A. M. BATES.

VALVE BAG.

APPLICATION FILED OCT. 15, 1912.

1,107,879. Patented Aug. 18, 1914.

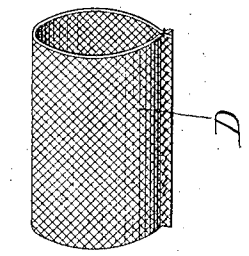


Fig. 4.

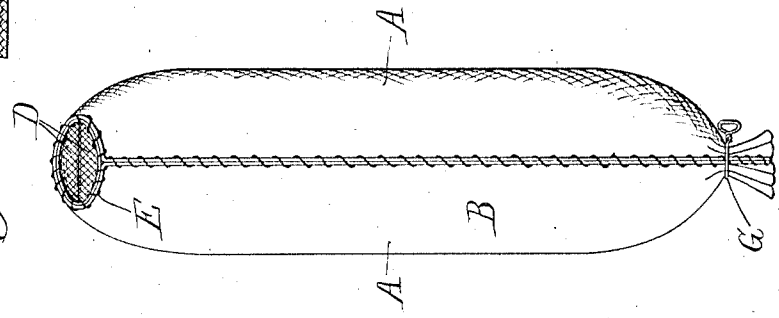


Fig. 3.

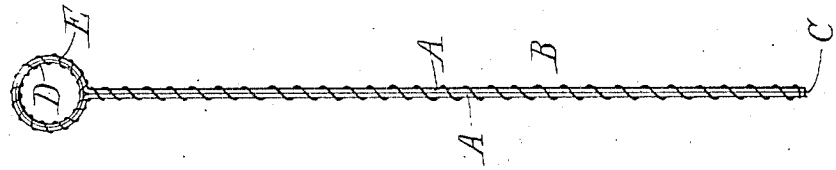


Fig. 2.

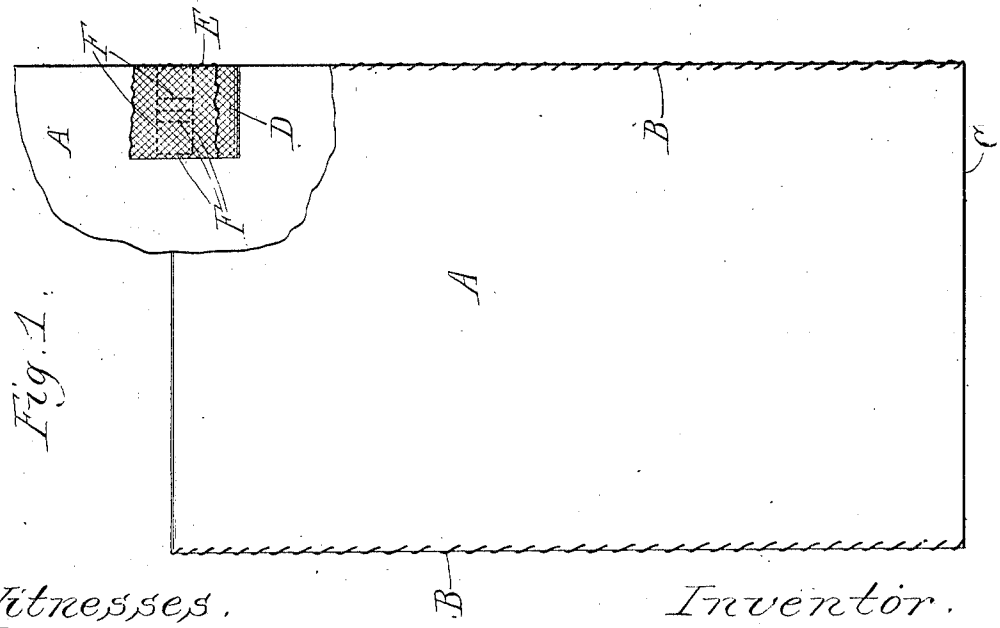


Fig. 1.

Witnesses.
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UNITED STATES PATENT OFFICE.

ADELMER MARCUS BATES, OF CHICAGO, ILLINOIS, ASSIGNOR TO BATES VALVE BAG COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF WEST VIRGINIA.

VALVE-BAG.

1,107,879. Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed October 15, 1912. Serial No. 725,805.

To all whom it may concern:

Be it known that I, ADELMER M. BATES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Valve-Bags, of which the following is a specification.

My invention relates to a valve bag and is particularly applicable to the case of large and heavy bags where the valve is to be applied to an otherwise completed or finished bag.

It is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a bag with parts broken away; Fig. 2 is an edge elevation of a collapsed bag with the valve tube open; Fig. 3 is a similar elevation with the bag extended and the valve collapsed; Fig. 4 is a perspective of the valve tube.

Like parts are indicated by the same letter in all the figures.

A, A are the sides of the bag which consists in this case of a long blank whose two parts are folded upon each other to form the sides of the bag and whose two side edges are then stitched at B, B so as to form a bag with the mouth open at C.

D is a tube of valve-making material which is securely stitched to the separated edges of the bag sides A, A, at E. The upper portion is also secured in any desired manner, but preferably by a series of quilting seams, F, F, to the folded edge or the permanently closed or upper end of the bag.

Such bags, and others differing in details but of the same general nature are easily made in large quantities at small expense, and they are commonly intended to be folded at the large open end. The open end C may be closed in any desired manner as by the wire tie G or by a permanent or removable closure, but for the purpose which I now have specially in mind, these bags are commonly closed before they are filled by a temporary closure. It is to such bags when they are to be filled through a valve opening that my invention relates.

The seam for a short distance from the folded edge or permanently closed end of the bag is open and a piece of fabric shaped like a tube is inserted. The end of the tube fills the aperture made in the bag by opening the seam, and the end of the tube and edges of the bag are securely sewed together. The upper portion of the tube is now securely attached to the folded edge of the bag within the latter so that the fabric of the bag and the tube are quilted together and thus each reinforces the other.

A very considerable number of my valve bag filling machines and apparatuses are constructed so that for satisfactory and successful operation a stream of material should be poured or forced into the bag at the top or upper edge on a line approximately at right angles to the length of the bag. It is equally important in many of my machines that the bag should more or less be supported on the filling tube which enters the bag and is adapted to receive its outer or folded or permanently closed end or edge. It is to provide for these conditions that my invention is particularly adapted, and in the case of heavy bags where the bag hangs upon the tube, it is highly important that the fabric of the bag should be strong and if possible reinforced. It is very difficult if not impossible to fold the otherwise finished bag in any such way as to produce a practicable horizontal filling tube. We have solved these difficulties and provided a form of bag which is entirely practicable for all sizes, though perhaps especially adapted for large bags or such as are to be filled with considerable quantities of material.

I claim:

1. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and its side secured to the inside of the bag end.

2. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and a part of its side walls secured to the inside of the bag end.

3. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and approximately half of its side walls secured to the inside of the bag end.

4. A valve bag comprising a body having an opening near one end in combination with

a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and approximately half of its side walls secured to the inside of the bag end by a series of seams.

5. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening and its side parallel with the end and inside of the bag.

6. A valve bag comprising a body having an opening near one end in combination with a separate flexible valve tube inserted in said bag after the same is finished, its end secured to the edges of the opening.

In testimony whereof, I affix my signature in the presence of two witnesses this 5th day of October 1912.

ADELMER MARCUS BATES.

Witnesses:
MINNIE M. LINDENAU,
LAUREL M. DOREMUS.