

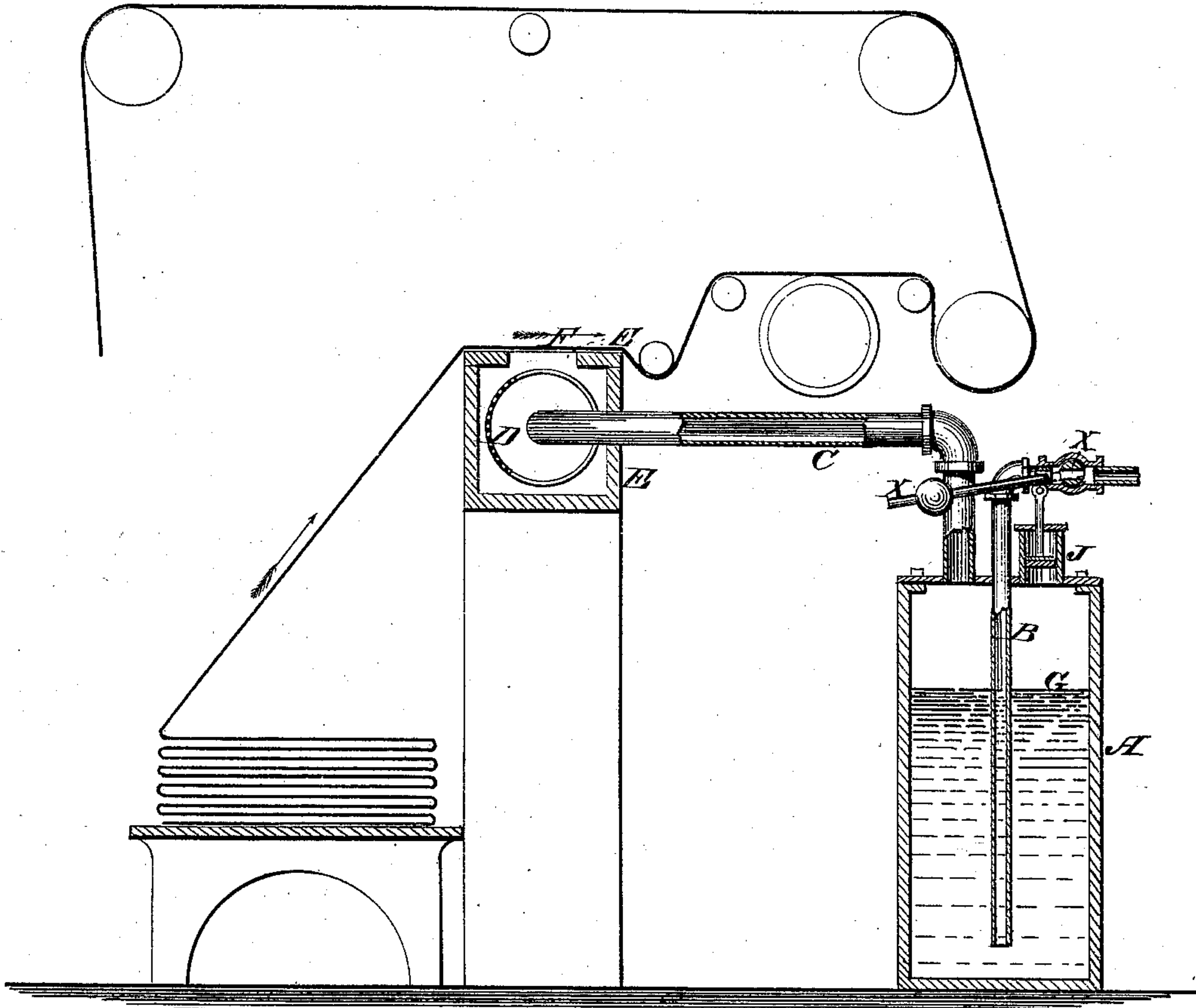
C. E. SCRIMGEOUR.

FINISHING CLOTH.

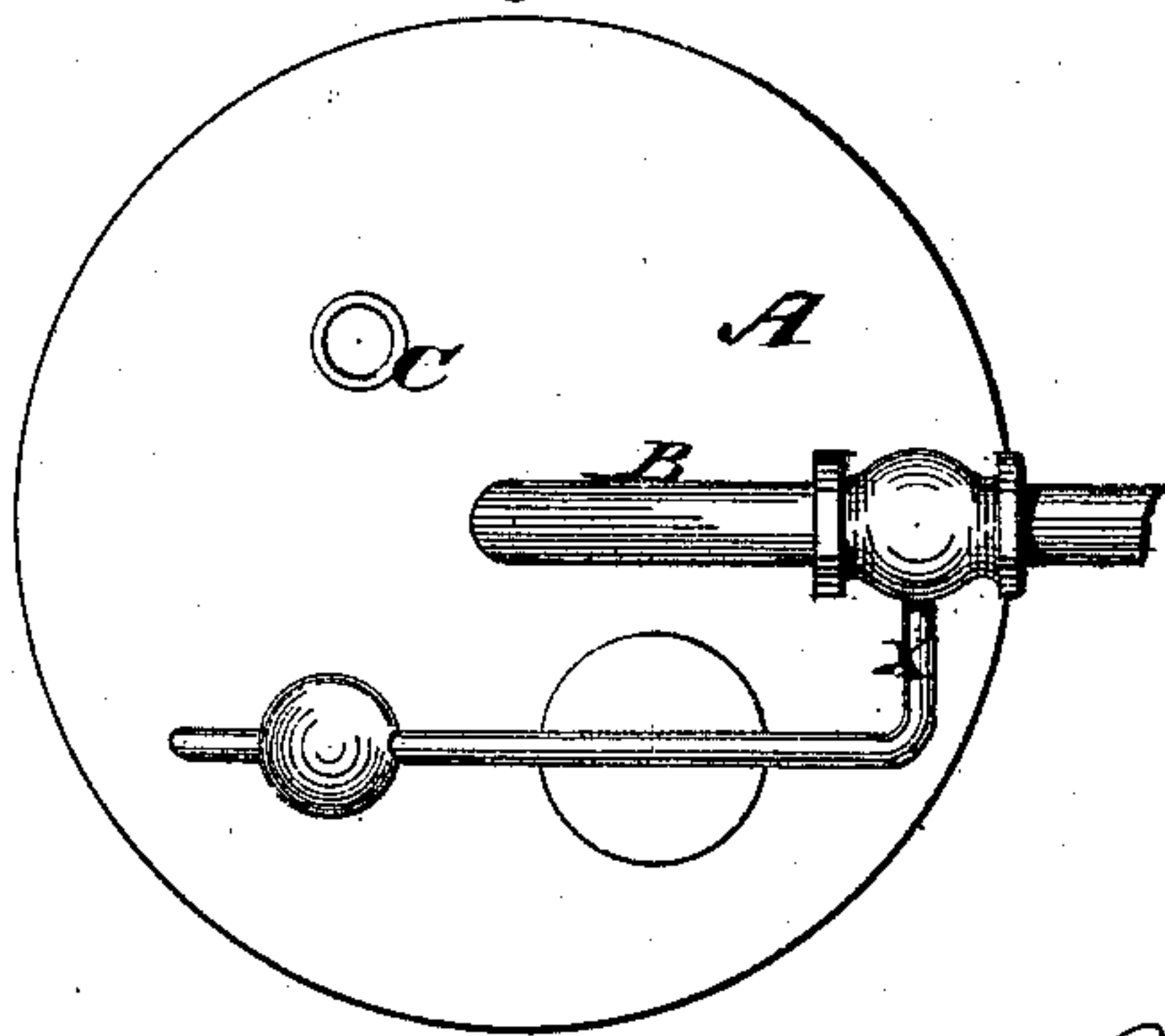
No. 174,308.

Patented Feb. 29, 1876.

*Fig. 1*



*Fig. 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES E. SCRIMGEOUR, OF ALMONTE, CANADA, ASSIGNOR TO ROSAMOND WOOLEN COMPANY, OF SAME PLACE.

## IMPROVEMENT IN FINISHING CLOTH.

Specification forming part of Letters Patent No. **174,308**, dated February 29, 1876; application filed November 19, 1875.

*To all whom it may concern:*

Be it known that I, CHARLES E. SCRIMGEOUR, of Almonte, in the county of Lanark, in the Province of Ontario and Dominion of Canada, have invented a new and useful Improvement on Process for Finishing Cloth, of which the following is a specification:

This invention has for its object to improve and facilitate the finishing of cloth in the process of steaming its face; and it consists in means for subjecting the face of the cloth to the action of vapor generated from water, to remove the gloss on its face, and creases resulting from the ordinary pressing process. The apparatus for carrying out and effecting such process consists of the combination of a water-tank having induction steam-pipe and outlet vapor-pipe connected with a perforated cylinder and boxing or other distributing device for applying the vapor to the surface of the cloth.

Figure 1 in the drawing represents a sectional view of my apparatus. Fig. 2 is a top view of a portion of the same.

Similar letters of reference indicate corresponding parts.

A is a close tank to be partly filled with water. B is the steam-induction pipe connecting with the engine-boiler and entering the tank A from above to below the water-line. C is the eduction vapor-pipe leading from the tank A above the water-line to a perforated cylinder, D, in a box, E, open at the top, or other suitable device for distributing the vapor, which will be generated from the water in the tank on the induction of steam from the boiler through the pipe B. F is the cloth, which, after being subjected to the usual pressing process, is passed over the vapor-box E in the usual manner.

J is an automatic-acting piston for the purpose of shutting off steam from the boiler through the valve *x* in the induction-pipe B when an excess of vapor is generated.

In the manufacture of cloth the ordinary pressing process produces, on both sides of the cloth, a smooth glossy surface, and in the process of passing the cloth with the face downward over the vapor-box E the gloss is removed from that side of the cloth, leaving

the reverse side in the glossy state, and retaining all the firmness produced by the pressing process while the goods are free from the heat occasioned by the use of direct steam. The removal of this gloss from the face of the cloth is quickly and efficiently effected by the passing of the cloth once or twice over the moist vapor generated in the tank A by the injection of steam from an ordinary engine-boiler. The usual way is to take steam from the boilers of the mill and apply it through the perforated cylinder. The object is to take off the glazed appearance the goods have after pressing, and to remove the fold-marks occasioned by the press-papers in the process of pressing.

It is important that as much as possible of the firmness acquired by the hard pressing be retained while giving the face of the cloth a soft yet smooth feel to the hand.

In the usual way of applying the steam the cloth requires to pass several times over the steam in order to get the uniform appearance necessary, and the difficulty experienced in almost every mill is to keep the goods cool, retain the firmness, and yet have the glazed surface uniformly removed.

I find, in practice, that all this, by this improvement, can be done by one or, at most, two revolutions.

The process is simply first passing the steam through water before applying it through the cylinder previously mentioned. In other words, the steam is passed into an inclosed vessel partly filled with water. The water boils and gives off steam, which is used for the purpose mentioned in place of direct steam from boiler. The steam is moist in place of dry.

Ordinarily the steam is brought as directly as possible from the boiler to the cloth, being thus at a maximum of pressure and dryness. The result of this is that it requires repeated applications to effect the desired object, and these tend to lessen the firmness that has been produced by pressure and the gloss that is on the back, which is very undesirable. These objections are removed by the use of wet steam, the result being attained at a lower temperature, at a less pressure, and in a very brief time.



Of course my apparatus for producing wet steam is only illustrative, the same being susceptible of production by other devices.

What I claim as new is—

The combination of close tank A, to be partially filled with water, an induction-pipe, B, connected with the steam-space of a boiler, and extending into the tank below the water

line, the eduction-pipe C, and the perforated cylinder D in box E, as and for the purpose specified.

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Witnesses:

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