

(Model.)

2 Sheets—Sheet 1.

B. H. GLEDHILL.  
INGRAIN CARPET FABRIC.

No. 543,208.

Patented July 23, 1895.

Key Chart

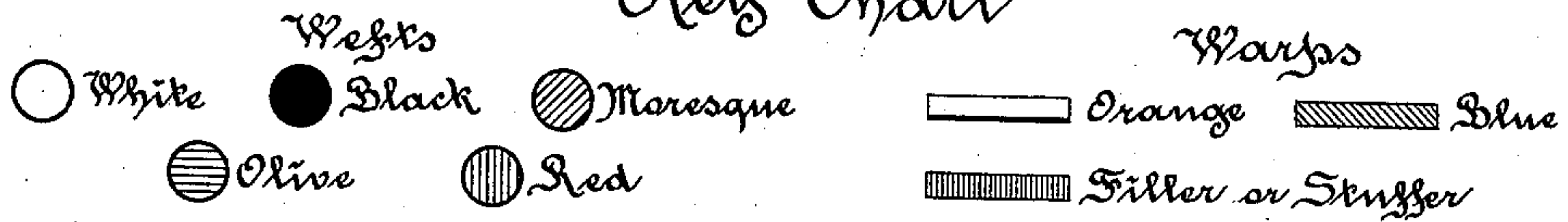


Fig: 1

White and Moresque Effect

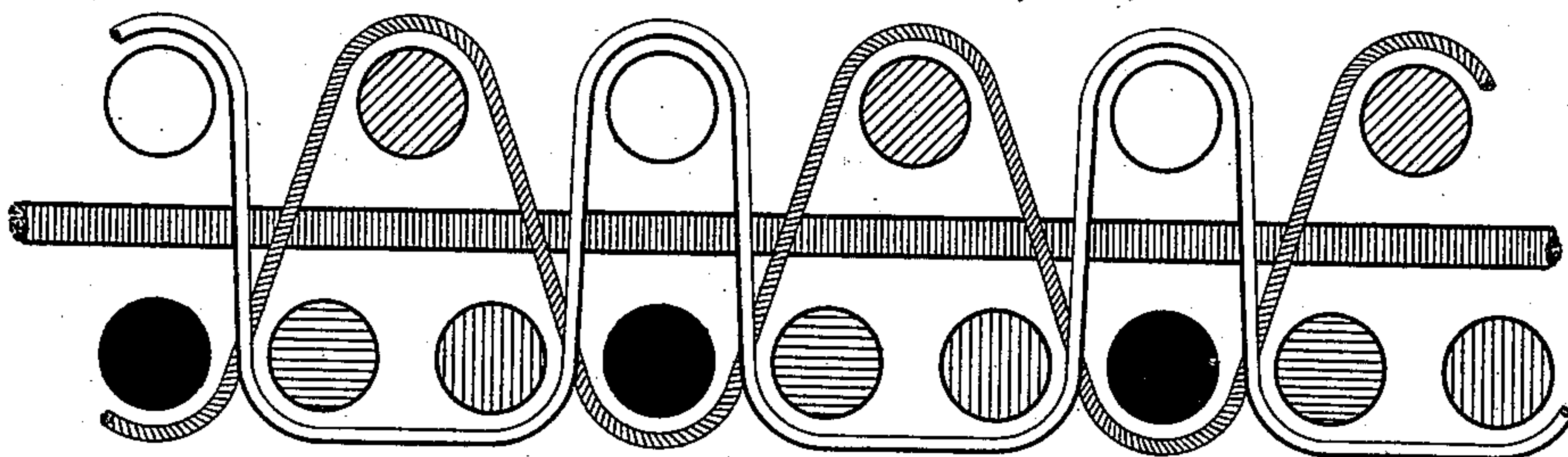


Fig: 2

White and Olive Effect

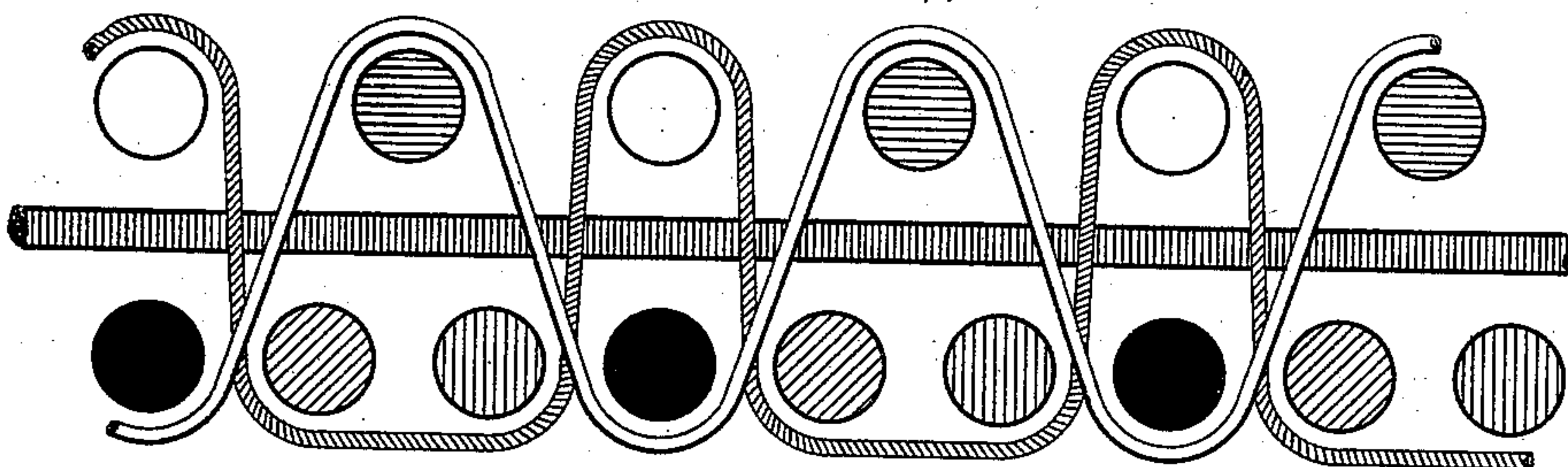
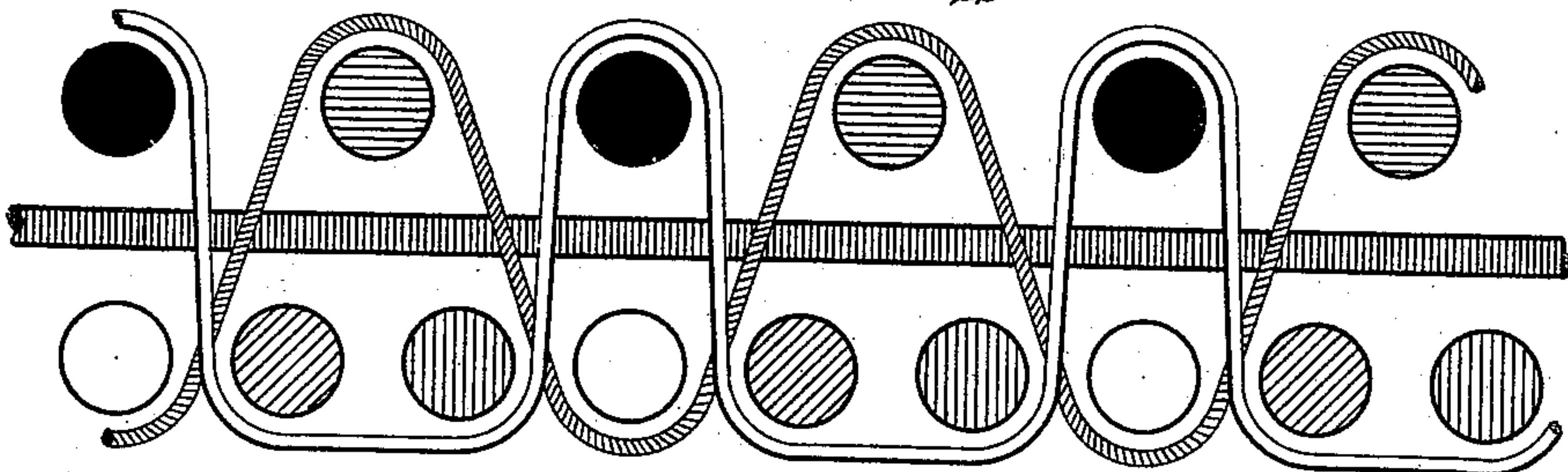


Fig: 3

Black and Olive Effect



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(Model.)

2 Sheets—Sheet 2.

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Fig. 4

### Black and Red Effect

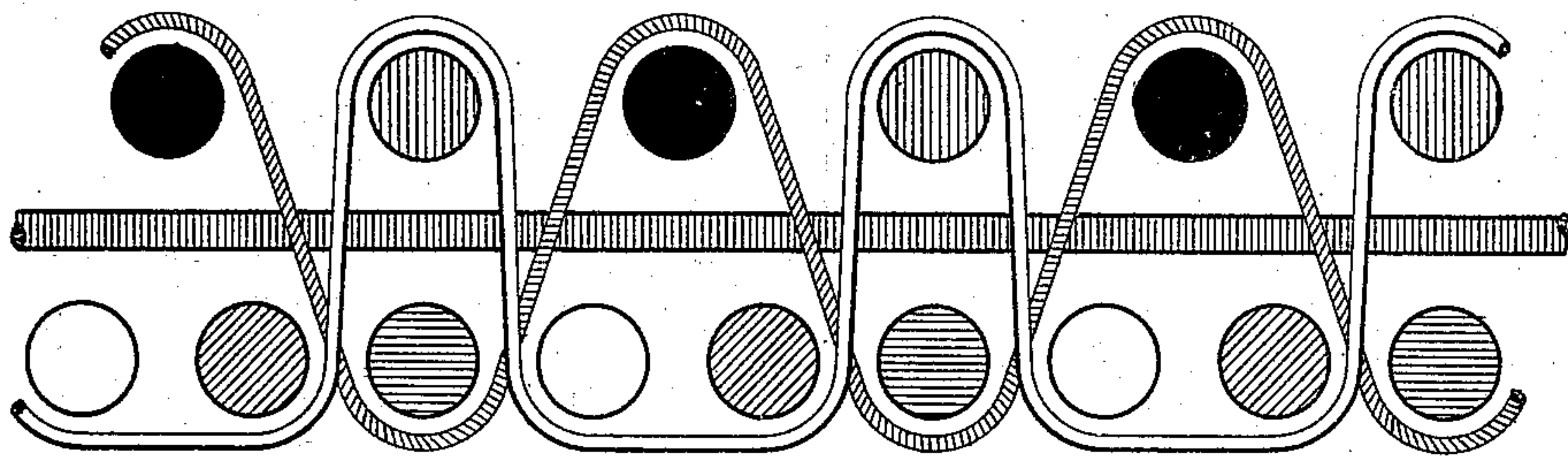
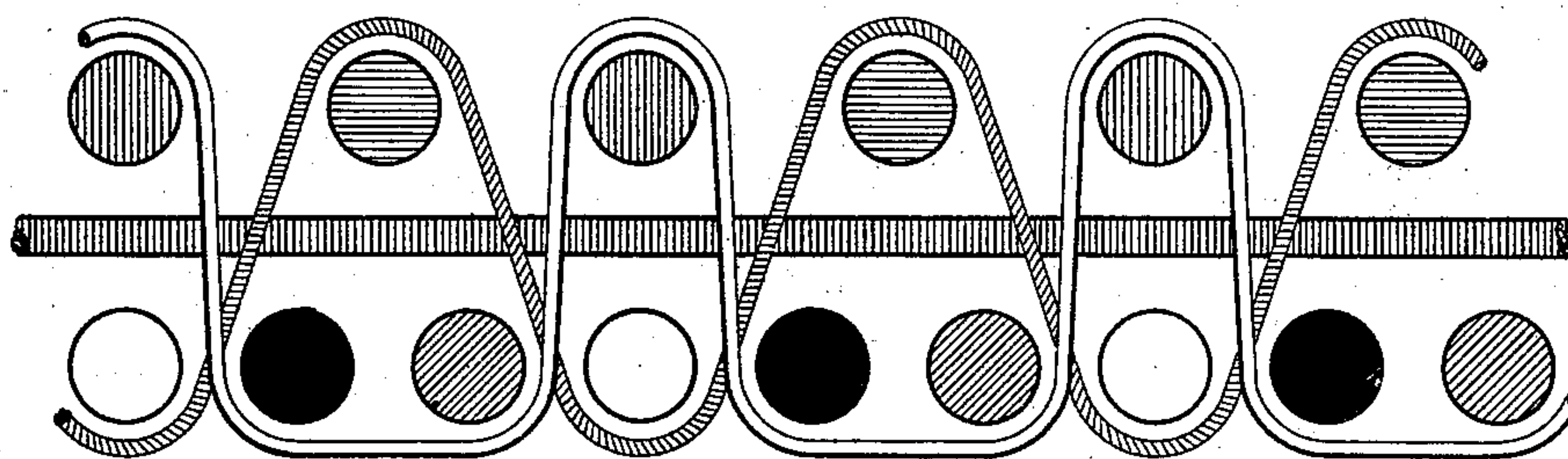


Fig 25

## Red and Olive Effect



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# UNITED STATES PATENT OFFICE.

BENJAMIN H. GLEDHILL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
MAURICE H. MASLAND AND FRANK E. MASLAND, OF SAME PLACE.

## INGRAIN CARPET FABRIC.

SPECIFICATION forming part of Letters Patent No. 513,208, dated July 23, 1895.

Application filed April 6, 1895. Serial No. 544,835. (Model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN H. GLEDHILL, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Ingrain Carpet Fabrics, of which the following is a specification.

My invention has relation to an ingrain carpet fabric, and in such connection it relates particularly to the structure thereof.

Hitherto in two-ply ingrain carpets weft-threads in sets of four weft-threads in a set and warp-threads in sets of four warp-threads in a set have been employed, two of the weft-threads of a set being interwoven with a like number of warp-threads to constitute one web or ply of the fabric and the remaining two weft-threads of the set with the remaining two warp-threads to constitute a second web or ply, one web forming the face and the other the back, and the two webs crossing and recrossing or ingraining to produce the pattern and color effects on the face; and it is this type of a fabric that my present invention is designed to improve by cheapening the production thereof and at the same time without sacrificing body and effects, but affording an increase in the range of design and color effects over the ordinary two-ply fabric, and, moreover, to produce a solid, homogeneous, and more acceptable woven or ingrain fabric.

The principal objects of my invention are, first, to provide a durable and inexpensive carpet fabric having five weft-threads to a set or weave, two warp-threads and a stuffer or filler bound between the two weft planes throughout the fabric to separate one plane from the other thereof, and at the same time to give body to the homogeneous fabric, and, second, to provide a solid and homogeneous carpet fabric in which the range of design and color effects is increased.

My invention consists of a two-weft-plane fabric having warp-threads arranged in sets of two, weft-threads arranged in sets of five, and a filler or stuffer bound between the two weft planes throughout the fabric, the weft-threads of each set interwoven with or bound

by warp-threads in pairs and in singles in the structure of fabric; and my invention further consists of an ingrain-carpet fabric, having the structure produced in substantially the manner hereinafter described and claimed.

The nature and general features of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figures 1 to 5, inclusive, illustrate, diagrammatically, the interweaving of threads in a fabric embodying my invention, showing five different effects therein and the fabric being supposed to be cut lengthwise—that is, parallel to the warp-threads.

In a fabric of my invention is employed figuring warp-threads, figuring weft-threads, and a filler or stuffer, the warp-threads being employed in sets of two in a set and the weft-threads in sets of five in a set, thereby departing from the ordinary two-ply ingrain fabric to that extent.

Referring now to the particular fabric illustrated, the weft-threads of the set may be white, black, moresque, olive, and red, as indicated in the key-chart for the wefts, the warp-threads may be olive and blue, as indicated in the key-chart for the warps, and the filler or stuffer S is bound between the two planes of the fabric throughout the same and so as to separate one plane from the other thereof and at the same time to give body to the homogeneous fabric, and this stuffer or filler is a heavy, double, or similar thread. It will therefore be observed that each of the warp-threads binds one weft-thread of a set on the face plane and one or more on the back plane, and that the operation of the warp-threads is not restricted to any one set or order of movements, but that the warp-threads are operated so that in all instances a perfect homogeneous fabric is produced having the filler or stuffer S bound between the weft planes. It will also be observed that the weft-threads in each set or weave are arranged in separate sheds in the upper plane and alternately in singles and in pairs in the lower plane.

With reference to the drawings, in Fig. 1 is



illustrated the white and moresque effect of the fabric, in which the orange warp-thread passes over the white weft-thread in the upper plane and under the olive and red weft-threads in the same shed in the lower plane, and the blue warp-thread passes under the black in the lower plane and over the moresque—that is, the olive and scarlet or other colored threads constituting the same in the upper plane and the stuffer or filler is bound between the two weft planes. The other sets of Fig. 1 are a repetition of the first set above described.

In Fig. 2 is illustrated the white and olive effect of the fabric, in which the blue warp-thread passes over the white weft in the upper plane and under the moresque and red in the same shed in the lower plane, and the orange warp-thread passes under the black weft in the lower plane and over the olive weft in the upper plane. The other sets illustrated in this figure of this effect are a repetition of the first set.

In Fig. 3 is illustrated the black and olive effect of the fabric, in which the orange warp-thread passes over the black weft-thread in the upper plane and under the moresque and red weft-threads in the same shed in the lower plane, and the blue warp-thread passes under the white weft-thread in the lower plane and over the olive weft-thread in the upper plane. The other sets illustrated in this figure of this effect are a repetition of the first set.

In Fig. 4 is illustrated the black and red effect of the fabric, in which the blue warp-thread passes over the black weft-thread in the upper plane and under the olive weft-thread in the lower plane, and the orange warp-thread passes under the white and moresque weft-threads in the same shed in the lower plane and over the red warp-thread in the upper plane. The other sets illustrated in this figure of this effect are a repetition of the first set.

In Fig. 5 is illustrated the red and olive effect of the fabric, in which the orange warp-thread passes over the red weft-thread in the upper plane and under the black and moresque in the lower plane, and the blue warp-

thread passes under the white weft-thread in the lower plane and over the olive warp-thread in the upper plane. The other sets illustrated in this figure of this effect are a repetition of the first set.

It may be here remarked that the disposition of the threads as hereinbefore explained are repeated in the pattern as frequently as desired.

It has not been deemed necessary to give a detailed description of the successive changes in the operation of the loom involved in the production of a fabric of my invention, but it is, however, here remarked that the mechanism must be such as to operate the warp-threads in the manner desired to produce said fabric, and suitable forms of such mechanism will be evident on an understanding of the fabric.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

A two weft-plane ingrain carpet fabric, consisting of warp-threads, weft-threads and a filler or stuffer, the warp threads being arranged in sets of two in a set and the weft threads in sets of five in a set and the filler or stuffer being a heavy thread and bound between the two planes throughout the fabric to separate one plane from the other and to give body thereto, the two weft-threads of one face of each set being in separate sheds and bound by the two warp-threads extending from face to back of the fabric throughout the same and the three weft threads of the other face of each set being alternately in singles and in pairs in the sheds and bound by said warp-threads extending from face to back of the fabric throughout the same to constitute by the respective warps, wefts and filler or stuffer a solid and homogeneous fabric.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

BENJAMIN H. GLEDHILL.

Witnesses:

J. WALTER DOUGLASS,  
THOMAS M. SMITH.