A. M. BATES.

BAG.

APPLICATION FILED FEB. 5, 1915.

1,164,451. Patented Dec. 14, 1915.

Fig. 1.

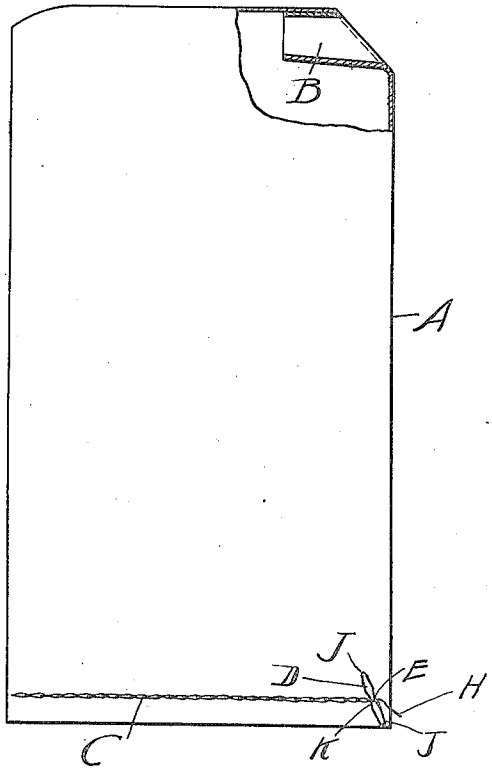


Fig. 2.

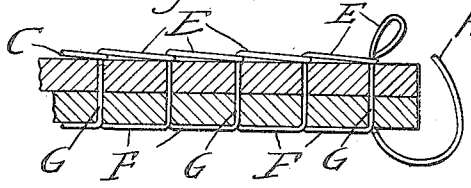
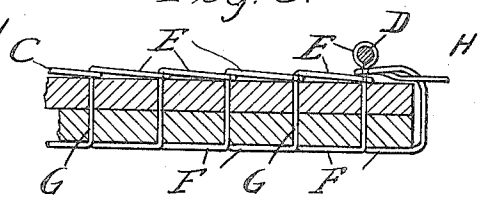


Fig. 3.



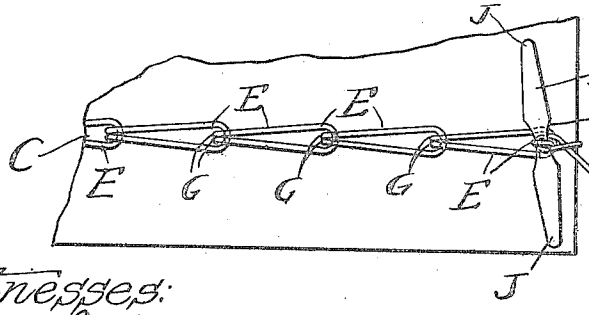


Fig. 4.

Witnesses:
O. F. Lawrence
Minnie M. Lindeman

Inventor.
Adelmer M. Bates.
by Parker & Carter
his Attys.

UNITED STATES PATENT OFFICE.

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

BAG.

1,164,451. Specification of Letters Patent. Patented Dec. 14, 1915.

Application filed February 5, 1915. Serial No. 6,224.

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 Bags, of which the following is a specification.

My invention relates to means for closing the open end of a bag, particularly a valve bag.

A great deal of bag material is wasted on account of the necessity of gathering or puckering the open end of the bag and tying it. Such an operation necessarily presupposes a considerable length of waste material. In other words, if a valve bag, for example, could be closed at the otherwise open end by a seam near the edge, there would be a great saving of bag material as compared with a similar bag whose otherwise open end is puckered and tied. Such seam, however, must be ravelly or easily eliminated, for otherwise the workmen who handle such bags, for example, cement bags, instead of attempting to open the end and save the bag would simply cut or slit the bag with a knife or a shovel as being the easiest way to get the material out. Thus the bag would be ruined. A ravelly thread, however, is likely to be easily raveled and the bag opened, and hence if it is used it must be locked. The lock, however, ought to be such a lock as can be easily disengaged and will then leave the seam in condition to be raveled. In short, the whole problem is to provide means whereby a very low class of labor can be used without threatening the bag.

One form of my invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation of a bag with a valve at one end and my seam and lock at the other; Fig. 2 is an enlarged detail cross section of a bag with a ravelly seam to close the end; Fig. 3 is a similar view with the locking pin in position through the loop and with the end of the thread carried around to make the locking hitch on the loop back of the pin; Fig. 4 is an enlarged plan view of the same.

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

A is the bag, B the valve, C the ravelly seam and D the locking pin. The ravelly seam is composed of a series of loops E, E which lie on one side of the bag, the thread sections F, F which lie on the other side of the bag and the portions G, G which pass through the bag. H is the end of the thread. This will be recognized as a familiar form of seam in which by pulling on the end H the first loop E will be gradually diminished until it disappears, thus releasing the next loop E, and this process will continue until the seam is entirely unraveled. If, however, a pin like the pin D, preferably with the pointed ends J, J and the groove K about its middle portion, be inserted in the last loop and the end of the thread H be drawn up tightly the thread of the loop will be tightened around the groove of the pin and the pin be held in position and the parts locked together. Such an attachment, however, will be likely to be disengaged in the ordinary handling of the bag, and hence the thread end H is brought over the edge of the material and tightened in any desired manner around the base of the loop beneath the pin so that the parts are all securely fastened together. Any other means of locking, of course, could be employed. It will be understood that this seam and the lock is applied to the bag before it is filled and the empty bag under these conditions can be handled in such way as to permit such a seam to be formed and locked against raveling with great ease and very close to the edge of the bag or bag material.

I wish my drawings to be taken as diagrammatic or suggestive and I wish it to be understood that great changes can be made, particularly in respect to the seam employed and the lock provided, without departing from the spirit of my invention.

The use and operation of my invention are as follows: A valve bag is made in the usual way closed at both ends except as to the valve opening preferably in one corner. This bag has, as explained, a ravelly seam at and near the end opposite the valve end and the lock is attached to the seam so that it will not ravel. If a ravelly seam consisting of a series of interlocked loops is employed, the last loop can be locked by means of the lock pin or equivalent substitute therefor. This bag so completed is shipped or sold to the user and the bag is

filled through the valve by suitable machines adapted for that purpose. The filled bag is then shipped and finally delivered to the point where it is to be used. The user, or the workman employed by him, can now easily in any manner disengage the pin by drawing it out or breaking it, whereupon the loop is immediately released, and it is only necessary to give a smart pull to the free end of the seam thread, whereupon the whole seam will be raveled with the least possible difficulty. Thereupon the contents of the bag may be emptied therefrom in the usual manner. The essential point is that there be a ravelly seam and that there be a removable or a detachable lock therefor.

I claim:

1. A bag provided with a ravelly closing seam and a removable separate lock for the same.

2. A bag provided with a ravelly closing seam and a removable pin to lock the same.

3. A bag provided with a ravelly closing seam formed with a final loop and a removable separate lock for the same.

4. A bag provided with a ravelly closing seam formed with a final loop and a removable lock for the same comprising a removable pin in the loop.

5. A bag provided with a ravelly closing seam and a removable pin to lock the same, the free end of the seam thread being hitched around the loop beneath the pin.

6. A bag provided with a ravelly closing seam formed with a final loop and a removable lock for the same comprising a removable pin in the loop, the free end of the seam thread being hitched around the loop beneath the pin.

In testimony whereof, I affix my signature in the presence of two witnesses this 28th day of January, 1915.

ADELMER M. BATES.

Witnesses:
H. WITTER,
EMILY MEALER.