

United States Patent Office.

THOMAS CROSSLEY, OF BRIDGEPORT, CONNECTICUT.

Letters Patent No. 61,520, dated January 29, 1867.

IMPROVED PROCESS OF FINISHING FELTED AND OTHER GOODS AND FABRICS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM THESE PRESENTS SHALL CONCERN:

Know ye that I, THOMAS CROSSLEY, of Bridgeport, in the county of Fairfield, and State of Connecticut, have discovered a new and useful invention in the Manufacture of Felted and other Goods; and do hereby declare the following specification to be a full and correct description of my invention.

In the manufacture of felted and other woollen cloths, whether the same be felted or woven, especially such as are dyed or printed, and used for druggets, carpets, bocking, linings, lap robes, and many other uses, it is desirable to obtain the greatest possible firmness of fabric, as well as clearness of finish, and in order to obtain this result to the greatest extent heretofore known, the hydraulic press with heated plates has been used. So far as simple pressing with heated plates and paper boards is concerned, the hydraulic press has produced a better result than heated calenders, or any style of screw press, whether the same are operated with levers or other mechanical devices. But upon all woollen goods, especially such as are used for the purposes I have named, the effect of the finish obtained by the plates and paper, as in ordinary finishing, is soon entirely lost after the goods are exposed to wear; as the fibres of wool are simply pressed flat upon the face of the fabric, and are thus not prevented from immediately being raised again, either by sweeping or brushing or the ordinary friction of use; also that the firmness of fabric obtained in this manner is lost from the same or similar cause, or by being exposed to a damp atmosphere.

I have discovered that these objections can be overcome by corrugating the face of woollen goods with fluted rolls heated to a high temperature. I use iron rolls heated by steam, (but rolls of any other metal and heated in any other manner will answer,) the under roll having a smooth surface, over which the back of the cloth passes, and the upper roll being fluted to any desired number of lines or flutes, under which the face of the fabric passes. The pressure upon the rolls is regulated to the description of goods operated upon, and may be made so as to give a very light or a very deep and distinct impression. The result thus obtained not only gives great firmness to the goods, but the fibre of wool being thus pressed down by the flutes or raised edges of the heated roll, remains in this position, as the effect of the heated iron or other metal edge is to crimp the fibre, as in hair curled by a hot iron, without causing it the least injury. The fibres of wool, fur, silk, or other material being thus depressed below the surface, are not exposed to the ordinary friction caused by sweeping or wearing, and are not so easily affected by dampness, as by any other process of finishing. In addition to this advantage I have named, I obtain by this method an effect, especially upon felted goods, where the same are dyed or printed, equalling in distinctness the finest rep cloth in the market. The effect of this kind of finish is to give great brilliancy to the coloring and distinctness to the pattern, and at the same time a smoothness and delicacy of finish which have not heretofore been obtained on similar goods.

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

A woven or felted cloth of wool, fur, silk, cotton, or other material, either dyed, colored, or printed, and subsequently corrugated as described, as a new article of manufacture.

THOMAS CROSSLEY.

Witnesses:

JOHN S. HOLLINGSHEAD,
JOHN D. BLOOR.