

No. 633,483.

Patented Sept. 19, 1899.

E. PIETSCHMANN.  
SKIRT PROTECTOR.

(Application filed May 17, 1898.)

(No Model.)

Fig. 1.

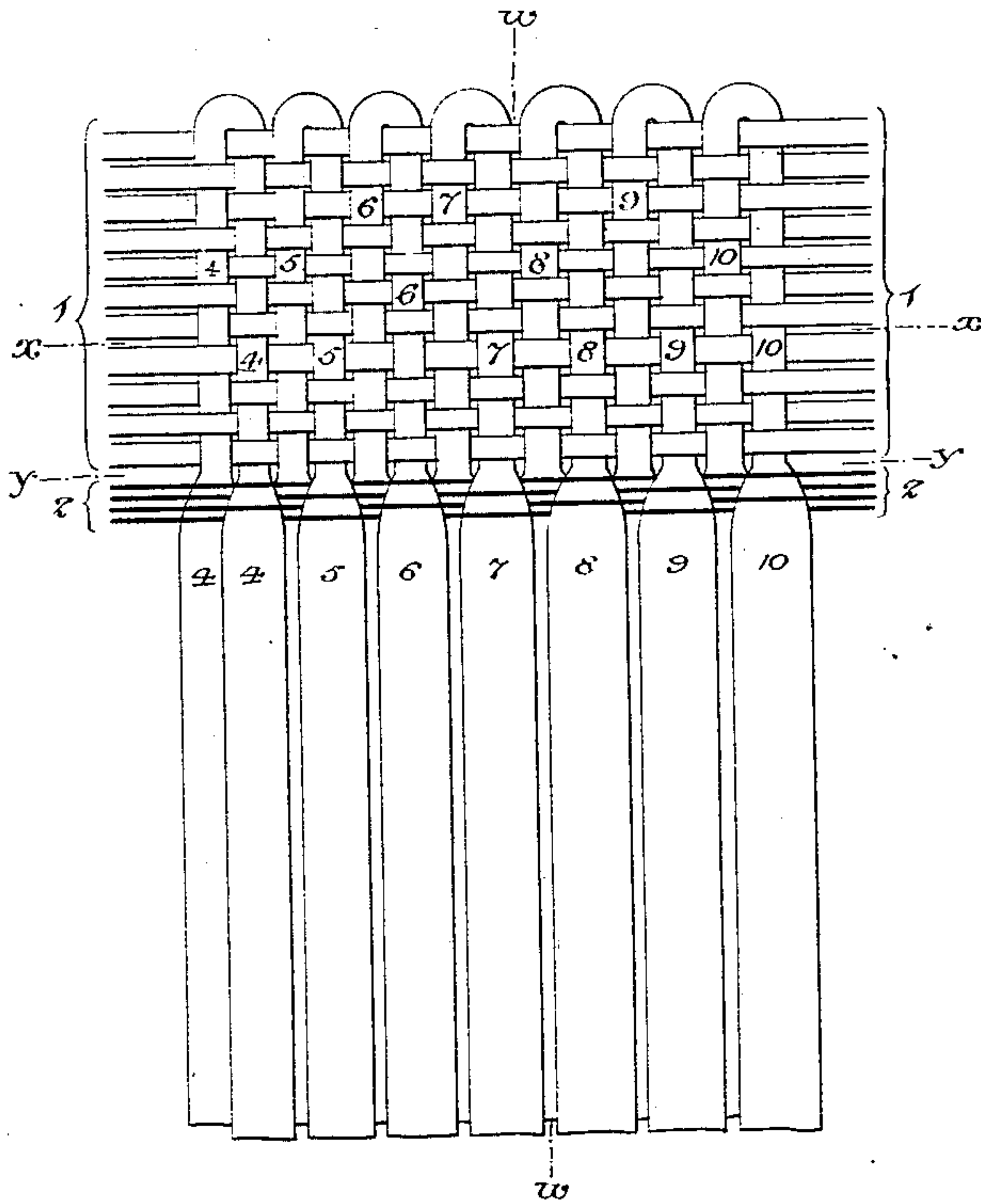


Fig. 2.

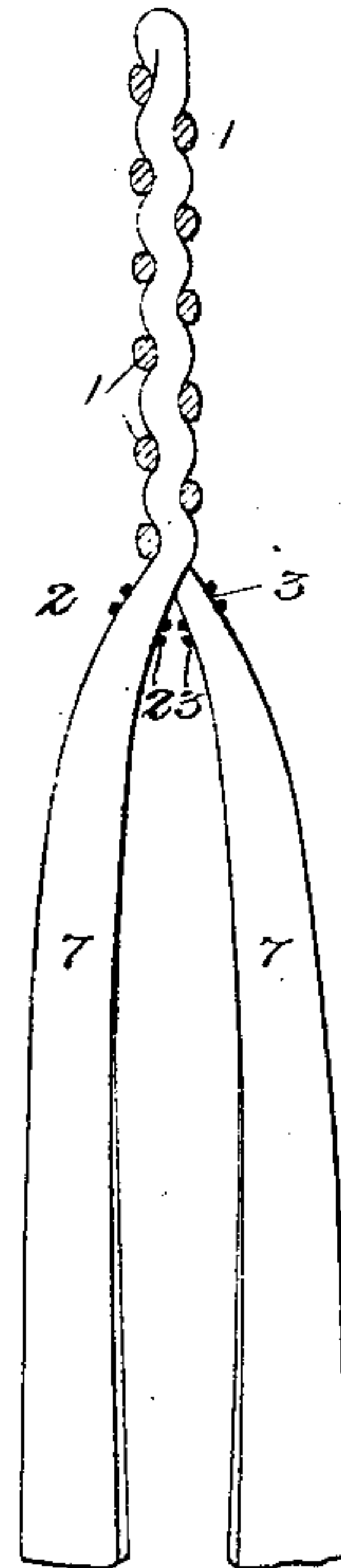


Fig. 3.

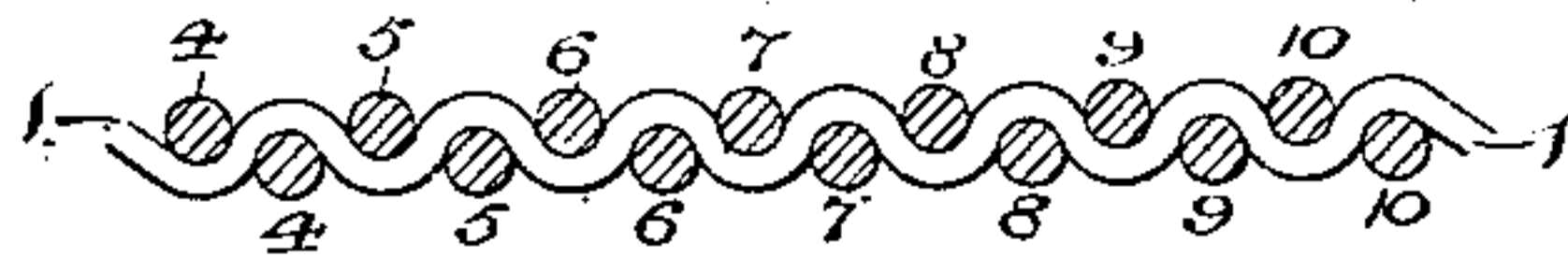
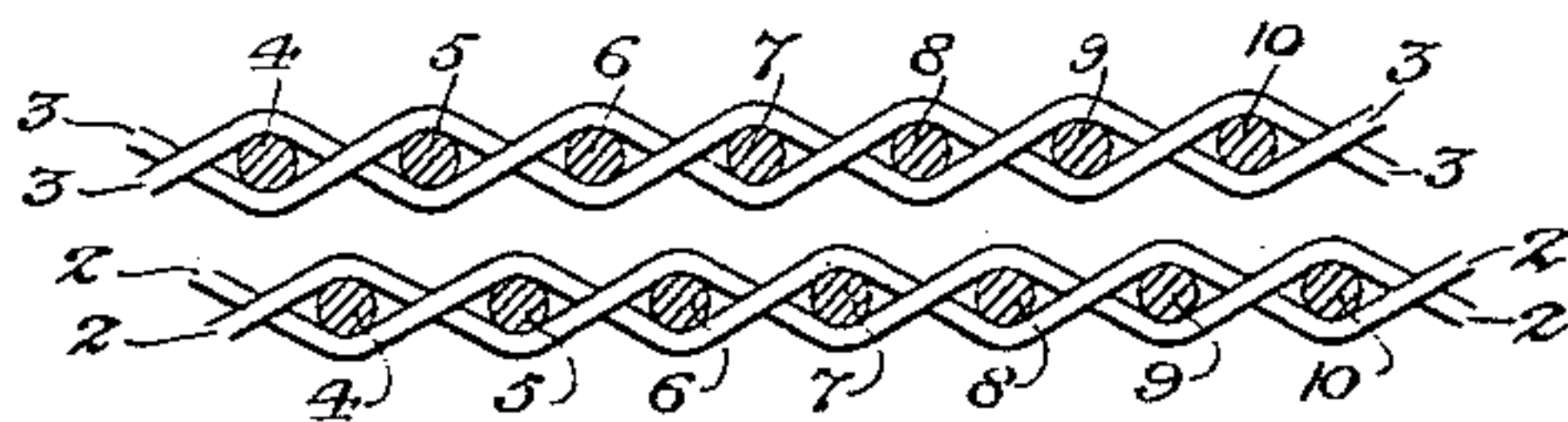


Fig. 4.



Witnesses:

Charles De Bow.  
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Inventor:

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by his Attorney:

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# UNITED STATES PATENT OFFICE.

EMIL PIETSCHMANN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
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## SKIRT-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 633,483, dated September 19, 1899.

Application filed May 17, 1898. Serial No. 680,905. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL PIETSCHMANN, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Skirt-Protectors, of which the following is a specification.

My invention relates to that class of woven fabrics used as dress-protectors, and particularly to those which consist of a heading with a depending fringe forming a brush-like lower edge, the object of my invention being to effect the spreading or distending of this fringe, so as to impart fullness to the brush portion of the protector. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a piece of web woven in accordance with my invention, the threads being very much exaggerated in size in order to more clearly illustrate the structure of the fabric. Fig. 2 is a vertical sectional view on the line *ww*, Fig. 1. Fig. 3 is a sectional plan view on the line *xx*, Fig. 1; and Fig. 4 is a sectional plan view on the line *yy*, Fig. 1.

In producing my improved fabric I employ three sets of warp-threads, which in the drawings are numbered, respectively, 1, 2, and 3, and with these threads are interwoven the weft or filling threads, of which in the drawings I have represented seven, numbered, respectively, 4, 5, 6, 7, 8, 9, and 10, these weft-threads forming a selvage at the top of the heading and having depending cut ends which form the projecting fringe or brush of the fabric.

Each run of each of the weft-threads is interwoven with the warps 1, so as to form a single close web in the heading; but the runs of the weft are divided for being interwoven with the warps 2 and 3, one run of the weft being interwoven with the warps 2 and the other run being interwoven with the warps 3,

as shown in Figs. 2 and 4. Hence in the depending fringe or brush portion of the fabric the wefts are separated from each other to a considerable extent, as shown in Fig. 2, and the desired fullness is thus imparted to said fringe or brush portion of the fabric without the use of an excessive amount of weft material for the purpose.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A woven dress-protector consisting of a heading composed of closely-woven warps and wefts and a fringe formed by the depending ends of the wefts of the heading and interposed warps laterally separating said depending ends from each other so as to impart fullness to said fringe, substantially as specified.

2. A woven dress-protector consisting of a heading composed of interwoven warps and wefts, each run of the weft being interwoven with the same warps, and a fringe composed of the depending ends of the heading-wefts, the runs of weft being separated in said fringe and separate sets of warps, interwoven with separate runs of weft and bunched close to the lower edge of the heading, substantially as specified.

3. A woven dress-protector consisting of a heading composed of interwoven warps and wefts, the warps being on the outer sides of the wefts, and a fringe composed of the depending ends of said heading-wefts, and warps interwoven therewith and disposed partly on the outside and partly on the inside of the said depending wefts, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EMIL PIETSCHMANN.

Witnesses:

F. E. BECHTOLD,  
WILL. A. BARR.