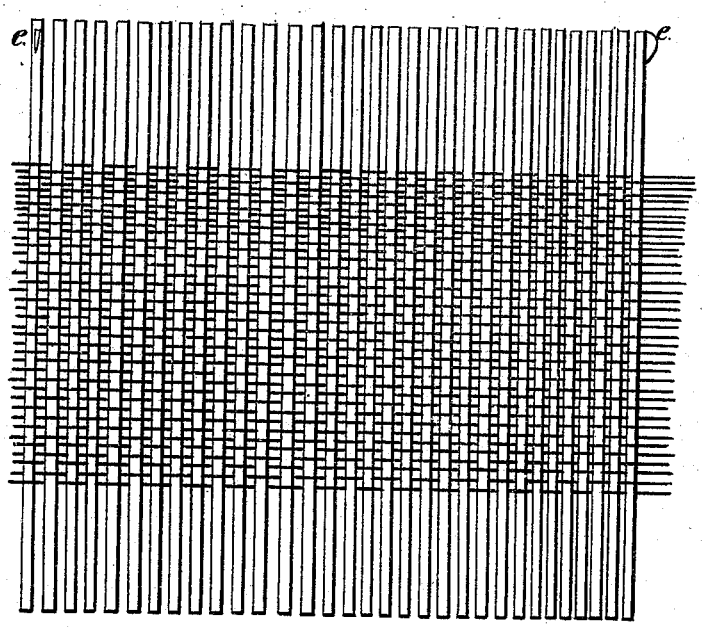
J. W. Crossley.

Woven Fabric.

No. 54,870. Patented May 22, 1866.



Witnesses.

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JAMES W. CROSSLEY, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN THE MODE OF MAKING PILE FABRICS.

Specification forming part of Letters Patent No. **54,870**, dated May 22, 1866.

To all whom it may concern:

Be it known that I, JAMES W. CROSSLEY, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in the Process of Making Pile Fabrics; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan or top view of this invention, and Figs. 2 and 3 are transverse sections of the same.

Similar letters of reference indicate corresponding parts.

This invention consists in retaining in the loops of pile fabrics the wire or other equivalent devices used in weaving said loops until a fabric has been cemented to the back in such a manner that during the process of weaving the fabric the wires or equivalent devices take the place of the weft, no other weft being used, and after the back has been cemented to a fabric the wires or other devices can be readily withdrawn, and a cheap and durable pile fabric is obtained.

The fabric A is made of wool or any other suitable material, on a loom of any desired description; but instead of using a linen or other weft for the purpose of binding the loops, I use nothing in place of the weft but the ordinary wires, cords, or other suitable devices generally used in forming the loops in the manufacture of pile fabrics; and after the operation of weaving is finished I take the fabric out of the loom, without, however, removing the wires or other devices used in place of the weft, and then I secure, by cementing, the fabric to a back of linen or other suitable textile or flexible material. After the cement has set I withdraw the wires or other devices, and the loops are retained solely by the cement, and without the aid of the usual linen shoots, which, in brussels carpets and other pile fabrics, are used to secure the loops to the back.

By these means a pile fabric can be produced which is exceedingly cheap and durable, and which can be made with great facility.

The loops being produced on a loom without throwing in any weft except the wires or equivalent devices, (which are withdrawn after the fabric is finished,) are formed with great rapidity, and when they are cemented to the back, and after the wires are withdrawn, the fabric has precisely the same appearance as a pile fabric manufactured in the ordinary way.

By using a loom the loops can be produced with great rapidity, the wires can be thrown in by hand or by the machine, and the fabric, when finished, can be printed in various colors, and with designs of any desirable description, the same as Brussels and other pile-carpets; or the warps can be printed previous to introducing them into the loom; or the designs may be produced by a Jacquard machine.

The fabric thus produced I secure to a back of linen or other textile fabric by means of a suitable cement of india-rubber or other material, and in order to produce a velvet fabric the wires may be constructed with sharp cutting-edges *e*, as shown in Fig. 1, so that by the act of withdrawing said wires the loops are cut; or the loops may be cut by other means after the wires have been withdrawn.

I am aware that various kinds of fabrics have been connected to backs by means of cement, and this I do not claim as my invention; but,

Having thus described my invention, I do not claim the pile fabric consisting of a fibrous warp cemented directly to a suitable backing and afterwards cut; but

I claim—

The process herein described of producing the pile fabric by the aid of wires, which are withdrawn after cementing the warp upon the backing.

JAMES W. CROSSLEY.

Witnesses:

W. HAUFF,

C. L. E. TOPLIFF.