

H. E. SMITH.

Machines for Pressing Cloth.

No. 147,989.

Patented Feb. 24, 1874.

Fig. 1.

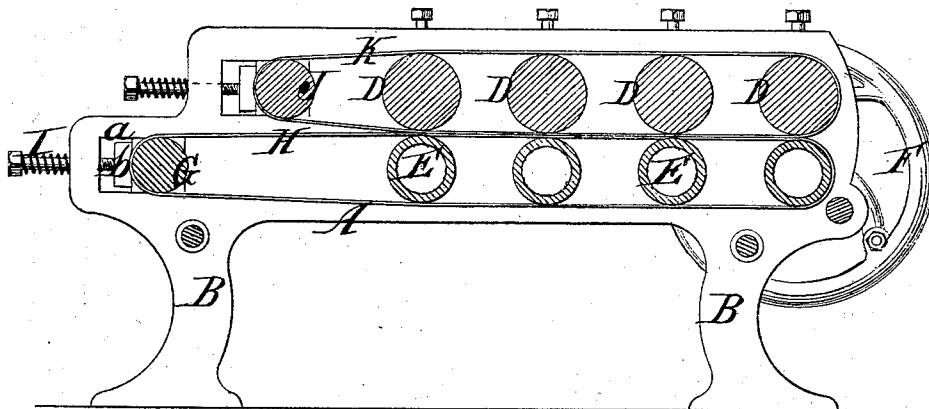


Fig. 2.

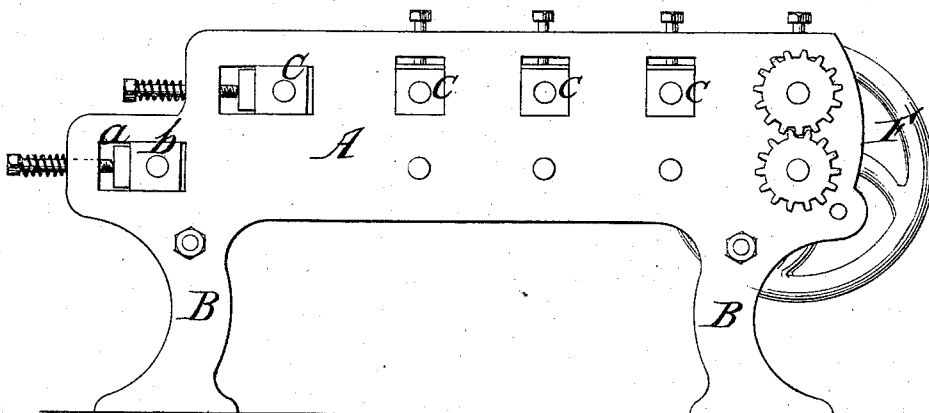
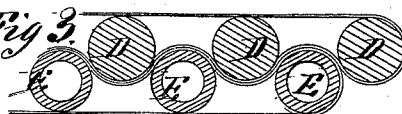


Fig. 3.



Witnesses.

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HAMILTON E. SMITH, OF WEST FITCHBURG, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR PRESSING CLOTH.

Specification forming part of Letters Patent No. **147,989**, dated February 24, 1874; application filed September 4, 1873.

To all whom it may concern:

Be it known that I, HAMILTON E. SMITH, of West Fitchburg, in the county of Worcester and State of Massachusetts, have invented a new and Improved Machine for Pressing Cloth or other articles; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a longitudinal vertical section of this invention. Fig. 2 is a side view of the same. Fig. 3 is a modification, showing a different mode of locating the rollers.

Similar letters indicate corresponding parts.

This invention consists in the arrangement, in a machine for pressing cloth or other articles, of an upper and lower series of heating and pressing rollers arranged horizontally, or nearly so, and each surrounded by an endless apron, which receives motion from said rollers.

The cloth or article to be operated upon is introduced between the aprons, and is carried by them through the machine.

In the drawing, the letter A designates the frame of my machine, provided with supporting-standards B B and with journal-boxes C, which form the bearings for the pressing-rollers D. The rollers E are placed beneath the rollers D, and the same are made hollow, and steam or hot air is let in at the end thereof, for the purpose of heating the same.

The rollers situated at the discharging end of the machine are geared together, as shown in Fig. 2, and the same are operated by means of a pulley or wheel, F.

In the example of my invention shown in Figs. 1 and 2 the rollers are arranged in pairs vertically over each other; but, if desired, they may be placed so as to alternate with each other, the top or pressing rollers D resting on two of the rollers E, and the latter coming between or in contact with two of the upper rollers, as shown in Fig. 3, and by this means lead the apron in a zigzag course.

The frame A is provided with extensions, which are furnished with slots *a*, to receive the journal-boxes *b* of a roller, G, which I term the "tension-roller" of the receiving-apron H, which apron is stretched over the heating-rollers E, and the tension thereof is

regulated by adjusting the boxes *b* in their slots by means of the set-screw I.

J is the tension-roller of the pressing-apron K, and the same is mounted similarly to the tension-roller of the receiving-apron H in the frame A, and said pressing-apron extends around the upper or pressing rollers D and round its tension-roller, as shown in Fig. 1.

The aprons H and K may be made of leather, rubber, felt, or of sheet metal, or the lower apron may be of metal and the upper apron of felt or equivalent material.

When metal aprons are used, gas jets or burners can be introduced between two rollers, and the heat thus brought in direct contact with the metallic belts or aprons.

The arrangement of metallic and felt or equivalent aprons is preferable for imparting a surface polish to the material or cloth; and in order to give a better surface polish, the lower rollers may be a little smaller than the upper ones, so that the metallic belt shall move slower than the upper belt, and a slipping or sliding action of the heated metallic belt or apron on the goods be produced, similar to the action of the ordinary smoothing-iron.

By adjusting the pressing-rollers D, their apron can be brought to bear with more or less force upon the receiving-apron H, and if the rollers are put in operation by means of the pulley or wheel F, and the articles to be pressed are spread on the exposed portion of the receiving-apron, said articles are carried in between the two aprons, and having passed through between the pressing and the heating rollers they are discharged in a smooth and glossy condition.

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

1. The combination of a series of pressing-rollers, D, and their endless apron K, with a series of heated rollers, E, and their endless apron H, arranged and operating substantially as described, for the purpose specified.

2. In combination with the pressing and heating rollers D E and endless aprons K H, the tension-rollers J G, arranged and operating substantially in the manner herein shown and described.

HAMILTON E. SMITH.

Witnesses:

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