

# Hodgman & Wyckoff. Napping Mach.

N<sup>o</sup> 6,412.

Patented May 1, 1849

Fig. 2.

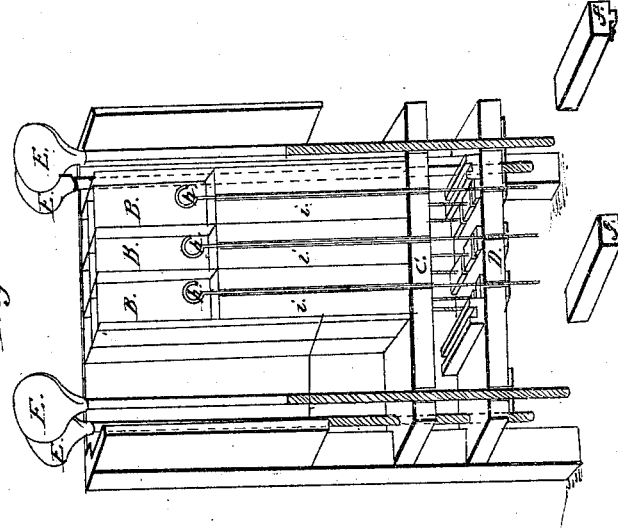
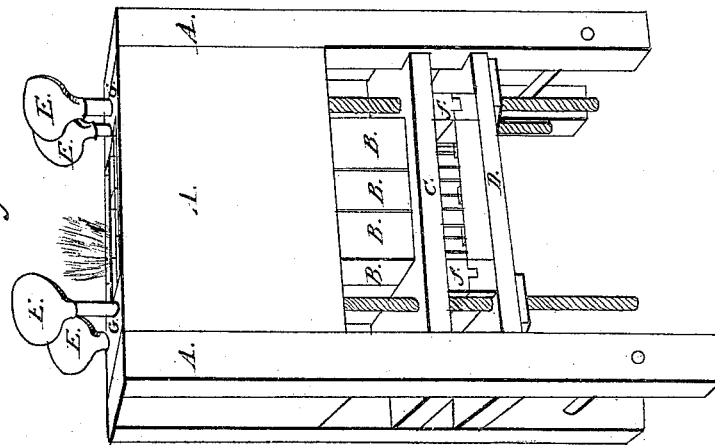


Fig. 1.



# UNITED STATES PATENT OFFICE.

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## MACHINERY FOR MAKING MATS, &c.

Specification of Letters Patent No. 6,412, dated May 1, 1849.

*To all whom it may concern:*

Be it known that we, DANIEL HODGMAN and AMOS D. WYCKOFF, both of the city and county of New York, in the State of New York, have invented a new and useful Machine for the Manufacture of Plush Napped or Tufted Fabrics; and we do hereby declare the following to be a full and exact description, reference being had to the accompanying drawings, which are intended to form part of this specification, in which the same letters indicate like parts of the machine in all the figures.

By our invention a plush napped or tufted surface is superimposed upon and attached to a plain surface or base of plain cloth with the aid of glue or cement composed of Indian rubber, gutta percha or the compounds thereof or of various other gums and resins producing rugs, carpetings, mats and various articles having a plush napped or tufted surface, at diminished cost as compared with other modes of making similar goods heretofore in use. Figure 1, shows a view of our machine A, the frame; B, the comb; C, the false bottom; D, the bottom plate; E, E, E, E, the graduating screws *f, f*, the wedges between the false bottom and bottom plate G, the top plate of the frame. Fig. 2, shows a sectional view of our machine *h, h, h*, the hooks *i, i, i*, the pistons.

We will describe first our manner of making the comb. We take sheets of copper, or tin plate, and make a number of cylinders, open at the ends, and of an even shape and size throughout the length. These cylinders we combine by soldering them all together, side by side, thus forming a series of parallel cells or what we denominate a comb (from its similitude to a honey comb) each cylinder being one cell. Iron or wood may be used but we prefer a tin plate for the purpose of making the comb. The comb is then secured vertically between the sides of the frame at the top, leaving its cylinders open, and ready to receive the pistons.

We prefer to make the frame about two and a half feet high, also that the comb be placed vertically therein, but this may be varied in both particulars sometimes with advantage. We likewise prefer that no openings exist between the different cells, but this is not imperative.

We make the cylinders about ten inches long and one inch square. But the size and

shape of these are immaterial so long as they conform one with another in such manner that when placed together in forming the comb no considerable portions of its surface shall be occupied by the edges of the partitions between the different cells, likewise the length of the cylinders should be equal. The number to be used will be determined by the size of the particular article to be made with reference also to the dimensions of the several cylinders.

For making mats we have the face of the comb to measure about three feet in length and twenty inches in breadth.

Having the comb placed stationary in the frame we proceed to place a bottom plate of wood underneath the comb between the four corner posts of the frame, upon this plate we put two wedges which serve to keep the plate separate from the false bottom which rests upon them and is situated next beneath the comb. We then take soft wood and make pistons of a shape and size adequate to fill the different cylinders of the comb. These pistons all rest endwise upon the false bottom. Next we bore a hole lengthwise through the center of each piston and continue the boring through the false bottom and bottom plate. Through each hole thus made we insert the shank of an iron hook which is made fast at the lower end below the bottom plate by means of a nut screwed upon it. These hooks are then each supplied with a skein of fibrous material, and by driving home the wedges between the false bottom and bottom plate each of the hooks are made to hold their several skeins down firmly upon the tops of the several pistons. We next bore four holes through the bottom plate and the false bottom extending also through the top plate of the frame, parallel with the holes made for the hooks, but these last are so situated as to run in a right line outside of the area of the comb. Within these holes we place four graduating screws which by being twined around through nuts situated underneath the bottom plate we are enabled to lower the bottom plate, the false bottom and the pistons with the hooks and skeins attached, thus leaving the comb occupied by the skeins only.

In making the fabric we select skeins of woolen yarn, hemp, or other fibrous material, suitable for napping each skein being of a size adequate to fill one cell we hook

fast the skein to the hook occupying the cell intended to be filled by the skein. In this manner we supply a skein to each hook next we drive home the wedges to hold the skein  
5 firmly down. Then by turning the graduating screws we withdraw the pistons, and supplying their places with the skeins. We then trim off the skeins even with the face of the comb and apply thereto a coating of  
10 cement using for this purpose a brush. We likewise cover with cement a piece of cloth of even size with the face of the comb, but one surface of the cloth is thus covered with cement. The cemented surface is then  
15 placed in close contact with the cement upon the skeins in the comb, by which contact the cement on both is formed into one homogeneous mass. We now proceed to remove from the comb, the cloth and a portion of  
20 the skeins which are cemented to it, and which are then to form the plush or nap upon its surface when finished, and to this end by forcing home the pistons the skeins are caused to protrude beyond the comb  
25 about half an inch. We then cut off all the skeins even with the face of the comb thus separating the napped fabric from the machine leaving it ready for a repetition of the same process. We then finish the fabric by

hardening or drying the cement should the 30 nature of its composition require such hardening or drying. The skeins may be of different colors to describe any desired figure formed by the shape of the cylinders.

Having described our invention and the 35 best manner known to us of manufacturing the same, likewise the manner of making the fabric, we do not claim the invention of fabrics whose body and nap are held together by means of cement or glue as this has been 40 made before by drawing the threads through openings in plates of metal, and wire cloth; nor do we claim the invention of the cylinders nor the graduating screw, nor the hooks used in making our machine. But 45

What we do claim as our invention and desire to secure by Letters Patent is—

A comb composed of a series of divisions or cells either entirely separated or otherwise, in combination with the pistons and 50 graduating screws in manner and for the purpose substantially as is above described.

DANIEL HODGMAN.  
A. D. WYCKOFF.

Witnesses:

WM. D. CHAER,  
F. C. HILLS.