatment; and this object I attain in the manner which I will proceed to describe.

In the accompanying drawings, Figure 1 represents a front elevation of a bleaching apparatus in connection with which my improvements are adapted to be used. Fig. 2 is an end view of the same, showing a receptacle or steeper partly in section. Fig. 3 is a plan of the perforated false bottom fitted into each of the receptacles or steepers, and Fig. 4 is a section through the bottom portion of a steeper and perforated false bottom.

The cisterns containing the various bleaching or treating liquors are numbered 1, 2, 3, and 4, and are connected by pipes to each of the receptacles or steepers A, B, and C, into which the wool or other material is placed. The line of pipes D is connected to each cistern 1, 2, 3, and 4 by branch pipes S and to the steeper A by pipes T. The line of pipes G is connected to the cisterns by branch pipes U, and to the steeper B by pipes V, and the line of pipes H by branch pipes W and to the steeper C by pipes X, each of the branch pipes being fitted with a valve or stop-cock, by which arrangement I am enabled to pass liquor contained in the cisterns through any one or all of the steepers. The horizontal pipes R, by which the pipes T, V, and X communicate with the receptacles, pass through the sides of the latter at the lower end below a peculiarly-shaped perforated false bottom, F, on which the wool or other material is placed. The liquor, after passing upward through the contents in each steeper, runs out at an overflow-branch, K, and if it is desired to use the liquor again it is conveyed by a portable trough to a

tank placed at a lower level, and lifted therefrom by means of an ordinary pump or injector into a trough, L, which is divided into as many divisions as there are cisterns, each division being connected by pipes P to one of the cisterns. Thus I am enabled to obtain a continuous flow through the steepers and use the liquor over and over again until all the virtue is extracted therefrom.

The pipes M are for supplying the cisterns and steepers with water, and are connected to the horizontal pipes R communicating with the bottom of the steepers.

N are steam-pipes, which are also connected to the cisterns and to the horizontal pipes R at the bottom of each steeper, so that the liquor in the cisterns or steepers can be regulated to the desired temperature.

The perforated false bottom F is dished, the flange around the circumference being at an obtuse angle with the bottom. The center of the false bottom F' is coned, and between the center and the flange, at the circumference, are one or more annular rings, F², of conical section. The liquor flows into the steeper through the horizontal pipes R underneath the false bottom F, and through the perforations in the outer flange and the flat portion of the bottom, as well as through the perforations in the annular ring and central cone, and thus impinges upon the contents in a perpendicular and angular direction and thoroughly saturates every portion of the contents.

I claim as my invention—

1. A bleaching or similar receptacle provided with a perforated false bottom having a perforated central cone, F', and perforated annular ring F².
2. The combination of a bleaching or similar receptacle having a perforated false bottom with a perforated central cone and perforated annular ring, with an inlet-pipe below the false bottom and an outlet near the top, all substantially as set forth.

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

JONATHAN SCHARR.

Witnesses:

JOHN WAUGH,
JOHN GILL.