(No Model.)

E. LANDRY.

CALENDERING MACHINE.

No. 263,540. Patented Aug. 29, 1882

FIG. 1.

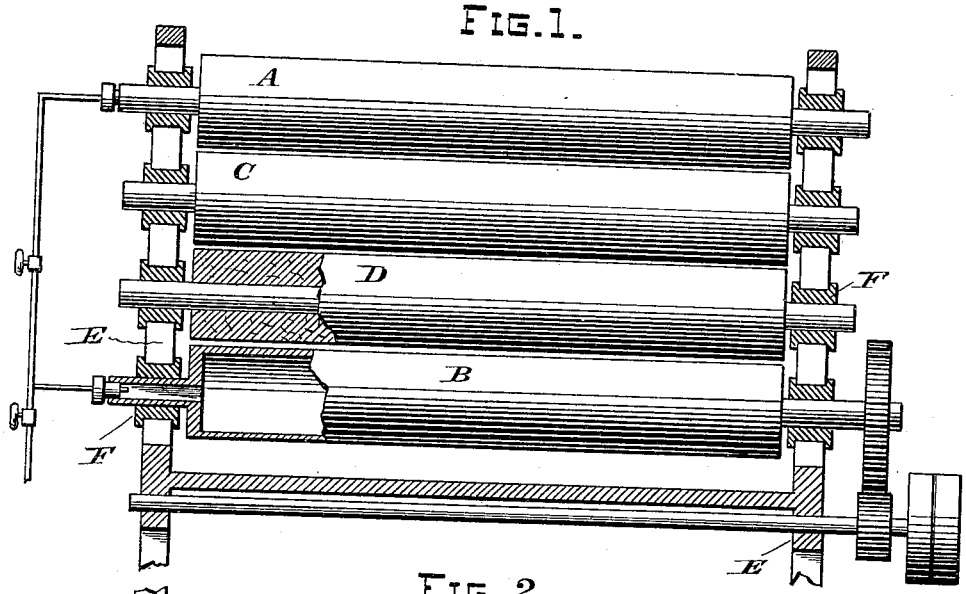
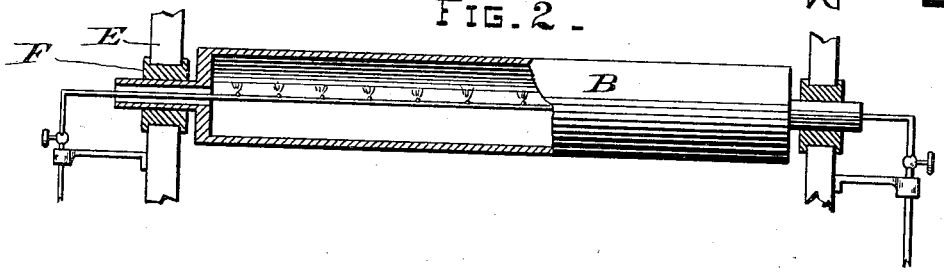


FIG. 2.



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ETIENNE LANDRY, OF SAN FRANCISCO, CALIFORNIA.

CALENDERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 263,540, dated August 29, 1882.

Application filed May 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, ETIENNE LANDRY, a citizen of the Republic of France, and residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Improvement in Calendering-Machines, of which the following is a specification.

Heretofore in the calendering of fabrics it has been the custom to pass the goods between two rollers, one of which was constructed of wood and one of metal, and weighted by means of a weighted lever, or by screws placed upon the top of the calendering-machine, to obtain the desired amount of pressure, and one of these rollers was heated by inserting a red-hot cylinder into it, or by steam or gas. By this construction, however, it has been found that the wooden cylinder was indifferently or insufficiently heated, and in passing long pieces of fabric through such a machine the necessary amount and uniformity of heat could not be maintained or kept up to impart to the cloth or goods that fine finish which is so essential in good or perfect calendering.

Hence the object of my invention is to provide a machine in which a uniform heat is imparted to the wooden or paper rollers and the fabric or goods finished in a perfect and uniform manner upon both sides or surfaces at the same time. I accomplish this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional front elevation representing a series of calendering-rollers. Fig. 2 is a sectional elevation of a roller heated by gas.

Similar letters refer to similar parts throughout the several views.

I construct my calendering-machine with a series of cylinders, the middle ones being made of wood or paper and the upper and lower ones of metal.

A represents the upper hollow cylinder, and B the lower hollow cylinder, both of which are constructed of bronze or other metal that will retain heat. Intermediate between these cylinders are placed the finishing-cylinders C and D. These I construct of wood or paper in the usual way. All of the series are placed in standards or supporting-brackets E, and have their end bearings in movable journals or boxes F in such a manner as that the surfaces of the rollers can be brought closer together or removed farther apart, as desired.

By means of weighted levers, or by screws at the top of the machine, any required amount of pressure may be applied to the fabric.

The series of metal rollers are heated by steam, gas, or by inserting red-hot cylinders into them in the usual way. Thus it will be seen that each one of the metal rollers is heated separately, and the fabric which is passed between the wooden or paper cylinders is treated upon both sides with a uniform degree of heat, and the same or a uniform gloss is imparted upon both sides of the goods, which would not be the case where the fabric is passed through the ordinary calendering-machines, where one roller is made of wood or paper and one of metal, as that side or surface of the cloth which is in contact with the metal roller will receive a greater degree of heat than the surface which is in contact with the wood or paper cylinder, and hence the faces are not finished alike. By this means it will also be seen that the heat is imparted by the upper and lower heating-cylinders to the solid or finishing cylinders at their extreme upper and lower points, and that the fabric is passed through or between the finishing-cylinders in the center of the press or machine, and consequently the goods can in no way become spoiled or damaged, being protected from too great heat by the arrangement of the middle cylinders, and receive only a soft or gradual heat, so essential to a fine finish, touch, and appearance, which cannot be imparted by the ordinary machine now in use.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a calendering-machine, the means, substantially as herein described, of finishing fabrics, which consists essentially of passing the goods through or between two or more finishing rollers or cylinders, to which the necessary heat is imparted by an upper and lower roller coming in contact with the said finishing-cylinders, said upper and lower rollers be-

ing heated by steam or gas, in the manner as herein set forth and specified.

2. In a calendering-machine, the combination and arrangement together of two or more finishing cylinders or rollers interposed between two or more heating-cylinders, the latter being heated by gas or steam and operated by suitable gearing, substantially in the manner as herein set forth and specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

ETIENNE LANDRY. [L. S.]

Witnesses:
WILMER BRADFORD,
CHAS. E. KELLY.