

(No Model.)

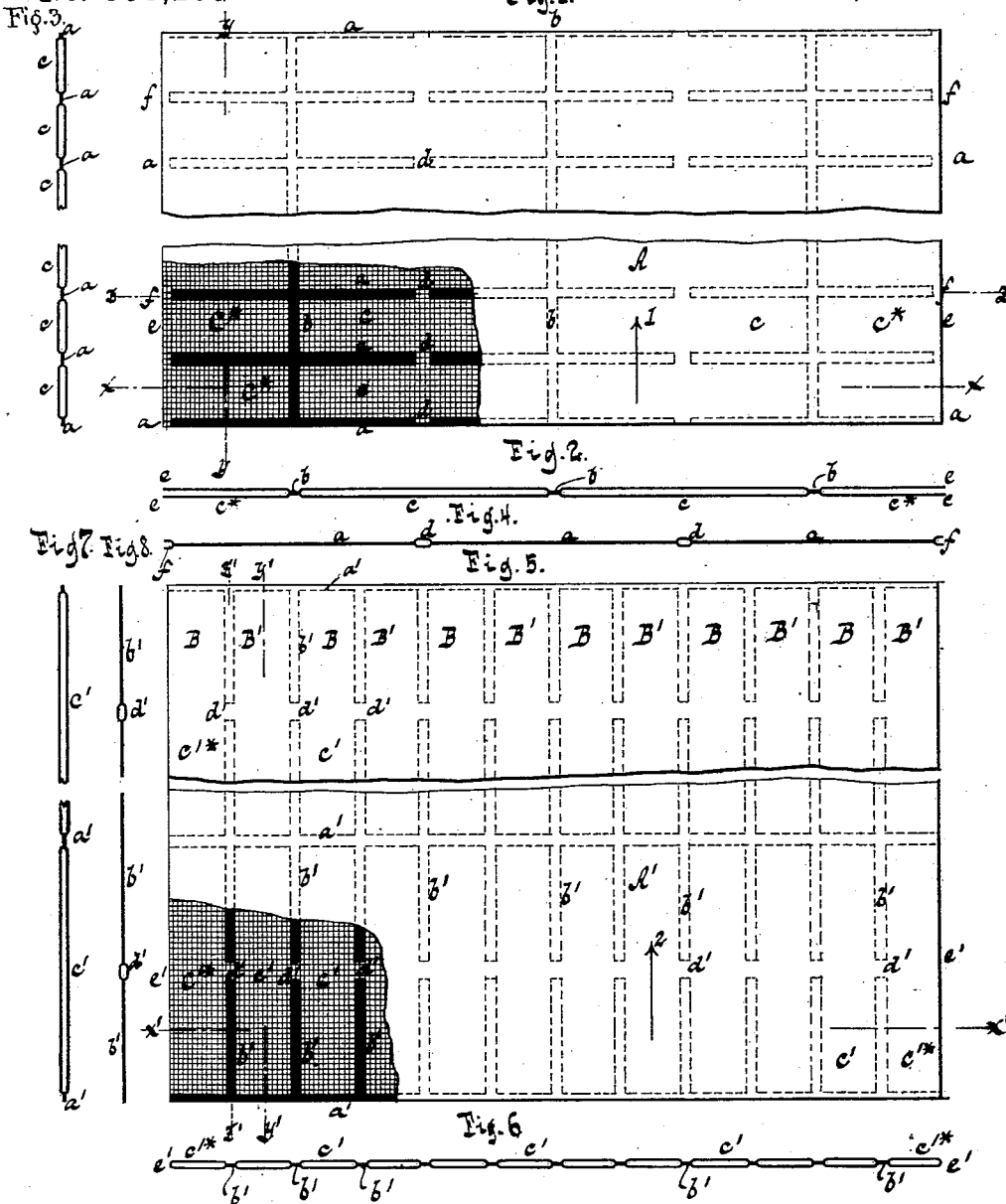
2 Sheets—Sheet 1.

B. C. HARDENBROOK.

WOVEN FABRIC FOR FORMING SEAMLESS BAGS.

No. 358,265

Patented Feb. 22, 1887.



Witnesses

Otto Hufeland

William Miller

Inventor  
Benjamin C. Hardenbrook  
by Van Sautwood & Hauff  
his attys.

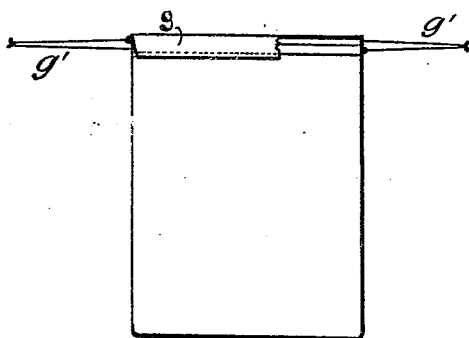
B. C. HARDENBROOK.

WOVEN FABRIC FOR FORMING SEAMLESS BAGS.

No. 358,265.

Patented Feb. 22, 1887.

Fig. 9.



Witnesses.

Robert Consett,

J. A. Rutherford

Inventor.

Benjamin C. Hardenbrook

By

Van Santvoord & Hauff

Attys.

# UNITED STATES PATENT OFFICE.

BENJAMIN C. HARDENBROOK, OF NEW YORK, N. Y.

## WOVEN FABRIC FOR FORMING SEAMLESS BAGS.

SPECIFICATION forming part of Letters Patent No. 358,265, dated February 22, 1887.

Application filed December 20, 1883. Serial No. 115,162. (No specimens.)

*To all whom it may concern:*

Be it known that I, BENJAMIN C. HARDENBROOK, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Woven Fabrics for Forming Seamless Bags, of which the following is a specification.

This invention consists in a woven fabric for forming seamless bags, said fabric being formed of a series of panels, each composed of two separate cloths, a series of solid webbings uniting the cloths of the panels, and a series of divisions formed in the solid webbings, each of said divisions being composed of two separate cloths.

In the accompanying drawings, Figure 1 represents a plan view of the fabric woven according to my invention. Fig. 2 is a transverse section of the same in the plane  $x x$ , Fig. 1. Fig. 3 is a longitudinal section in the plane  $y y$ , Fig. 1. Fig. 4 is a longitudinal section in the plane  $z z$ , Fig. 1. Fig. 5 is a plan view of a modified form of my fabric. Fig. 6 is a transverse section of the same in the plane  $x' x'$ , Fig. 5. Fig. 7 is a longitudinal section in the plane  $y' y'$ , Fig. 5. Fig. 8 is a longitudinal section in the plane  $z' z'$ , Fig. 5. Fig. 9 is a sectional side view of a bag when finished.

Similar letters indicate corresponding parts.

Referring to Figs. 1, 2, 3, and 4, the letter A designates a fabric of my invention, woven in a manner well known to weavers, the direction of the warp-threads being indicated by arrow 1, Fig. 1. Said fabric consists of a series of panels,  $c c^*$ , each composed of two cloths, and of a series of transverse solid webbings,  $a a$ , and longitudinal solid webbings  $b b$ , in which the weft is interwoven with all the warp-threads of the fabric and composes one cloth. In the solid webbings  $a a$ , however, are formed divisions  $d d$  and ends  $f f$ , each composed of two cloths. (See Figs. 2 and 3.) The edges  $e e$  may be selvages and open, or they may be closed, (and in this case they must afterward be cut,) and the beginning and end of the fabric are formed each by one of the transverse solid webbings  $a$ . If the fabric

is cut lengthwise through the center of the longitudinal solid webbings  $b b$  and through the center of the divisions  $d d$ , and also transversely through the middle lines of the solid webbings  $a a$ , a number of bags are produced, and it will be seen that the bags produced from the side portions,  $c^* c^*$ , of the fabric have selvages at their mouths, while all the others produced from the center portions,  $c c$ , will have raw edges at their mouths.

Referring to Figs. 5, 6, 7, and 8 of the drawings, the letter A' designates a modified form of the fabric of my invention, woven in a manner well known to weavers, the direction of the warp-threads being indicated by arrow 2, Fig. 5. Said fabric consists of a series of panels,  $c' c'^*$ , each composed of two cloths, of a series of transverse solid webbings,  $a' a'$ , and longitudinal solid webbings  $b' b'$ , in each of which the weft is interwoven with all the warp-threads of the fabric and composes one cloth, and of a series of divisions,  $d' d'$ , each composed of two cloths, in the longitudinal webbings  $b' b'$ . (See Figs. 5, 6, and 7.) The edges  $e' e'$  on the opposite sides of the fabric are closed, Fig. 5. The beginning and end of the fabric are formed each by one of the transverse solid webbings  $a'$ . If the fabric is cut transversely through the center of the divisions  $d' d'$ , and through the middle lines of the transverse solid webbings  $a' a'$ , and lengthwise through the middle lines of the longitudinal solid webbings  $b' b'$ , a number of bags are produced, all having raw edges at their mouths.

The divisions or openings through the webbings may be located in any part of them, according to the size or shape of the bag desired.

From the foregoing description it will be seen that in cutting up the fabrics represented in the drawings a number of bags are formed, the mouth of each of which is composed of two single cloths which project beyond the solid webbings, so that they can be turned back upon the body of the bag (see Fig. 9) to form a tube,  $g$ , for the reception of drawing-strings  $g'$ , or simply hems to protect the raw edges.

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

5 A woven fabric for forming seamless bags, said fabric being formed of a series of panels, each composed of two separate cloths, a series of solid webbings uniting the cloths of the panels, and a series of divisions formed in the solid webbings, each of said divisions being composed of two separate cloths, substantially  
10 as set forth.

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

BENJAMIN C. HARDENBROOK. [L. S.]

Witnesses:

WILLIAM MILLER,  
E. F. KASTENHUBER.