

UNITED STATES PATENT OFFICE.

THOS. CROSSLEY, OF ROXBURY, MASSACHUSETTS.

IMPROVEMENT IN CARPETS.

Specification forming part of Letters Patent No. 8,798, dated March 16, 1852.

To all whom it may concern:

Be it known that I, THOMAS CROSSLEY, of Roxbury, in the county of Norfolk and State of Massachusetts, have invented a new and useful or Improved Manufacture of Carpeting; and I do hereby declare that the same is fully described in the following specification.

In the fabrication of ingrain carpets it has been customary, in order to produce the figure, to use different-colored yarns in the warp and weft, a Jacquard apparatus and a series of shuttle-boxes being also employed. To produce a carpet by means of Brussels or raised woolen warps combined with linen warps and filling-threads, woven without the figure being brought out in the process of weaving, but afterward stamped or printed on the fabric, is not new; nor is it new to stamp or print backing or felted fabrics.

My new carpet is made by the process of ingraining or weaving together uncolored warps and wefts in what is termed "plies," (whether two or more plies be ingrained,) and subsequently printing the figures in colors on either one or both surfaces of the cloth—that is to say, the cloth is woven plain or without a colored pattern or figure and thoroughly ingrained, no pattern except that produced by the process of ingraining uncolored yarns appearing on the cloth. This done, the figure or design is next to be stamped or printed on the cloth by means of blocks or cylinders, the number of which being in accordance with the number of colors required in the pattern or figure to be stamped or imprinted on the fabric. An ingrained printed carpet so made is, I believe, an entirely new article of manufacture, it never to my knowledge having been produced or introduced into the market before my invention of the same. It possesses many very important advantages, not only over the common ingrain carpets, whose figures are produced in the process of weaving the fabric, but also over other kinds of printed carpets or floor-cloths, for in the first place, and particularly when three plies are used, it admits of a figure of one kind and composed of any colors being stamped or printed on one side of it, while a figure of an entirely different kind, or one having entirely different colors, is stamped or printed on the opposite side or face of it, for the plying or ingraining process produces,

as it were, two or more layers of cloth, which are simply connected together at many points or spots. The manner in which the cloth is woven—that is to say, the plying of it—operates to prevent the colors imprinted on the external surface of one of the plies or layers from striking into and entirely through the other ply or layer, so as to appear on its outer surface, as a printed figure or colors when produced on one side of a felted cloth or fabric will strike through and show on the opposite side thereof, and so as to prevent it from being printed without more or less exhibiting the figure of the first side. Only one side of the cloth in tapestry Brussels weaving—viz., that on which the pile is raised—can be printed, as the opposite side has no raised woolen warps and exhibits the binding-linen warps.

From the above it will be seen that I have made a very important discovery, on which my new manufacture is based—that is to say, I have discovered what was before unknown or believed to be impossible among carpet-manufacturers—viz., that colors imprinted on a plied carpet, or "two" or "three" ply carpet, as the same is termed, will not strike from one ply into and through another to such extent as to materially injure the external surface of such other ply, or so as to prevent it from receiving the same or a different design in the same or different colors.

This very important discovery in the art of manufacturing carpets enables me to effect a great improvement in the trade, and to produce a carpet having advantages, as hereinbefore or hereinafter particularly stated.

When three or more plies are used the middle ones, or those situated between the outside plies, may be made of any other material or materials that can be converted into yarns, and thus, should any colors be used for the figure of one side that might by any possibility be likely to run through the opposite outer ply, the middle ply might be made of a material and woven in such manner as would effectually prevent such striking through of the color to any practically injurious degree. The common process of plying and ingraining seems, however, to render such unnecessary, as the colors do not appear to go entirely through the cloth to any injurious extent, even in a two-ply carpet.

An ingrained printed carpet can be made by

my improvement with many colors in its figure, generally speaking, at very little expense in comparison to what such figure can be produced by the process of weaving and ingraining colored yarns in a loom. Consequently more beautiful patterns of ingrained printed carpets can be brought into the market and afforded at a less cost to the consumer or buyer than that for which the ordinary woven ingrained carpets can be purchased and sold.

The improvement or improved manufacture of ingrained ply printed carpeting made with a printed figure on one side or surface, and another or the same or a different figure printed on the opposite side or surface, affords to the user the advantage of turning the carpet after it has been worn or injured on one side and using the opposite side uppermost, and either with the same or an entirely different figure from the first in accordance with the character of the figure on the two sides of the fabric, such a carpet, when made with different figures on its opposite sides, presenting an advantage beyond the ordinary ingrain carpet made by weaving different colored yarns, as the figure on one side of the latter kind of carpet is governed by and is generally a similar one to that of the other side. It may be said to be essentially like it in form, and differs in being of an opposite color. In my improved carpet there may be a difference in both form and color in the patterns or figures on its opposite sides, thus enabling me to produce varieties of patterns on its opposite sides that cannot be effect-

ed in the ordinary process of weaving and ingraining plies with colored yarns of various colors.

I lay no claim to the invention of making a carpet by the process of plying and ingraining or connecting together the plies or different layers of cloth, whether woven with plain (or uncolored) or colored yarns; nor do I claim to weave a carpet with an uncolored pile or warp in the Brussels process of weaving and afterward printing the figure thereon in colors; but

What I do claim as my invention or new or improved manufacture is—

An ingrained plied printed carpet made by a combination of the process of weaving in two or more plies and ingraining the same and subsequently printing the figure or figures on both sides of the same, as described, the discovery having been made by me that the plying process prevents the colors printed on one ply from penetrating the other ply so as practically to injure its other surface to an extent which renders it unfit for the reception of colors and use as a carpet, as hereinbefore stated, a great improvement in trade being the result of such.

In testimony whereof I have hereunto set my signature this 23d day of February, A. D. 1852.

THOMAS CROSSLEY.

Witnesses:

R. H. EDDY,
G. W. CUTTER.