

No. 625,012.

Patented May 16, 1899.

A. F. BEMIS.
CLOTH SACK FOR FLOUR, SUGAR, &c.

(Application filed Feb. 10, 1898.)

(No Model.)

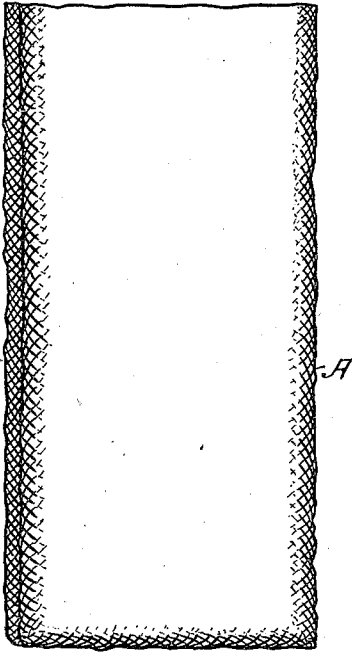


Fig. 1.

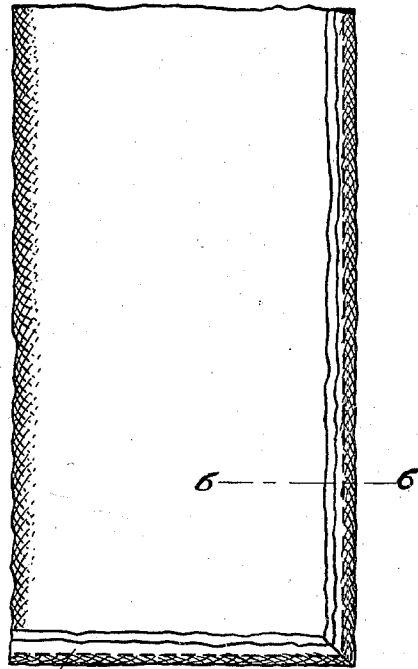


Fig. 2.

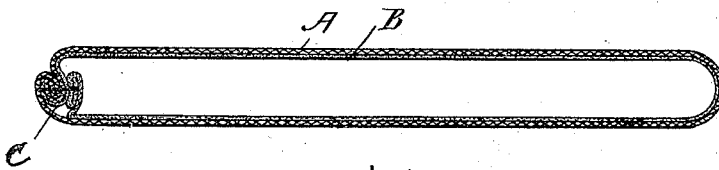


Fig. 3.

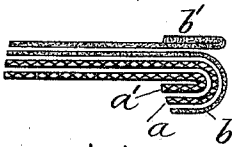


Fig. 5.

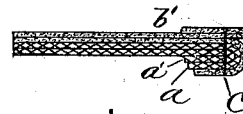


Fig. 6.



Fig. 4.

WITNESSES

J. W. Dolan
L. A. Walsh.

INVENTOR

A. Fawell Bemis
by his atty.
Clerke & Raymond



Fig. 7.

UNITED STATES PATENT OFFICE.

ALBERT FARWELL BEMIS, OF BOSTON, MASSACHUSETTS.

CLOTH SACK FOR FLOUR, SUGAR, &c.

SPECIFICATION forming part of Letters Patent No. 625,012, dated May 16, 1899.

Application filed February 10, 1898. Serial No. 669,756. (No model.)

To all whom it may concern:

Be it known that I, ALBERT FARWELL BEMIS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Cloth Sacks for Flour, Sugar, or other Material, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to cloth sacks for holding and transporting flour, sugar, and other material of similar nature having an inner section of relatively closely woven cloth and an outer, stronger, coarsely-woven inclosure. Heretofore the two sections of such sacks have been separately made and the inner then inserted into the outer; and my invention consists in an improvement in the manufacture of such sacks whereby both sections are simultaneously closed by a single seam and at the same time united to each other along the line of the seam.

The invention further relates to the former construction of the seam employed, whereby one or more raw edges of one or both sections is or are covered or bound and whereby also a stay for reinforcing the seam is provided. A sack of this structure is much stronger than a sack of the old type, and especially along the seams. It is also more readily filled than a sack of the old type in that the seam holds up the mouth of the inner section, so that it is always at the mouth of the outer section, where it can be readily seen, taken hold of, and opened.

In practicing my invention I take to form the inner section of the sack a cloth which is strong and relatively finely woven and which is preferably, though not necessarily, filled or surfaced on one or both sides with a filling or sizing or a composition of similar nature and to such an extent that the interstices between the threads of the cloth are practically closed or sufficiently closed to prevent the ready escape of powdery, fine, or dust-like material from the sack. This filling or sizing may be continuous over one or both surfaces of the cloth, if desired. Among the cloths suitable for the purpose I would mention cotton forty-four by forty-four, No. 30 yarns, when heavily sized or filled. For the outer

sack-section I use a stronger fabric than is employed for the inner, of larger threads more closely woven, and make no attempt necessarily to close the meshes or interstices thereof. A cloth suitable for this purpose is that known as "jute" or "gunny-cloth," which is a very strong coarsely-woven fabric.

In manufacturing the sack the materials of the inner and outer sections are cut to the required shape and to a size in relation to each other which permits the inner section to be closely contained in the outer section—that is, to be large enough to fill against the outer section and receive its reinforcing support.

The complete structure preferably has but two seams—namely, a side seam, which closes both sides of each of the sack-sections and at the same time unites them together, and an end seam, which does the same thing to one end of the sack. The side seam and the end seam, if desired, are made so as to provide great strength to the sack along their lines. The inner section is also held up within and by the outer section and its entrance located and maintained at the mouth of the outer section, whereby it is always readily accessible preparatory to the filling of the sack.

The invention will now be described more in detail in connection with the drawings, wherein—

Figure 1 is a view in side elevation of the complete sack. Fig. 2 is a view in elevation of the sack after the seams have been sewed, but before the inner section has been turned inside the outer. Fig. 3 is a view in horizontal section, enlarged, of the complete sack. Fig. 4 is a view representing the relation which the edges of the two sack-sections bear to each other previous to the formation of a seam. Fig. 5 shows these edges folded back upon themselves preparatory to the formation of the seam. Fig. 6 is the section upon the dotted line 6 6 of Fig. 2, representing the seam as completed. Fig. 7 is a detail view, in horizontal section, representing a slight modification, to which reference is hereinafter made.

A is the outer section of the sack, which is made of gunny-cloth, jute, or other suitable material, as above specified.

B is the cloth inner sections.

C is the uniting side seam, and D the uniting end seam.

To form the side seam, the two pieces of

cloth are folded lengthwise, with one edge extending somewhat beyond the other, and are placed one upon the other, with the two extending edges in contact, or, as represented in Fig. 4, where *a* represents the extending edge of the outer section A, and *b* the extending edge of the inner section B. The edges of the ends of the two sections which form the end seam may be similarly arranged, if desired, although it is not as important that the end seam should be so constructed as the side, as the end seam does not require to be as strong as the side. The edges of the two sections being thus arranged are caused to take the relation to each other represented in Fig. 5—that is, the edge *a'* of the outer section is turned back upon itself and the two edges *a b* are both turned together either over the edge *a'*, as shown in said Fig. 5, or over the edge *b'*, as represented in Fig. 7, and all the edges and the main parts of the sections within the edges are then united by the seam C, sewed through all and uniting all. This forms a very strong construction and a very desirable and economical one. It so unites and stays the fabrics near their outer edges as to prevent any tendency to weaken or draw along and away from the seam. It gives a sufficient support for the seam outside it and also binds the seam, forming a tight construction at the seam, through which the contents of the sack cannot escape from the inner section, and ties together the ends of the coarse strands of which the outer section is made, so that they are tightly held and cannot fray.

I prefer the construction represented in Fig. 5, or that in which the edge *b* of the inner section is carried about the edges of the outer section, as I think that forms a somewhat stronger construction, the edge *b* forming a firmer outer stay than the edge *a* of the construction represented in Fig. 7. I would say, however, I consider that one part of my invention includes a sack of the materials mentioned combined by a connecting side seam C of any construction.

While one line of stitching will ordinarily answer for the seam, two or more may be used. The two sections thus united at the side and ends are then disposed in relation to each other to bring the section B within the section A, as represented in Fig. 3, when the parts of the seam will bear the relation to each other represented in Fig. 3.

It will be seen that a single seam acts not

only to close the sides or one end of each section, but that it also unites the sections, thus saving the cost of extra sewing material and the time employed in making the sections separately and slipping one within the other in the old way.

It will be seen that a sack thus constructed will have its inner section held in place by the side seam, so that its mouth or opening will always be substantially in line with the mouth of the outer section and always readily accessible. This is a help not only in filling the same, but in the subsequent closing of the open ends of the sections, which may be combined, folded, and united by a seam similar to that represented in Figs. 5 and 6, if desired.

While I have shown and described both edges *a b* as extended, I would say that it is not always necessary to extend the edge which is the inner or inclosed one. Neither is it necessary to turn back the edges *a' b'* upon themselves, as shown in Figs. 5 and 6, although I deem this to be the preferable construction.

It will be understood that the inner section of the sack may be made of unsized or unfilled cotton.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The improved cloth sack above described having an inner section of cotton or similar cloth and an outer reinforcing-section of coarsely-woven fabric, and a uniting-seam, having one edge of one layer of said section turned back upon itself, and the other layer of said section and the two layers of the other section turned back upon themselves, said sections being united by a line of stitching common both to all layers and all turned-back edges, as set forth.

2. The improved sack above described consisting of four thicknesses of material disposed to form an outer section and an inner section joined by a seam composed of one of said layers doubled upon itself and the three outer layers doubled upon themselves with a line of stitching passing through all of said doubled layers, said line of stitching, when said bag is turned right side out, being protected on the inside by an inside layer and on the outside by an outside layer, as set forth.

A. FARWELL BEMIS.

In presence of—

F. F. RAYMOND, 2d,
J. M. BEMIS.