

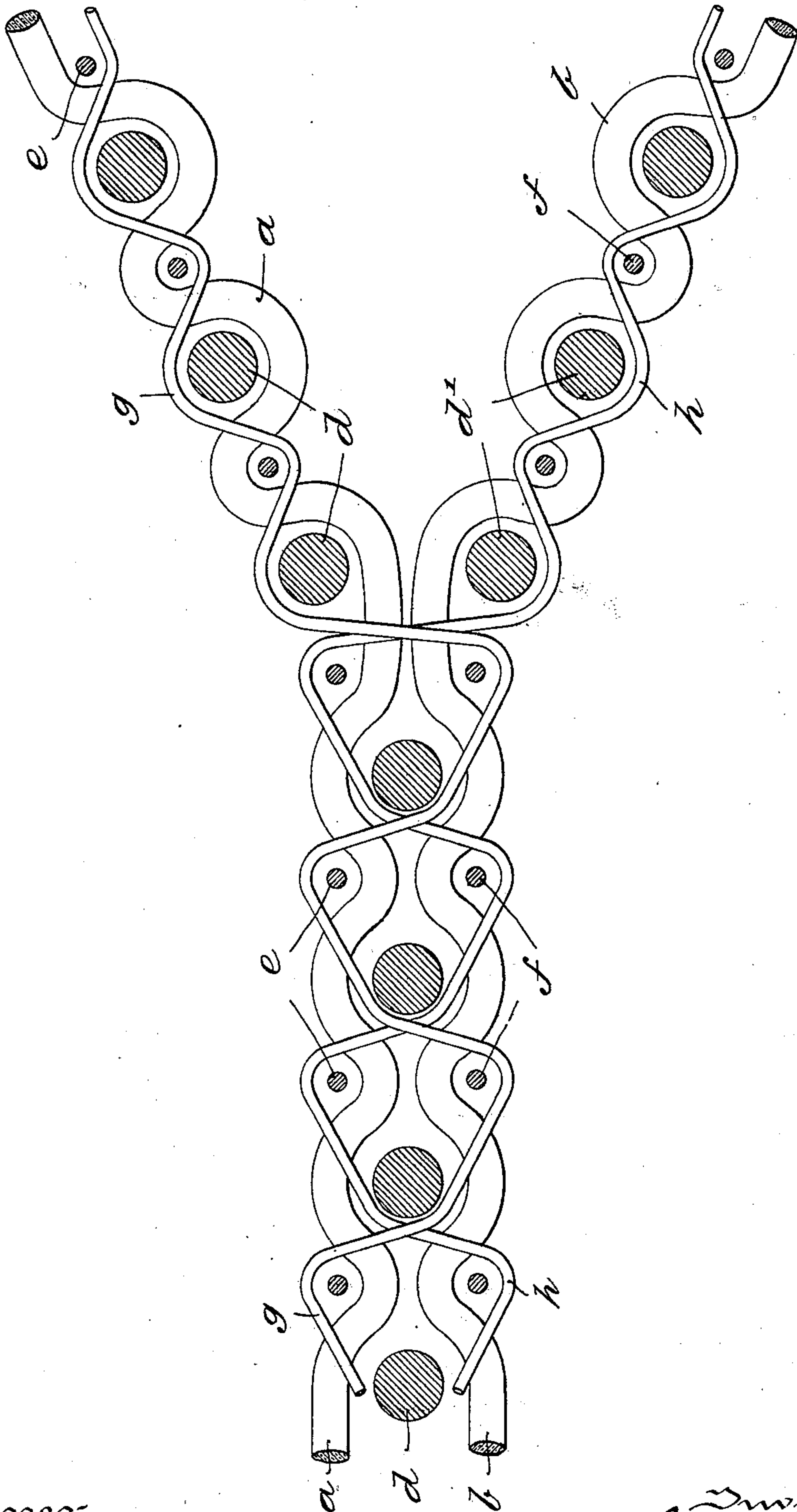
No. 658,181.

Patented Sept. 18, 1900.

R. JOHNSTON.
WOVEN FABRIC.

(Application filed Aug. 6, 1900.)

(No Model.)



Witnesses:
Wilhelm Vogt
Thomas M. Smith

Inventor:
Robert Johnston,
J. Walter Douglas,
Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT JOHNSTON, OF PHILADELPHIA, PENNSYLVANIA.

WOVEN FABRIC.

SPECIFICATION forming part of Letters Patent No. 658,181, dated September 18, 1900.

Original application filed June 29, 1900, Serial No. 22,023. Divided and this application filed August 6, 1900. Serial No. 25,974.
(No specimens.)

To all whom it may concern:

Be it known that I, ROBERT JOHNSTON, 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, of which the following is a specification.

My invention has relation to a woven fabric; and in such connection it relates particularly to the structure and to the arrangement of the warps and wefts to constitute the fabric of my invention.

The principal object of my invention is to provide a thick, double-faced, and homogeneous fabric suitable for portières, couch-covers, and the like in which both faces are ornamented or figured by heavy warp-threads, one set of the figuring warp-threads remaining in one plane to constitute the figure for one face only of the fabric and the other set remaining in a parallel plane to constitute the figure for the other face of the fabric and said figuring warp-threads being used in conjunction with weft-threads of alternately heavy and light texture, the heavy or stuffer weft-threads remaining always during the weaving of the body of the fabric between the two sets of figuring warp-threads, while the light weft-threads are arranged in sets of two, one in each set being shot above the upper heavy figuring warp-thread, while the other in each set is shot below the lower heavy warp-thread, said warp and weft threads being combined or united by two light binder warp-threads, which inclose one heavy or stuffer weft and one set of two light weft-threads in a single set, in connection with a frieze or border in two separate plies or planes, in which one ply is formed of alternate shots of a heavy or stuffer weft and a light weft tied or bound together by one figuring-warp and one binder-warp, and the other ply is similarly formed of alternate shots of a heavy or stuffer weft and a light weft bound together by the other figuring-warp and the other binder-warp.

My invention, stated in general terms, consists of a woven fabric having the structure and with warps and wefts arranged in sub-

stantially 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 drawing, forming part hereof, illustrating in sectional view a fabric embodying main features of my invention with a double frieze or border completing the said fabric.

Referring to the drawing, *a* and *b* are respectively the upper and lower heavy figuring warp-threads, each of which, as shown, remains constantly in one plane to constitute the figure or ornamentation of respectively the upper and lower faces of the fabric. Between these two warp-threads *a* and *b* and in the body of the fabric is arranged a series of heavy stuffer weft-threads *d*. Above the upper warp *a* and below the lower warp *b* are arranged, respectively, the upper and lower light weft-threads *e* and *f*, which constitute together a set of light wefts, between which the two warps *a* and *b* are located. These sets of light wefts are arranged in series and alternate with the series of heavy stuffer-wefts *d*. A set of light wefts *e f* and one stuffer-weft *d* are tied together in a single set by two light binder-warps *g* and *h*, and when so tied the wefts serve to bind the warp-threads *a* and *b* into a homogeneous structure.

When it is desired to complete the fabric by forming a double border of two separate plies, an additional heavy stuffer-weft *d'* is shot into the fabric, and the arrangement is as follows: To constitute the upper ply of the double border, the heavy warp-thread *a* and a light warp-thread *g* bind or tie in alternate arrangement a heavy stuffer *d* and the upper light weft *e* together, while the lower heavy warp *b* and the other light binder-warp *h* bind in alternate arrangement the added heavy stuffer *d'* and the lower light weft *f*. It should, of course, be understood that the added stuffer *d'* could be shot so as to form part of the upper ply of the border instead of forming, as shown, a part of the lower ply of said border, and it will be obvious that either light binder-warp *g* or *h* can be used in the formation of either the upper or lower plies of the said bor-

der. It will be observed that in the border-ply the heavy warp figuring-thread *a* is arranged that it passes below or under the stuffers *d* and the thread *b* passes over or above the stuffers *d'*, which is the reverse position of the threads *a* and *b* with respect to the body of the fabric. This arrangement is preferred, for the reason that the figures in the fabric are formed at the points where the threads *a* and *b* lie adjacent to the stuffers, and in the main body of the fabric the figures are always on the outside or upper and lower faces of the fabric. In the border, however, the plies are designed to fold back or down upon the upper and lower faces of the body of the fabric, and hence the inner face of each ply is ornamented.

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

A double-faced, homogeneous woven fabric, the main body of which is formed of upper and lower heavy figuring warp-threads, heavy stuffer-wefts shot between the warp-threads,

sets of two light weft-threads between which the upper and lower warp-threads are arranged and light binder-warps inclosing one heavy stuffer-weft and one set of two light wefts to bind the fabric together and a double-ply frieze or border formed at the end of the fabric, one ply of said border being formed of alternate shots of a heavy stuffer-weft and one light weft tied or bound together by one heavy warp and one light binder-warp, and the other ply of said border formed of alternate shots of an added heavy stuffer-weft and the other light weft tied or bound by the other heavy warp and the other light binder-warp, substantially as and for the purposes described.

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

ROBT. JOHNSTON.

Witnesses:

J. WALTER DOUGLASS,
THOMAS M. SMITH.