(Specimens.)

## M. R. FLETCHER. DOUBLE EMBOSSED FABRIC.

No. 304,418.

Patented Sept. 2, 1884.

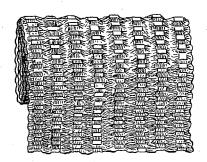


Fig.1.



F 19.2.

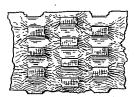


Fig.3.

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## UNITED STATES PATENT OFFICE.

MOORE R. FLETCHER, OF BOSTON, MASS., ASSIGNOR OF FIVE EIGHTHS TO CHARLES G. PATTERSON, OF SAME PLACE, AND CHARLES H. HUNT.

## DOUBLE-EMBOSSED FABRIC.

SPECIFICATION forming part of Letters Patent No. 304,418, dated September 2, 1884.

Application filed December 19, 1883. (Specimens.)

To all whom it may concern:

Be it known that I, Moore R. Fletcher, a citizen of the United States, residing at Boston, in the county of Suffolk and State of 5 Massachusetts, have invented certain new and useful Improvements in Double Embossed Fabrics; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

My invention is a new article of manufacture—a double-embossed sheet or roll of paper or paper-pulp, or of equivalent material, formed with broken corrugations or alternate elevations and depressions both lengthwise and crosswise, and extending both above and below an intermediate fulled, shirred, or wrinkled portion, into which they become merged.

In the drawings, Figure 1 represents a roll
of my improved fabric; Fig. 2, an edgewise
or sectional view thereof; and Fig. 3 is a plan
of a piece of my fabric enlarged for clearness.

My fabric is peculiar, in that it is embossed in both directions, with short corrugations arranged alternately above and below the intermediate plane, which is fulled or shirred by reason of and to correspond with the lessening in length which the entire sheet undergoes in the treatment which corrugates it.

My article is to be distinguished from ordinary embossed fabrics which have one flat side, and from the well-known quilled or fluted bottle-packing paper, which is commonly reenforced on one or both sides by a plain pasted 35 sheet to prevent the flutes from flattening out. The short broken corrugations which characterize my article have sufficient stiffness to retain their shape in use, and require no re-enforcing sheet. The heavier grades form an 40 admirable carpet-lining, and the various qualities are adapted for many ornamental and useful purposes. I design it particularly for the packing of bottles and other fragile articles. The elevations and depressions occur alter-45 nately in regular order, lengthwise, crosswise, and obliquely on both sides of the sheet, which

is thus not only strengthened and adapted mechanically for the special purposes for which it is designed, but is rendered novel and attractive in appearance, fitting it for the production of a great variety of fancy articles.

In the manufacture of my improved fabric I propose to employ any material or combination of materials adapted to the production of such an article, and especially the various grades of paper and straw-board of suitable tenacity. I prefer, however, to make it from wood-pulp, sheets of which, sized if required, are corrugated, as described, while in a moist unfinished condition, and are subsequently 60 dried.

Corrugation of the sheet is effected in any convenient manner, preferably by intermeshing rollers having surfaces with broken corrugations the reverse of the fabric to be pro-65 duced. A suitable machine for this purpose forms the subject of another application for patent filed by me simultaneously herewith.

I am aware of the patent to M. Newton, No. 235,449, dated December 14, 1880, in which is 70 described a fluted paper having flutes running in azigzag course across the sheet. I disclaim everything set forth in said patent.

I claim as my present invention-

1. As a new article of manufacture, a double 75 embossed fabric formed with independent hollow bosses extending above and below the plane of intermediate fulled, shirred, or wrinkled material, substantially as set forth.

2. As a new article of manufacture, a doubleembossed fabric of homogeneous material, formed with alternate hollow bosses or elevations and depressions, arranged in oblique lines on both its surfaces, and put up in sheets or rolls, substantially as set forth.

In testimony whereof I hereto affix my signature in presence of two witnesses.

MOORE R. FLETCHER.

Witnesses:

A. H. SPENCER, E. A. PHELPS.