

H. W. MERRILL.
Sand-Papering Machine.

No. 159,953.

Patented Feb. 16, 1875.

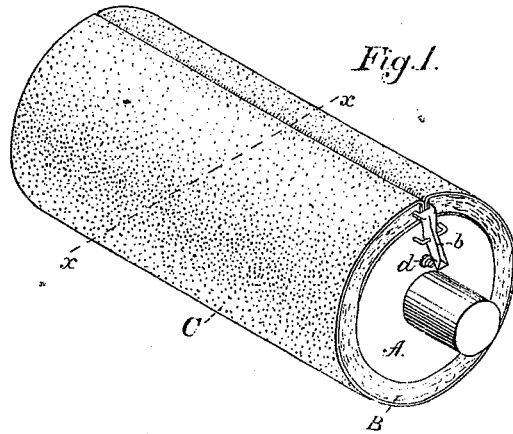


Fig. 2.

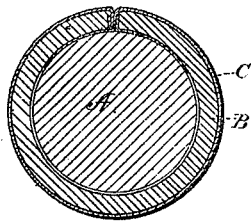


Fig. 3.

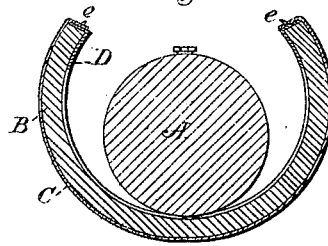
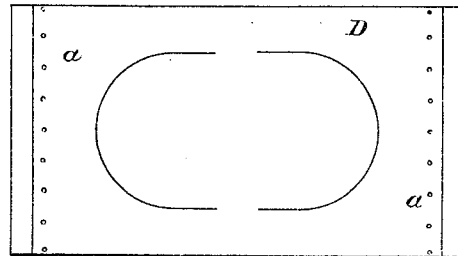


Fig. 4.



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Inventor:
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Fig. 5.

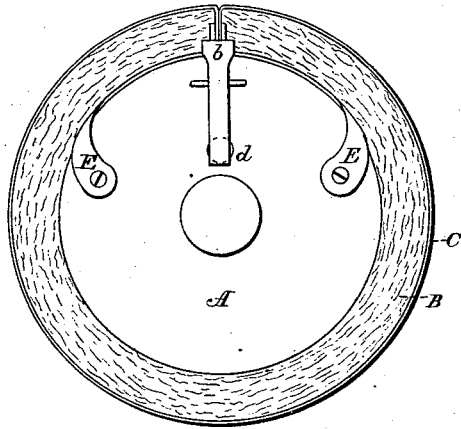
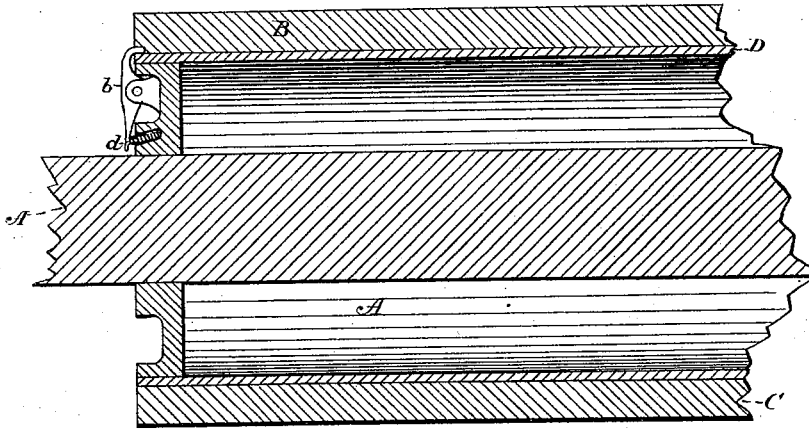


Fig. 6.



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UNITED STATES PATENT OFFICE.

HOLLIS W. MERRILL, OF LYNN, MASSACHUSETTS.

IMPROVEMENT IN SANDPAPERING-MACHINES.

Specification forming part of Letters Patent No. 159,953, dated February 16, 1875; application filed January 30, 1875.

To all whom it may concern:

Be it known that I, HOLLIS W. MERRILL, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Sandpapering-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of machines used in the arts for the purpose of reducing the rough and uneven surfaces of articles made of wood, metal, or leather, such as tool-handles, pen-holders, or any other surface upon analogous material which it may be desired to operate upon, the object being to so form the rolls for carrying the sand-paper as to give them an elastic yielding surface, and allow of the ready removal of and replacement by new sheets of the worn sand-paper; and the invention consists in the means by which this is accomplished, as will be hereinafter fully described, and then claimed.

Figure 1, Sheet 1, of the drawings presents a perspective view of one of the rolls ready for use. Fig. 2 represents a section upon the line *xx* of Fig. 1. Fig. 3 shows a section of the roll upon the same line as Fig. 2, but with the clamps removed to allow the spring to open the elastic covering of the roll. Fig. 4 is a plan view of the spring, showing the method of forming it from a single sheet of metal. Fig. 5, Sheet 2, presents an end view of a roll with the clamps for securing the ends of the elastic covering.

In the drawings, the body of the wheel or roll, whether constructed of wood or metal, is represented by the letter A. B represents the elastic covering, consisting of felt; and C denotes the abrading surface of sand-paper or emery-cloth. In the spring-roll, Fig. 1, the felt is secured to the spring-plate D by means of thread passed through the openings *a*, near the edges of the plate, the jaws of the plate, while doing this, being open, as shown in Fig. 3, Sheet 1. The sand-paper, or other abrading material, cut in appropriate lengths,

is then applied, the edges being turned within the jaws and hooked over the projecting points *e*, with which they are provided. The jaws being then brought together and secured by means of the clamps *b*, the coverings are held firmly in position.

Fig. 5, Sheet 2, is an end view of a roll provided with hinged plates E, instead of spring-plates, to which the coverings are fastened in the same manner as in the spring-roll.

This method of construction is found to be of great advantage where larger rolls of metal are used, instead of the wooden roll.

This method of securing elastic and abrasive coverings to buffing-cylinders may be employed either in solid or hollow cylinders.

In Fig. 6 is represented a hollow metallic cylinder, to which the coverings are applied, A denoting the shaft, and the other parts being represented by the letters before mentioned.

The clamp *b* is preferably formed as shown in Fig. 1, Sheet 1, being pivoted near its middle, and one end of it being provided with two jaws projecting at right angles to its body, which embrace the ends of the sheet of abrading material, as well as the springs or other devices to which they may be fastened, and when closed is retained in that position by the spring *d*.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent of the United States, the following:

1. The spring D, constructed as and for the purpose specified.
2. The clamp *b*, provided at one end with jaws for clasping the material, as described, and at the other with the spring *d*, all as and for the purpose set forth.
3. The hinged plates E, in combination with the roll A and elastic covering B, substantially as and for the purpose specified.
4. The abrading-rolls, constructed as herein described and shown, and for the purposes set forth.

In testimony that I claim the foregoing as my own I hereunto affix my signature in presence of two witnesses.

HOLLIS W. MERRILL.

Witnesses:

P. LENNOX, Jr.,
M. LENNOX.