

(No Model.)

A. D. EMERY.
WOVEN SEAMLESS BAG.

No. 415,154.

Patented Nov. 12, 1889.

Fig. 2.

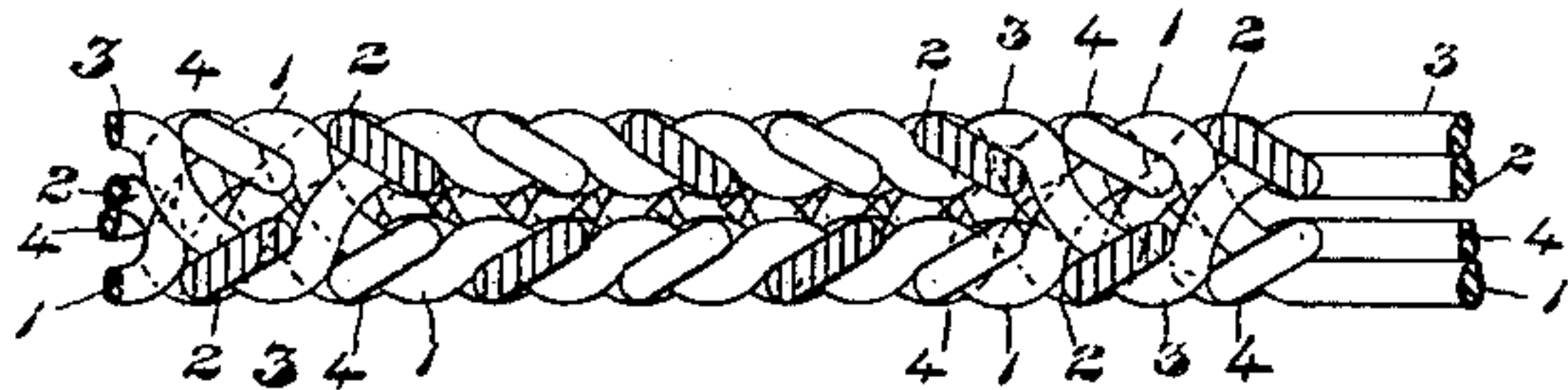


Fig. 1.

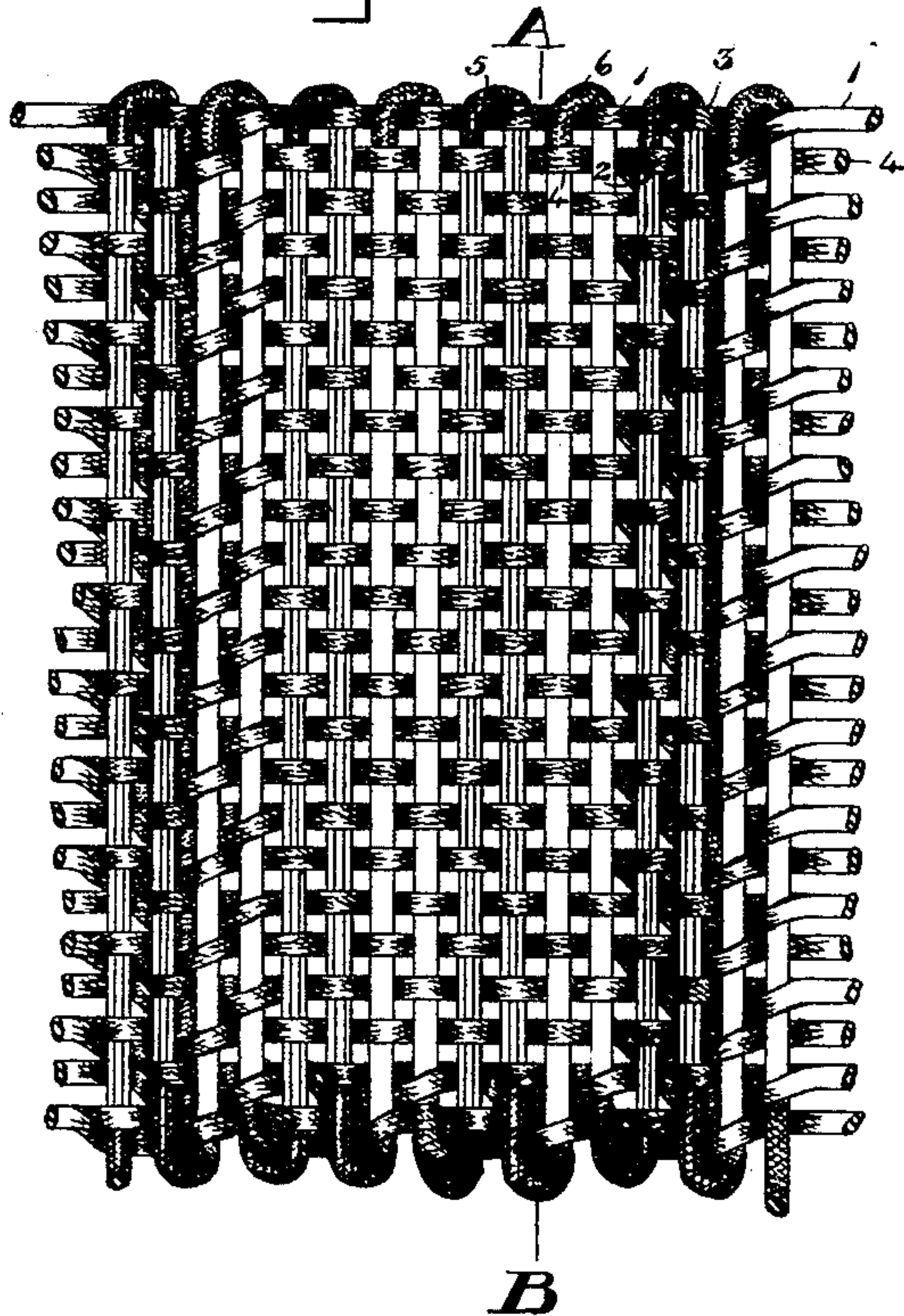
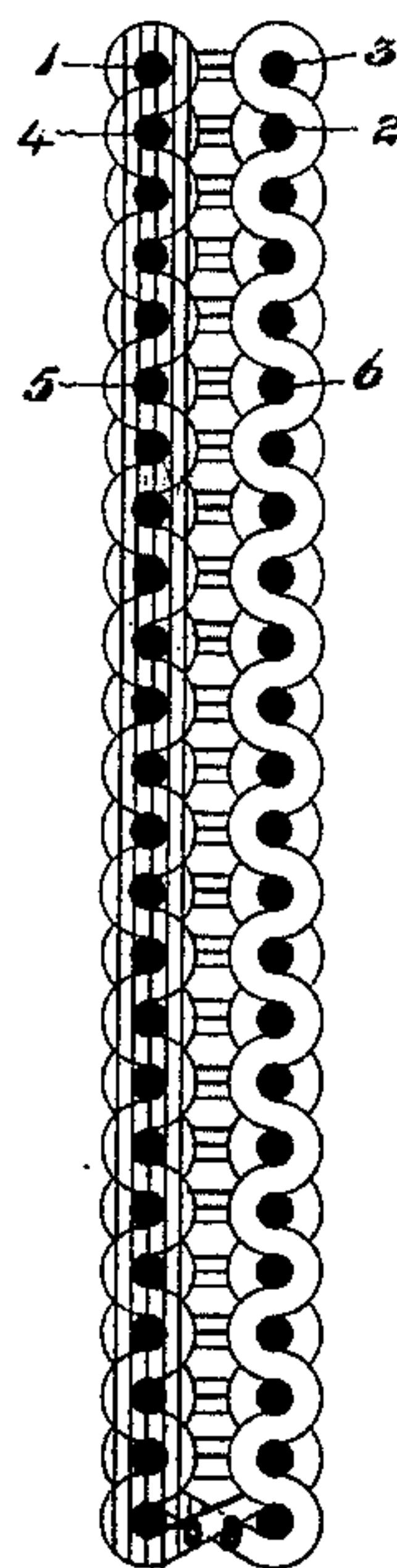


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ABRAM D. EMERY, OF TAUNTON, MASSACHUSETTS.

WOVEN SEAMLESS BAG.

SPECIFICATION forming part of Letters Patent No. 415,154, dated November 12, 1889.

Application filed May 31, 1889. Serial No. 312,833. (No model.)

To all whom it may concern:

Be it known that I, ABRAM D. EMERY, a citizen of the United States, residing at Taunton, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Woven Seamless Bags, of which the following is a full description.

My invention relates to woven seamless bags composed of a set of chain-threads and two separate weft-threads, each occupying a half of each pick, and which traverse the chain-threads of opposite sides of the bag for two successive picks and are then transferred at the bottom of the bag to opposite positions in the bag for two successive picks, and so on. The two sides of the bag thus formed are bound together at the sides and bottom by interlacing the chain-threads of the two sides about the two weft-threads. In the body of the bag separate weft-threads starting from opposite selvages located on the same side of the bag make passages to the opposite side of the bag, where they pass each other, one over and one under, into succeeding picks in the opposite parts of the bag and to the opposite selvages from which they started. The weft-threads then return through succeeding picks from those selvages to the bottom of the bag, where they again pass by each other and cross, one over and one under, and return through succeeding picks to the selvages from which they started. At the point where the sides of the bag are bound together the chain-threads are interlaced around the weft-threads. At the point where the bottom of the bag occurs the chain-threads are similarly interlaced around the weft-threads, the bottom being further strengthened and made perfect by the circumstance that the weft-threads make continuous passages around the bottom and cross each other at that point, forming a lock. The mouth of the bag in this formation consists of two selvage-edges formed by the weft-threads passing to and from said edges around the outer chain-threads at that point. In this formation a given weft-thread is in one half of the fabric for two successive picks and is then in the opposite half of the fabric for two successive picks, the same being true of the other weft-thread in the reverse sense.

In the accompanying drawings, forming

part of this specification, Figure 1 is a plan view of the fabric, with the several threads separated to show the position of the same. Fig. 2 is a side view of the fabric, showing the two selvages constituting the mouth of the bag. Fig. 3 is a cross-section on the line A B, Fig. 1, showing the two sides and the manner of uniting the sides and bottom.

One of the weft-threads is shown as shaded and is indicated by the numeral 5, the other weft-thread is shown as plain and is indicated by the numeral 6. The numerals 1, 2, 3, and 4 indicate the chain-threads, the threads 1 and 4 forming one side of the bag and threads 2 and 3 forming the other side of the bag. It will be observed that each weft-thread occupies a half of each pick, and that at each second pick they are transferred at the bottom of the bag to opposite sides of the bag, in the manner more fully described in application Serial No. 265,639, filed by me February 28, 1888.

The side and bottom of the bag are united by passing the chain-threads of one side of the fabric to the other side and outside the weft-thread, forming that side of the bag in regular order, so that at all times there is one chain-thread on each side of each weft-thread, or one on each outside and two between or inside the two weft-threads.

According to my present invention the weft-threads 5 and 6 are not only interlaced with the chain-threads at the bottom of the bag, but cross each other over and under at this point into succeeding picks into opposite sides of the bag, thus forming a double binding at that point. The binding of the sides together may be of any width desired. In the drawings I have shown four threads so bound together; but any multiple of this number may be so treated as desired.

The bags now described may be formed in an endless fabric, as described in an application filed by me July 22, 1889, Serial No. 313,249, (Case 20,) and are separated into distinct bags by cutting across the chain-threads at the middle of the portion woven together, as indicated in the drawings.

The bag here described is to be distinguished from the bag which is the subject of application Serial No. 312,826, filed by me May 31, 1889, which bag is made by the method

which is the subject of application No. 312,827, (Case 12,) filed by me May 31, 1889. The bag of the present case is precisely like the bag of Case 11, except that as an additional feature the bag of the present case has the weft-threads interlaced with all the chain-threads at the bottom of the bag, whereas in Case 11 the bottom is closed only by the passage of the weft-threads by each other at that point into opposite sides of the bag. The same distinction exists between Case 20 and Case 12, presenting the methods by which the respective bags are made.

The term "pick" as used in this specification signifies a complete layer of weft, lying in a given vertical plane, passing perpendicular to the plane of the bag, and composed of one weft-thread on one side of the bag and the other weft-thread on the other side. These

threads are laid in a single operation by the simultaneous passage of two shuttles through double sheddings, as fully explained in application Serial No. 318,249, (Case 20,) referred to.

What I claim is—

A woven seamless bag containing two weft-threads, each occupying a half of each pick, said weft-threads being transferred to opposite sides of the bag at the bottom after each second pick, the closed ends and closed bottom of the bag being formed by interlacing the weft-threads with all the chain-threads.

In testimony whereof I have hereunto set my hand this 29th day of May, A. D. 1889.

ABRAM D. EMERY.

Witnesses:

WM. T. DONNELLY,
WALTER T. EMERY.