No. 860,707. PATENTED JULY 23, 1907.

W. L. TURNER.

WOVEN FABRIC TO IMITATE LEADED STAINED GLASS WINDOWS.

APPLICATION FILED DEC. 1, 1905.

Fig. 1.

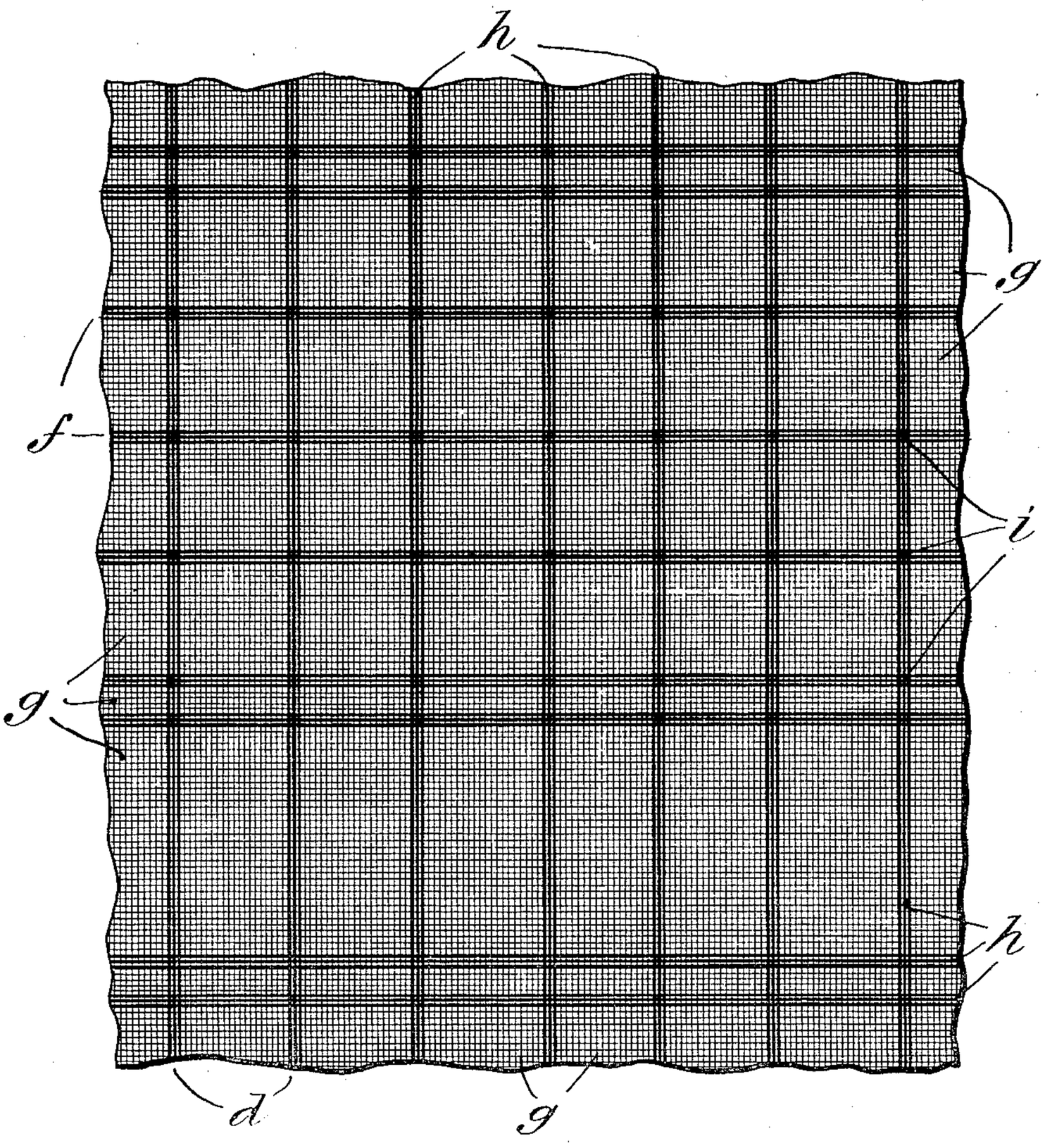
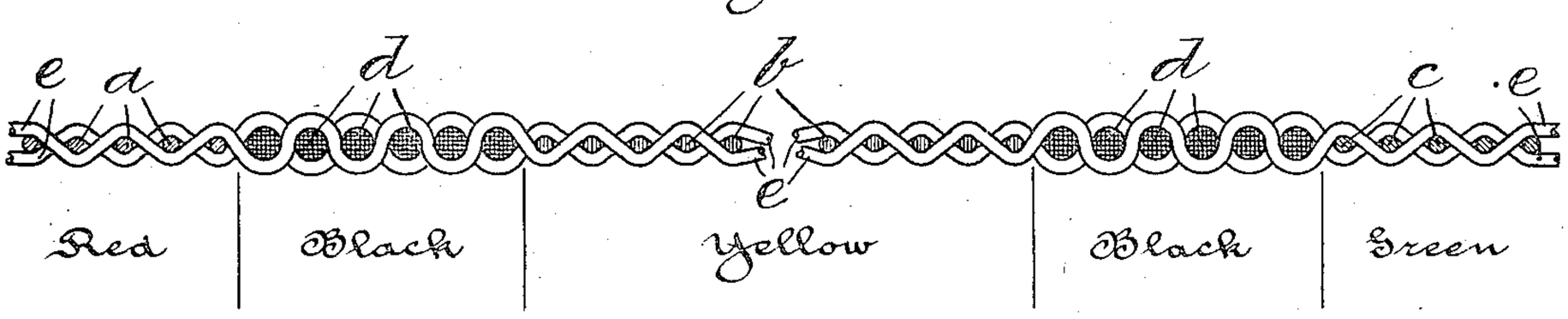


Fig. 2.



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WOVEN FABRIC TO IMITATE LEADED STAINED GLASS WINDOWS.

No. 860,707. Specification of Letters Patent. Patented July 23, 1907.

Application filed December 1, 1905. Serial No. 289,735.

To all whom it may concern:

Be it known that I, WILLIAM L. TURNER, 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 Woven Fabrics to Imitate Leaded Stained Glass Windows, of which the following is a specification..

My invention relates to the production of a woven article produced to closely imitate leaded stained glass windows, without employing superfluous or additional warps or wefts requiring to be cut, clipped or sheared from the cloth after weaving, as is the practice in the fabricating of Leno, Madras or other fabrics, as now produced, to imitate stained glass windows.

The principal object of my invention is to produce a single plain woven fabric, alternately of loose and close weaves and to arrange the warp threads and weft threads and the colors and thicknesses of these threads so that in the completed fabric blocks or rectangles of varying colors and of a tabby or gauze weave is produced, separated from each other by bands or strips of closer fabric and of a different color from the blocks or rectangles to closely imitate the non-transparent leaded frames of stained glass windows, and by the tabby or gauze weaves of the blocks or rectangles of the fabric and blending of the different colored threads into each other permitting of rays of light through the blocks or rectangles of the fabric to closely imitate the peculiar color effects produced by glass of such windows.

To obtain this result, the warp threads and the weft threads are divided into groups of thin threads of varying colors, which are separated by a group of heavier threads of a single color and each group consisting of a sufficient number of threads so as to form, when woven, the transparent blocks or rectangles of varying size, in which the threads appear continuously in both faces and in a number of heavier threads to form, when woven, alternately with the thinner threads, the non-transparent bands or strips of varying colors, but of a closer weave than the blocks or rectangles surrounding said blocks or rectangles to form small blocks of a single color by the intersection of the heavier threads with each other and thereby to impart to the blocks or rectangles a sunken effect and to the bands or strips a raised effect in the completed imitation stained glass window fabric.

My invention stated in general terms, consists of the production of a woven fabric, for the purposes defined in substantially the manner hereinafter described and claimed.

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

Figure 1, is a plan view of a portion of the completed fabric, embodying main features of my invention; and Fig. 2, is a sectional view through the fabric.

Referring to the drawings *a*, *b* and *c*, are groups of thin warp threads, each of which is separated from one another by a group of heavier threads *d*. In the present instance the thin warp-threads of the group *a*, is red, the group *b* yellow, and the group *c* green, whereas the heavy warp-threads of the narrow groups *d*, separating the large groups of warp-threads, from each other, are preferably of a dark or black color. The weft-threads *e*, are similarly divided into large groups of thin threads of the same color, in each group, varying in color from each other, in the succeeding groups of thin threads, as will be readily understood from Fig. 2. These groups of thin weft-threads are also separated by small groups *f*, of heavy black threads as shown in Fig. 1. In the formation of the fabric, the thin warp-threads and the thin weft-threads are arranged to form a series of blocks or rectangles *g*, of different colors, and the heavy warp-threads to form dark strips or bands *h*, separating the blocks or rectangles of lighter colored threads from each other. The different warp-threads and weft-threads are manipulated, to form a plain, tabby or gauze weave, in which where the thin threads intersect a thin loose fabric is produced, which by permitting of the rays of light to pass therethrough produces a certain blending of the colors of the threads and thus of a softening of the color effect, in the different blocks or rectangles *g*, similar to that obtained by the colored glass in stained glass windows. Wherever thin and heavy warp and weft-threads intersect a closer weave is obtained, which when the fabric is exposed to the light is nearly non-transparent and on this account and in conjunction with the dark color of the thicker threads produces a harsh color effect, which closely imitates the leaden frames or bands of such stained glass windows. At the point of intersection of the heavy warp and weft-threads a still closer weave of solid or black color is obtained forming small blocks *i*. By the arrangement of thin and heavy threads in groups, the blocks or rectangles *g*, appear to be depressed within the bands or strips *h*, surrounding the same, and the small blocks *i*, appear to be raised above these strips or bands in the completed fabric. Thus a close imitation of a stained glass window is produced in which the leaden non-transparent frames or bands project above the glass portions thereof. The threads by being of different colors in each group of warp and weft-threads permit of the selection of colors which combined produce color effects only found in stained glass windows. In order to obtain the blending of colors and the soft effects thereof, it is advisable to slightly vary the same color for instance green in one group of thin threads in each of the series of groups forming the warp and weft-threads of the fabric.

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

A woven fabric in imitation of stained glass windows, comprising a series of groups of thin and heavy warp-threads, a series of groups of thin and heavy weft-threads alternately arranged with respect to each other, the groups of thin warp and weft-threads consisting of a single color, differing in color from preceding groups of thin warp and weft-threads, each group of thin warp-threads and weft-threads, when interwoven, arranged to form a plain or gauze weave differing in color one from the other and transparent when exposed to light, and the heavy warp and weft threads, when interwoven, to form bands or strips of closer weave of uniform thickness, and of a single color; but less transparent when exposed to light, dividing the plain or gauze weave into blocks or rectangles to impart thereto a sunken effect, and the heavy threads, when interwoven, arranged to form blocks of a close weave at the point of intersection of the bands or strips imparting an effect of being raised above the bands or strips and blocks or rectangles and forming a weave of three different thicknesses, so as to imitate glass of different colors, leaden frames and the points of junction of the frames in a single color of a stained glass window.

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

WILLIAM L. TURNER.

Witnesses:
J. WALTER DOUGLASS,
THOMAS M. SMITH.