Aug. 4, 1925. 1,548,431

A. M. BATES

MEANS FOR REVERSING AND STORING BAG TUBES

Original Filed Oct. 3, 1919

Fig. 2.

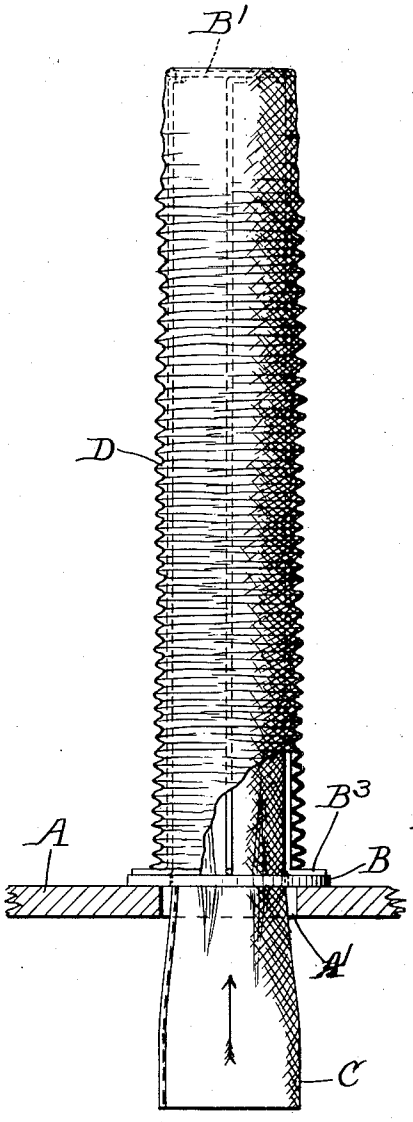


Fig. 1.

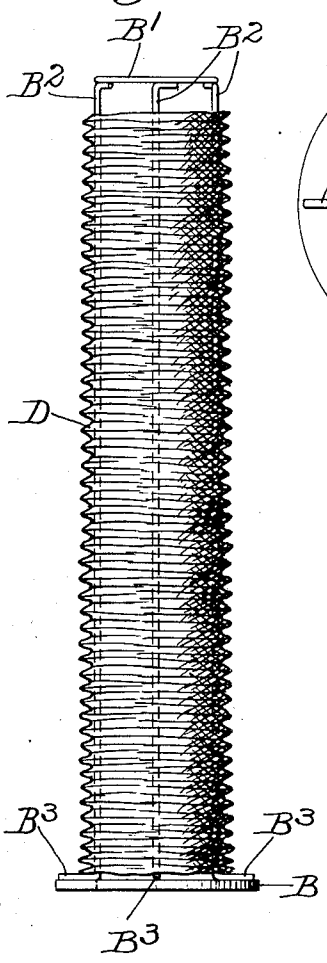
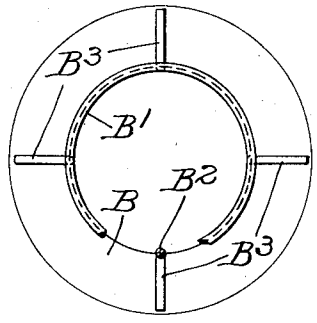


Fig. 3.



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UNITED STATES PATENT OFFICE.

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

MEANS FOR REVERSING AND STORING BAG TUBES.

Application filed October 3, 1919, Serial No. 328,312. Renewed January 22, 1923.

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 a Means for Reversing and Storing Bag Tubes, of which the following is a specification.

My invention relates to means for reversing and storing bag fabric tubes from which bags are intended to be made. In one of the usual ways for making such bags, the fabric is formed so that its two edges come together and these are then stitched together to form a longitudinal seam and then the tube is reversed to bring the seam inside before the bags are made. My apparatus is intended for the purpose of facilitating the reversal of such tube after the same has been completed. The invention has for its object to provide means for gathering or collapsing or longitudinally puckering such tubes so that a great length thereof may be brought into a comparatively short space. The process and device which forms the subject matter of my present invention forms an exceedingly important link in a chain of processes which have for their ultimate object to permit the direct and continuous fabrication of a series of filled bags out of rolls of bag fabric and material which is to fill the bags. In carrying out the chain of processes, the continuous bag forming tube which is here illustrated is reversed to bring the seam of the previously made tube inside, and the reversed bag tube is then drawn about the reversing frame and there puckered or folded or longitudinally collapsed to form a storage spool. This spool or bag tube supply which is open from end to end is later placed in a machine or suitable apparatus and bag portions of the tube are drawn off successively. First one end of the bag tube is closed, then the bag filling material is fed thru the spool from end to end to fill the bag portion, the tube is closed above the charge, and the bag portion is then cut off to form the bag. The invention is illustrated in the accompanying drawings wherein—

Figure 1 is a side elevation of my device with a tube completely collapsed thereon;

Figure 2 is a similar view showing the tube in the process of being reversed and the device resting on the floor;

Figure 3 is a plan and part cross sectional view of the device.

Like parts are indicated by like letters in all the figures.

A is the floor or support having the perforation A^1. B is an annular plate on which rests the bag tube supporting device which consists of the ring B^1, the downwardly depending legs B^2 B^2 and the lower projecting feet B^3 B^3. The whole forms a skeleton frame on which the collapsed bag tube is to be assembled as it is reversed. C is the tube before it has been collapsed and D represents the collapsed or folded portion of the tube. The tube can be inserted in the direction indicated by the arrow in Figure 2, upwardly through the cage. Its upper edge will be turned about the ring B and be drawn back in the reverse direction on the outside, there being longitudinally collapsed or puckered as indicated at D. When the operation is completed, the entire length of tubing which has been drawn through the cage, is longitudinally puckered and laid on the outside of such cage. In this condition the bag tube is ready for transportation or to be passed down along a feed tube. The cage may be made in any desired manner and may even be a complete cylinder, it may be oblong in cross section, it may have any number of vertical bars or legs, and it may have any means for attaching it in position on the plate B. The bag tube can be drawn through by hand or machinery to carry out the process of reversing it. The preferred form, of course, is that shown here, wherein the bag tube is drawn up through the cage and then down on the outside thereof. The cage or assembly of bars or tubes should be much smaller in cross section than the bag tube.

By cage I mean to include any device or structure which is adapted to permit the tube to pass in at one end and out at the other and over the outside of the cage, and which may become a storage part smaller in cross section than the bag tube and therefore adapted to receive and store a relatively great length of longitudinally collapsed tube thereon.

I have not shown in my present application any particular means for drawing the bag tube along the reversing form and puckering it thereabout, as this may be done in a number of ways, as for instance by an op-

erator doing it by hand, or by a series of rollers which, in any desired manner, may engage the surface of the bag tube and draw it along. If such rollers were used they could be part of another apparatus which could be brought into proper relation with the form as shown, and such rollers would engage the smooth part of the bag tube where it is shown extending down from the ring B′ toward the place where the bag tube is in my drawings shown as puckered about the form for storage and shipment.

I claim:

A device for reversing bag tubes comprising a cage open at both ends, and a support for said cage having an aperture which registers with the bottom opening of the cage, said cage containing an upper ring and a series of longitudinal legs having out-turned feet.

In testimony whereof, I affix my signature in the presence of two witnesses this 17th day of September 1919.

ADELMER M. BATES.

Witnesses:

E. B. STOCK,

MINNIE M. LINDENAU.