S. BERNSTEIN.

Woven Bag.

No. 240,645. Patented April 26, 1881.

Fig. 1.

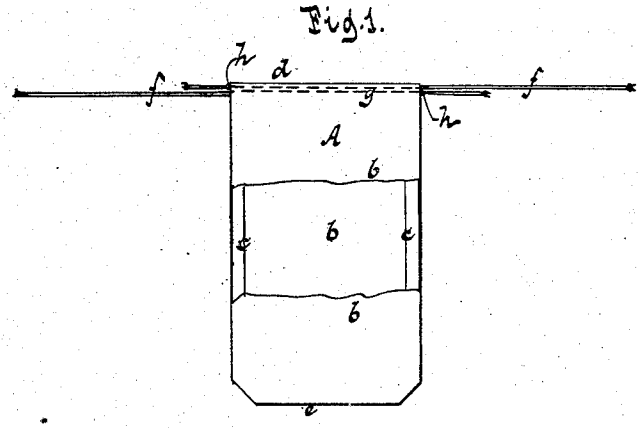


Fig. 5.

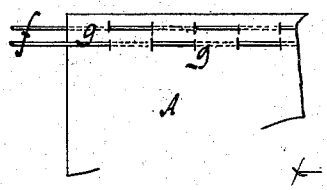


Fig. 2.

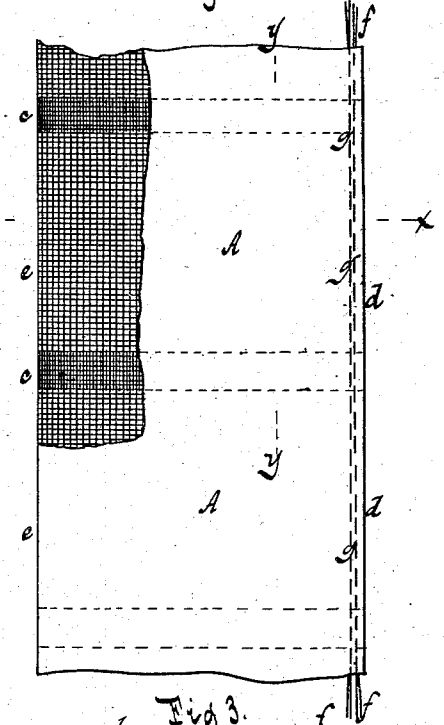


Fig. 3.

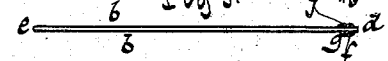
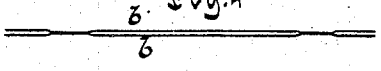


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL BERNSTEIN, OF MOUNT VERNON, NEW YORK.

WOVEN BAG.

SPECIFICATION forming part of Letters Patent No. 240,645, dated April 26, 1881.

Application filed June 28, 1879.

To all whom it may concern:

Be it known that I, SAMUEL BERNSTEIN, of Mount Vernon, in the county of Westchester and State of New York, have invented a new and useful Improvement in Woven Bags, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 shows my bag partly in side view and partly in section. Fig. 2 illustrates the manner of weaving a number of bags. Fig. 3 is a section on the line *x x*, Fig. 2. Fig. 4 is a section on the line *y y*, Fig. 2. Fig. 5 shows the arrangement of the pockets containing shirring-strings.

Similar letters indicate corresponding parts.

My invention relates to bags or pouches for holding tobacco, coin, and other articles which are carried on the person, and is applicable also to bags or pouches of large size for holding any kind of merchandise.

It consists in a bag made complete and provided with shirring threads or strings in the process of weaving, the bags being woven consecutively, so that it is only necessary to cut them apart as they come from the loom, when they are ready for use, the shirring threads or strings being tied at their severed ends. The fabric is so woven that the bags are arranged side by side, each bag occupying the whole width of the fabric. One edge of the fabric forms the bottoms of the bags, the mouths or open ends of the bags being at the opposite edge of the fabric. The fabric is woven double for that length which is required for the width of the bag, and then all the warp-threads are woven together into a single thickness of cloth for a little space, so as to form a web, which separates the adjoining bags, and then the weaving proceeds as before, to form a fabric of two thicknesses, closed at one edge of the fabric to form the bottom of the bag, and open at the other edge of the fabric to form the mouth of the bag, as explained before. The shirring threads or strings form parts of the warp on that side of the fabric where the mouths of the bags are formed.

In the drawings the letter A designates a bag constructed according to my invention, and composed of a fabric which is double, or, in other words, is made with two thicknesses, *b b*, between the sides *c c* of the bag, and between the bottom *e* and the mouth *d*.

The letters *f* designate the shirring threads or strings, which are interlaced in the process of the weaving with the shuttle-thread near the mouth of the bag, and in each thickness of the fabric. There are four shirring threads or strings, two of them being interwoven with each thickness of the fabric, in the manner indicated in the drawings. One of the shirring threads or strings which are interlaced with one of the thicknesses of the fabric is tied at the edges of the bag with one of the strings or threads of the other thickness, so as to form a shirring-string. The other pair of strings or threads are tied in like manner, and the result is that two sets of shirring-strings are produced, which can be operated from opposite edges of the bag. If preferred by the manufacturer, only two shirring-strings may be combined with the warp.

Observing Fig. 2, which represents a piece of bag-fabric as the same is produced by my method on the loom, the letters A A designate the portions of the fabric which constitute two bags, and the letters *c c* designate webs which unite adjoining bags to each other when the fabric is woven.

I begin the production of the fabric by weaving all the warp-threads together into a single thickness across the whole fabric, as at *c c*, thereby forming the edge of a bag, and then divide the warp-threads so as to form therefrom two sets of warps extending across the width of the loom. This arrangement of the warp-threads is, of course, provided for before the weaving commences, in the manner well known to weavers, for weaving two thicknesses of cloth independently of each other, and throwing the same warps together at the desired intervals, so as to form a single thickness from the united warps for the desired extent in the weaving. While the whole body of the warps is being operated so as to form two independent bodies of warps, the shed for the passage of the shuttle is formed in each of said bodies successively, and the shuttle is passed, observing Figs. 2 and 3, from the right side of the fabric, marked *d*, across through one shed—say, for example, the lower shed—to the left side, marked *e*, and in returning

to the right side is made to pass through the shed—say the upper shed—of the remaining warp-threads. The shuttle is next caused to pass again from right to left through another upper shed made from the said remaining warp-threads, and when it reaches the side marked *e* it returns to the right side through the lower shed, and so on, two successive picks being woven with each division of the warp alternately, until enough of the double fabric has been woven to form the desired width for one bag or pouch, when the whole body of warps is operated together to form a single thickness across the fabric, as at *c*, thereby producing a web which intervenes between the last portion of the double fabric woven and the next portion of double fabric.

The weaving may, of course, be interrupted when a second web, *c*, of sufficient width has been woven, thus completing one bag; but I contemplate producing the bags or pouches with the intervening webs in succession, as indicated in the drawings, and severing the webs across the center of their width, so as to leave a safe or strong edge on each side of the bags.

The shirring strings or threads *f* may, if it is desired that they should be longer than the width of the bag, be drawn out from off the warp-spools so as to produce sufficient slack thread at each web, *c*, to give the length of shirring string or thread desired. The shirring strings or threads, as well as the other portions of the warp, are controlled by the jacquard of the loom, or other devices suitable for the purpose, in the manner well known to weavers familiar with Jacquard and other looms. The shirring strings or threads are so controlled by the jacquard or other apparatus used for that purpose that one-half of them is thrown in one body and the other half into the other of the divided warp during the time that the fabric is being woven of two thicknesses.

After a bag is severed from the fabric it is turned inside out, thereby bringing the edges of the web *c* in the inside of the bag, as indicated in Fig. 1.

The bag thus produced is complete without sewing, and without applying any other fastening device than that obtained by means of the shirring strings or threads.

I do not lay claim to the inventions described in the several Letters Patent No. 6,566, granted to W. B. Carlock; No. 24,691, granted to Baare and Garelly, or No. 160,453, granted A. M. Miller; but

What I claim, and desire to secure by Letters Patent, is—

As a new manufacture, a bag woven complete and provided with shirring-strings forming part of the warp and woven in the fabric, the warp of the fabric running crosswise, or from side to side of the bag, and the weft or shuttle threads lengthwise thereof, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 25th day of June, 1879.

SAML. BERNSTEIN. [L. S.]

Witnesses:
W. HAUFF,
CHAS. WAHLERS.