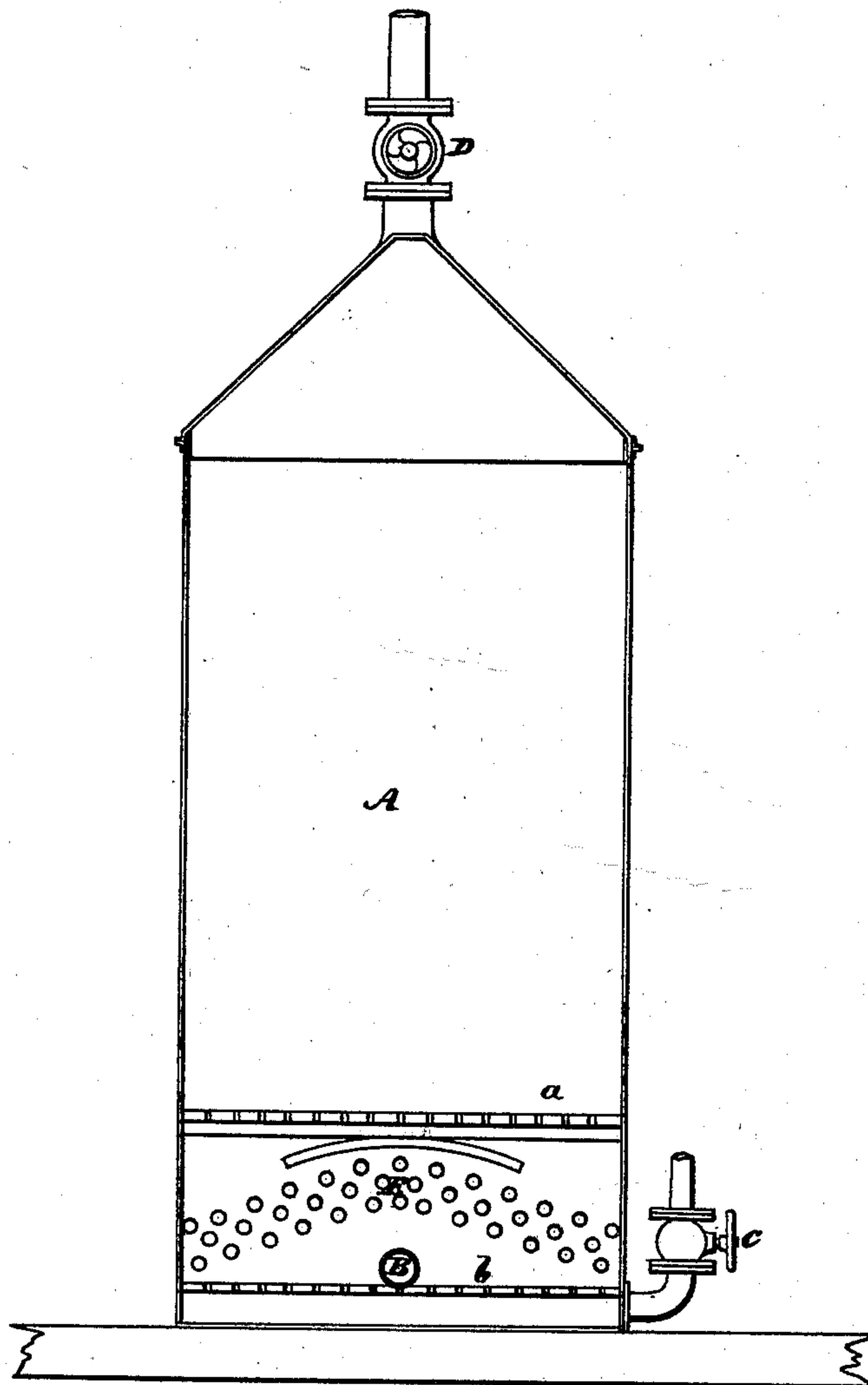


C. T. MIEG.
Method of Fixing and Developing Colors on Fabrics.
No. 166,287. Patented Aug. 3, 1875.



Witnesses

1 *Harley Linton*
2 *Charles DeRosier*

Inventor

Charles Henry Mieg

att. by
and Briesen

UNITED STATES PATENT OFFICE.

CHARLES THIERRY MIEG, OF PARIS, FRANCE.

IMPROVEMENT IN METHODS OF FIXING AND DEVELOPING COLORS ON FABRICS.

Specification forming part of Letters Patent No. **166,287**, dated August 3, 1875; application filed May 26, 1875.

To all whom it may concern:

Be it known that I, CHARLES THIERRY MIEG, of Paris, France, have invented a new and Improved Process of and Apparatus for Fixing and Developing the Colors on Fabrics, of which the following is a specification:

The drawing represents a vertical section of my new apparatus for fixing and developing the colors on fabrics.

The object of this invention is to combine the advantages of the various means heretofore employed for fixing colors on fabrics by heat, and, at the same time, to dispense with the disadvantages attending the employment of said means.

Two processes were heretofore mostly employed. One, the hot-air process, the other, the steam process. The former was carried out in large drying-rooms, whose atmosphere was heated to about 122° Fahrenheit, in which the workmen were obliged to move about and handle the fabrics, removing and replacing the same. The disadvantage of this process is that the atmosphere could not be raised to a sufficient degree to properly affect many colors which require greater heat to develop and fix them. The necessity of allowing workmen into the drying-room precluded the use of greater heat. The steam process was carried out by letting steam into vats containing the fabrics, in order to secure a heat of about 212° Fahrenheit. This process is defective, as the steam, in entering the vat, immediately loses its pressure, and, consequently, its temperature.

My invention seeks to combine both processes by admitting heated air, and also steam, to the vat, in separate conduits, so that the desired temperature of the steam may be equally and continuously maintained by admitting heated air, and without unduly heating the steam prior to its entrance into the vat.

In the drawing, the letter A represents a suitable steaming-vat. B is a pipe for conducting steam into the same. C is a pipe for conducting air into the vat. D is a ventilat-

ing-pipe on top for letting off the surplus and impure atmosphere. E is a coiled pipe, in which hot water, steam, or other heated fluid circulates, and which serves to heat the air that enters through the pipe C. The fabric rests within the vat, preferably on a perforated false bottom, *a*, beneath which the discharge-openings of the pipes B and C are situated. *b* is a false drip-bottom beneath the pipe B, which may, however, be dispensed with.

When steam has been let into the vat it can be retained at the proper and equal degree of temperature by admitting air through the pipe C, said air becoming heated by contact with the worm E. The admission of air and that of steam can be constantly regulated by means of cocks in the respective pipes.

Instead of admitting the air in a cold state, and heating it by the coil or other heating apparatus within the vat, it may as well be heated by suitable means previous to its reaching the vat, or just as it is about to enter the same, and the style of the vat may be suitably varied.

I am enabled, by the above-described means, to apply hot air alone to some fabrics that do not require stamping; yet, when steam is admitted, I insure its efficiency by the proper admixture of the heated air, which, in equalizing the steam pressure and temperature, economizes steam, and yet allows a greater degree of heat to be conveniently reached than could be done where steam alone is admitted, which is the case in the steam-vats formerly employed.

I claim as my invention—

The process herein described of fixing and developing colors on fabrics by exposing the same in a closed vat to the joint action of steam and of heated air, as set forth.

CHARLES THIERRY MIEG.

Witnesses:

ROBT. M. HOOPER,
CHARLES DESNOS,
ADOLPHE GUION.