

J. N. SMITH.
Graining-Tools.

No. 150,198.

Patented April 28, 1874.

Fig. 1

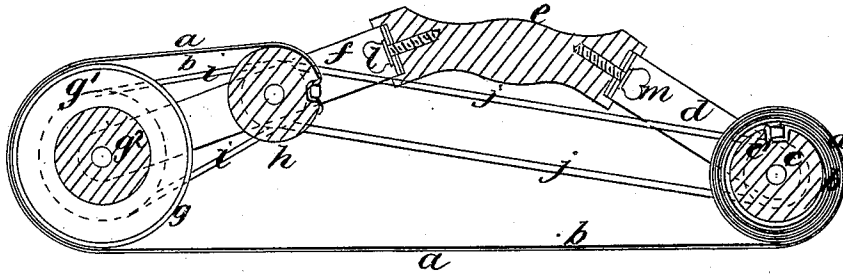


Fig. 2.

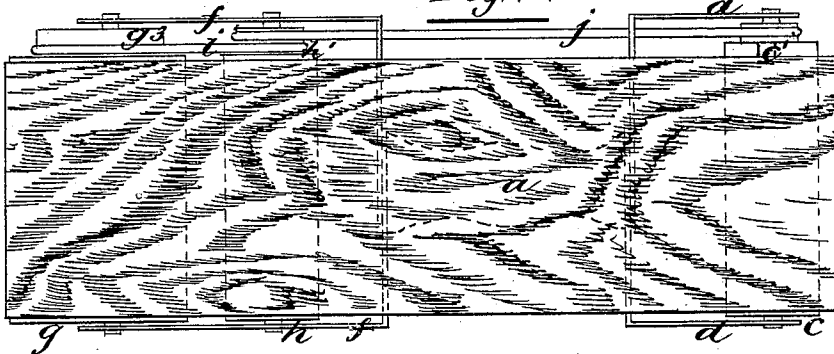


Fig. 4

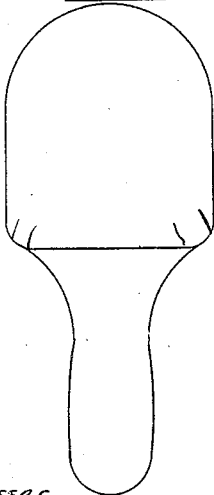


Fig. 3

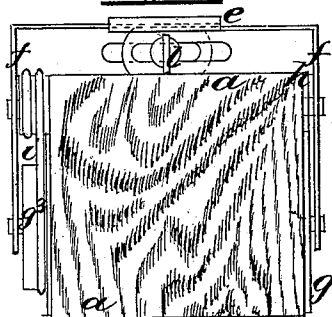


Fig. 5.



Witnesses.

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IMPROVEMENT IN GRAINING-TOOLS.

Specification forming part of Letters Patent No. **150,198**, dated April 23, 1874; application filed September 19, 1873.

To all whom it may concern:

Be it known that I, JOHN N. SMITH, of New York, county and State of New York, have invented a certain Improved Method of Graining and Machine therefor, of which the following is a specification:

The first part of my invention consists of a new method of graining, which, in appearance, is fully equal to hand-work, and only requires a very short time to do in comparison therewith. This I accomplish by painting, with a varnish or any other compound not affected by oil-paint, on a strip of porous fabric—as silk, muslin, &c.—the design in negative of the wood to be imitated. A piece of cloth coated on one side with rubber is covered with paint of the color of the grain of the wood to be imitated. The prepared silk or muslin is laid against the place to be grained, with the painted cloth against it, the rubber side being on the outside. Then, by pressing on the cloth, some of the paint absorbed by it is forced through all of the parts of the silk which are not covered with the varnish, onto the prepared surface, so that upon removing the silk and cloth the graining is accomplished. The prepared silk may be as long as required, so that any length of graining may be done without any breaks, and by keeping it in oil when not in use it will last a long time. Any design such as scrolls, lines, letters, &c., may be painted in negative on the silk and reproduced in any number by this process in a very short time. It is only necessary to cover the cloth with paint occasionally, as it will retain sufficient paint for a number of impressions. The second part of my invention relates to a machine for carrying the silk and cloth by which the operation may be performed with facility; and consists of a light iron frame, with a handle in the center, carrying two rollers, to which are attached the ends of the silk and cloth. The silk, and cloth in going from one roller to the other, pass over an elastic roller, which presses the paint on the place to be grained. The three rollers are connected together by

cords running over grooved pulleys, so that, as the elastic roller is revolved by passing over the surface operated upon, the other rollers turn with it, thereby winding the silk and cloth, from one to the other, keeping them always taut; but, to describe my invention more particularly, I will refer to the accompanying drawings, which are about one-half the size of the machine, forming part of this specification, in which—

Figure 1 is a longitudinal section. Fig. 2 is a view of the under side, showing the prepared silk. Fig. 3 is an end view, showing the manner in which the frames are fastened to the handle. Figs. 4 and 5 are views of a pad used for pressing the silk and cloth into the rounded end of a panel.

a represents the silk or muslin, &c.; and *b*, the rubber-coated cloth, both being wound around the roller *c*, and the ends fastened to it by a strip of wood pressing them into a longitudinal groove, *c'*. The roller *c* runs in the frame *d*, fastened to one end of the handle *e*. The other end of the handle *e* holds the frame *f*, which carries the elastic roller *g* near its end, and the roller *h* between the handle and elastic roller. All of the rollers are parallel, and the silk and cloth pass over the elastic roller *g*, and are connected to the roller *h* in the same manner as to the roller *c*. The elastic roller *g* is made by binding cotton batting or felt *g¹* around a wooden mandrel or shaft, *g²*, and then covering it with a thin coating of rubber. The grooved pulley *g³*, with the cord *i*, causes the roller *h* to revolve with the roller *g*, by the cord *i* passing over the grooved pulley *h'*. The roller *c* is made to turn by the cord *j* connecting it to the roller *h*. The frames *d* and *f* are secured to the handle *e* by two thumb-screws, *l* and *m*, passing through slots in both sides of the frames, so that the sides of the frames may be adjustable to hold different widths of rollers carrying different widths of silk and cloth, as shown at Fig. 3.

Figs. 4 and 5 represent the front and side view of a pad for pressing the silk and cloth

into the top end of a rounded panel, after the roller *g* has pressed the silk and cloth as far as it can, so that the whole of any shaped panel may be grained by this machine without any subsequent touching up, as I make different-shaped pads for corners, &c.

I claim—

1. The fabric *a*, prepared as described, in combination with the cloth *b* and pad or roll-

er *g*, operated substantially as hereinbefore set forth.

2. The fabric *a* and cloth *b*, in combination with the rollers *c*, *g*, and *h*, and frames *d* and *f*, substantially as described.

JOHN N. SMITH.

Witnesses:

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