

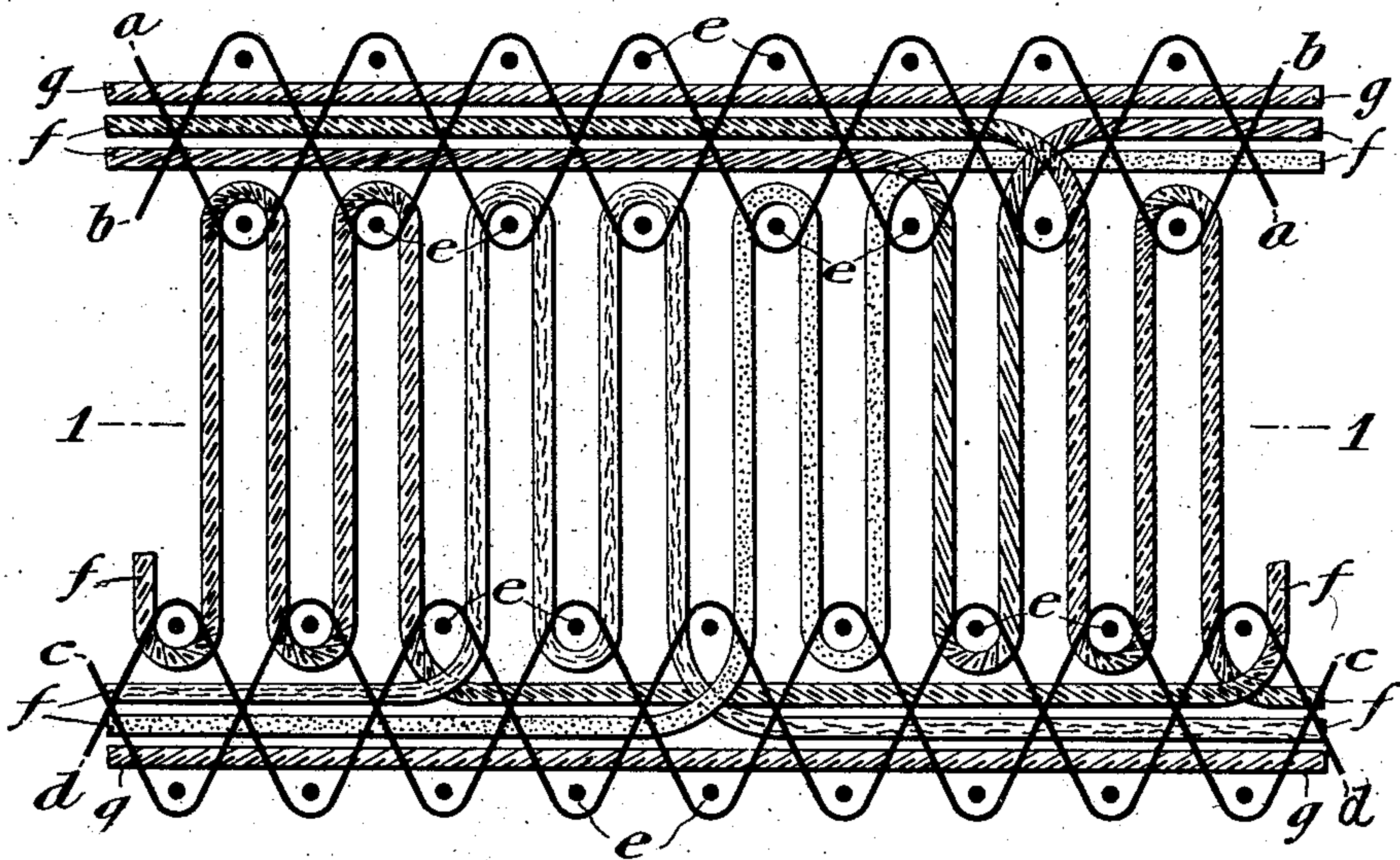
No. 749,219.

PATENTED JAN. 12, 1904.

F. PEARSON.  
DOUBLE PILE FABRIC.

APPLICATION FILED APR. 13, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRED PEARSON, OF PHILADELPHIA, PENNSYLVANIA.

## DOUBLE-PILE FABRIC.

SPECIFICATION forming part of Letters Patent No. 749,219, dated January 12, 1904.

Application filed April 13, 1903. Serial No. 152,342. (No specimens.)

*To all whom it may concern:*

Be it known that I, FRED PEARSON, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Double-Pile Fabrics, of which the following is a specification.

In the manufacture of cut pile fabrics—for instance, Wilton carpets—a plurality of frames are employed, a fabric being classified by the number of frames, or, in other words, by the number of different colors called for in one row of loops in the direction of the warp in the fabric. Usually four or five different frames or colors are employed—that is, the jacquard governs four or five different-color warp-threads within one dent-space of the reed—though a greater or less number may be employed.

Cut pile fabrics may be produced either from a single-pile woven structure or from a double-pile woven structure. The latter method of producing a cut pile fabric is preferable for economical reasons. Heretofore efforts to produce cut pile fabrics—as, for instance, Wilton carpets—from a double-pile fabric have not proved entirely satisfactory, for the reason that the pile-tufts of the cut fabric have not been uniformly distributed—that is to say, the tufts would tend to separate from one another at certain points in the top surface of the fabric.

It is the object of this invention to produce a double-pile fabric each of the body structures of which when separated in any usual and well-known manner constitutes a cut pile fabric of desirable thickness and in which the pile-tufts are uniformly distributed. The thickness of a cut pile fabric produced by the separation of the body structures of a double-pile fabric is controlled by separating the pile-warp threads not in use and locating or burying one portion of them in one body structure and the remaining portion in the other body structure. The uniform distribution of the pile-tufts is secured by placing each of the weft-threads within a loop of a pile-thread. When so constructed, each pile-tuft tends to move in a direction away from its weft-thread, and the pile-tufts within a single dent-space

and between two adjacent weft-threads tend to move toward each other—that is, in opposite directions—and in consequence of coming in contact each assists in supporting the other in an upright position, whereby all of the pile-tufts are held in close contact and constitute a structure in which all of the pile-tufts are uniformly and evenly distributed. To secure a construction of this kind in which the pile-tufts of the cut fabrics are uniformly distributed, it is necessary in the operation of weaving upon discontinuing the use of a pile-thread which is being interlaced from one body structure to the other and leaving it to lie buried in one or the other of the body structures of a double-pile fabric that the next pile-thread which is to be used be taken from the same body structure as that in which the discontinued pile-thread is left buried, and it is necessary that the ending and beginning portions of interlaced pile-threads within a dent-space occupy positions upon opposite sides of an intermediate weft-thread in the manner clearly illustrated in the drawing.

In the construction as illustrated five different frames or colors are employed, and, as is evident from inspection of the drawing, two of the pile warp-threads are at all times lying in a straight line in each dent-space of each of the body structures. A greater or less number of colors may be employed; but, as will be understood, the number of pile warp-threads not in use—that is, the “dead working color threads”—is always one less than the number of color warp-threads employed.

In the drawing the binder or body warps are designated by the reference-letters *a*, *b*, *c*, and *d*, and the filling or weft threads by the reference-letter *e*. The pile-warp color threads are designated by the reference-letter *f*. In order to increase the thickness of the body structure as desired, a thickening-warp *g*, of jute or other cheap material, is employed. Only one pile-warp color thread is employed at a time, and it will be seen upon examination of the drawing that this thread is interlaced from one body structure to the other and that when another color is desired the thread having such color is substituted for the color thread previously used. The desired



color thread may be taken from either one of the body structures; but in each case, as has already been stated, the color thread the use of which is being discontinued must be substituted for the color thread which is taken up or put into use by being interlaced from one body structure of the double-pile fabric to the other. It will also be noted upon reference to the drawing that the end of an interlaced portion of a pile-warp color thread and that the beginning of an interlaced portion of another pile-warp color thread occupy positions upon the opposite sides of an intermediate weft-thread.

The body structures constituting the double-pile fabric may be separated and disconnected from each other by severing the interlaced pile warp-threads along the line *ll* in any usual and well-known manner.

It will thus be seen that two cut pile fabrics—as, for instance, Wilton carpets—are produced by a single operation, each of which in the construction illustrated has a color design consisting of five different colors and in the body structure of which there are but two dead working color threads.

In a construction such as is above described, in which the pile-tufts at the end and beginning of two different interlaced pile color threads are looped around and are located upon opposite sides of an intermediate weft-thread and in which all of the different-colored pile warp-threads are found in each dent-space of each body structure, all of the pile warp-threads will be found buried in each dent-space of each body structure along the line of a single row of pile-tufts, but not all at one place or time. When five differently-colored pile warp-threads are employed, two of them, less than half, will at all times be buried in each body structure in a single dent-space. If an even number of warp-threads is employed, half or less than half of the number may be found so buried.

Having thus described my invention, I claim—

1. A cut pile fabric in which each pile-tuft is looped around a weft-thread so that the projecting ends of the tufts constituting the top

surface of the fabric tend to move away from the said weft-thread, the pile-tufts between any two adjacent weft-threads moving in opposite directions so that they come into contact with each other, whereby each assists in holding the other in an upright position, and in which the number of pile color threads which lie buried in the body of the fabric in a dent-space at any selected point is half or less than half the number of color threads employed.

2. A cut pile fabric in which each pile-tuft is looped around a weft-thread and in which the pile-tufts which constitute the end and beginning of two different colors are located on opposite sides of an intermediate weft-thread, and in which the number of pile color threads which lie buried in the body of the fabric in a dent-space at any selected point is half or less than half the number of color threads employed.

3. A cut pile fabric comprising weft-threads and pile color threads which are looped around said weft-threads to produce pile-tufts and all of the pile-threads of a dent-space being buried in the body of the said fabric but not at the same point in the fabric.

4. A double-pile fabric consisting of body structures comprising weft-threads about which pile-warp color threads interlaced from one body structure to the other are looped and in which an interlaced pile-warp thread is discontinued in a selected one of the body structures, a new pile-warp thread being taken from the same body structure, and also in which the end loop and the initial loop of two different-colored adjacent pile-warp threads face in opposite directions, the said loops being located on opposite sides of and adjacent to a selected weft-thread in either of the body structures.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 8th day of April, A. D. 1903.

FRED PEARSON.

In presence of—

L. KLEINFELDER,  
THOS. K. LANCASTER.