5992X

I. R. Williams.

Felting Machine.

No.

No Printed Specification Available

Patented. May 22. 1830.

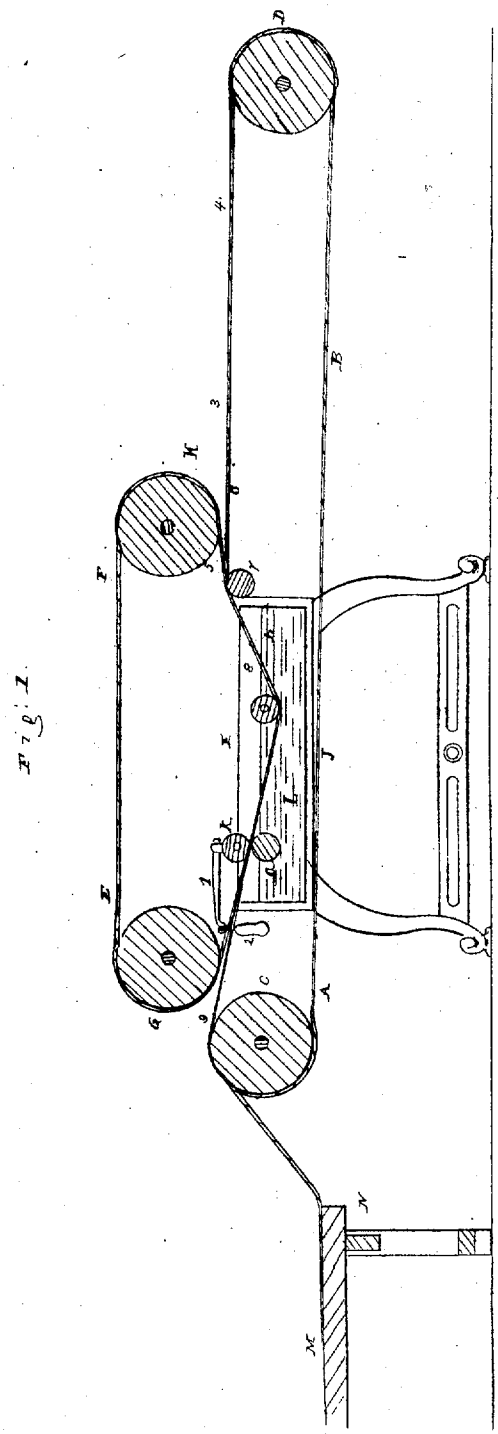


Fig. 1.

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Thomas R. Williams
Letters Patent

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Thomas R. Williams himself of his improvement in the method of "making or manufacturing Felt or a substance in the nature thereof applicable to covering the bottoms of vessels & other useful purposes."

My improvement in the "making or manufacturing of felt or a substance in the nature thereof applicable to covering the bottoms of Vessels and other useful purposes" I declare to be in manner and form following, reference being had to the accompanying drawings. That is to say. Fig 1 Represents a section of the machine and A B. an endless web of woven wire extended upon and passing around the two rollers or drums. C.D. Upon this endless web is received the different substances of which I make the felt, or a substance in the nature thereof. These substances are first prepared such as hair wool, cotton, hemp, flax &c. by a carding Engine blowing machine picker or any other machine attached to this, and capable of spreading the material or materials evenly upon the web of woven wire. E.F. Another endless web of woven wire extended upon and passing around the two drums G.H. I.J. A cistern or box which contains the mixture in which the materials are to be immersed. This cistern or box is heated when required either by a Steam pipe passing through and coiled within it, or by a fire applied underneath it. as may be found most convenient. K.L. are two metal Rollers mounted in bearings at each end. the upper one being pressed upon the lower by levers and weights as at I. 2. These rollers receive any required motion by being connected with any convenient part of the preparatory machine. It will now be readily seen that as both the endless webs of woven wire pass

between the weighted rollers K. L. whilst in motion that they will be drawn forwards and consequently receive a rotary motion which will likewise be communicated to the four rollers or drums C. D. G. H. and that when the different substances are properly spread upon the endless web as seen at 3 and 4. they will move onwards until they are received between the two sheets of woven wire as at 5 and 6 and thence onwards over the roller 7 and down into the liquid (the surface of which is shewn by the dotted line a. b.) such as melted tar and pitch or other mixtures. then under the roll. or 8. after which they pass up again out of the liquid between the metallic rollers K. L. where all that may be superfluous ... is ... pressed out and falls again into the cistern. while the felt, or substance in the nature thereof. will still move onwards until it is liberated from between the two sheets of woven wire as seen at 9. where from the action of the rollers and liquid it is sufficiently compressed and only remains to be deposited upon the table M. N. where it is either cut into sheets or rolled up in any lengths as may be required.

For the purpose of covering steps bottoms or hoods a felt composed of hair immersed in a composition of tar and pitch. or resin is preferable. but by varying the material and using hemp flax cotton or wool and by varying the composition or mixtures through which the same is passed, and adding size or glue and clay whiting lime or other substances I produce a felt or a substance in the nature thereof, of greater firmness adapted to the same uses, as mill board paste board floor cloth and for other purposes. I may also further add that I sometimes make use of two separate sheets or pieces. (instead of a continuous web) between which the hair &c are placed and whilst so between them. they are immersed in the required liquid and subjected to the pressure of rollers, as in the above described manner. In reference to the above description, I hereby declare, that I do not claim as my invention, any novelty in the manner of spreading the materials upon the web as before described, as I

make use of either the common Carding Engine, Cleaning machine, Picker, or any other method of doing it as evenly as possible. But I do claim as my Invention the making use of two Sheets or webs for this purpose, whether they be as before mentioned, of woven (or plaited, laid or braided) wire or even perforated sheets of metallic or other substances, and the method of subjecting the different materials, — whilst between them, to the action of the rollers in such liquids as I wish to impregnate the different materials with.

In witness whereof I have hereunto set my hand and seal this 27th day of August, One Thousand Eight hundred and twenty nine

Witness

Thos. R. Williams

Thos. Aspinwall. Consul of the U.S.A. London Eng.

J. Delcuf Jr. Vice Consul U.S.A.

Patented May 22. 1830

Enrd. M.G.

(888 words)