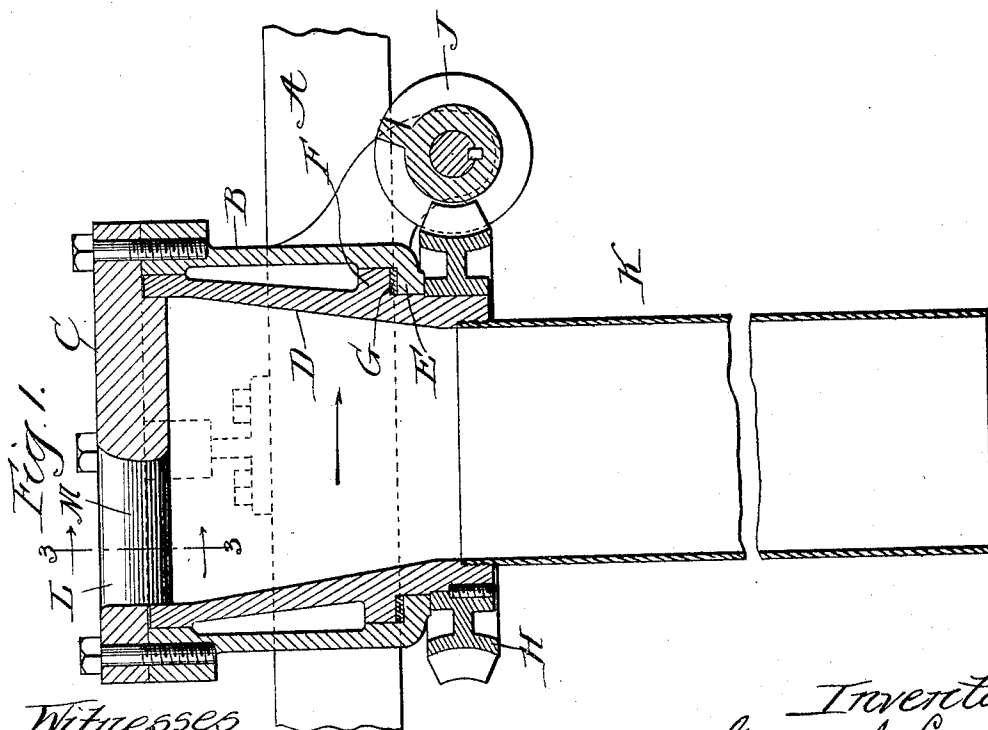
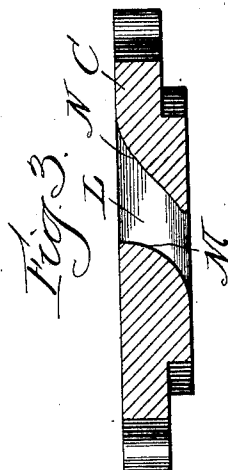
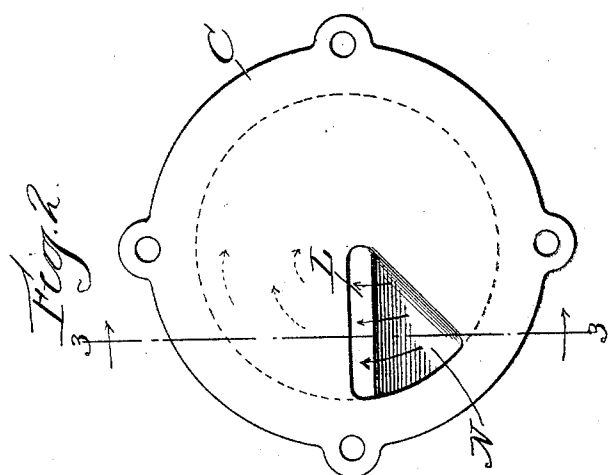


(No Model.)

G. A. LOWRY.
PRESS FOR COTTON, WOOL, &c.

No. 581,601.

Patented Apr. 27, 1897.



Witnesses
Wm. J. Fleming
Geo. M. Rheem

Inventor
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by Moxon & Darby Atty

UNITED STATES PATENT OFFICE.

GEORGE A. LOWRY, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JAMES F. O'SHAUGHNESSY, OF NEW YORK, N. Y.

PRESS FOR COTTON, WOOL, &c.

SPECIFICATION forming part of Letters Patent No. 581,601, dated April 27, 1897.

Application filed February 10, 1897. Serial No. 622,802. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. LOWRY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Press for Cotton, Wool, &c., of which the following is a specification.

This invention relates to presses for cotton, wool, hair, and the like.

The object of the invention is to provide a press of novel and exceedingly simple construction for pressing cotton, wool, hair, and the like into bales.

The invention consists, substantially, in the construction, combination, location, and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally specifically pointed out in the appended claims.

Referring to the accompanying drawings and to the various views and reference-signs appearing thereon, Figure 1 is a view in central longitudinal section of a press embodying the principles of my invention. Fig. 2 is a top plan view of the cover-plate. Fig. 3 is a transverse sectional view of the same on the line 3 3, Figs. 1 and 2.

In my pending application, Serial No. 615,993, filed December 17, 1896, I have shown, described, and claimed a construction of press embodying the generic principles of my invention hereinafter to be set forth, and in the specific construction set forth and claimed in said application I have shown a cap-plate arranged to project to a progressively-increasing depth into the compressing-chamber. I have found, however, that good results may be attained by employing a cap-plate having an under surface contained in a single plane, and it is the purpose of the present application to cover specifically such modification of the generic principle embodied in said pending application.

In the drawings forming part of this application, reference-sign A designates a suitable supporting-frame upon which is suitably mounted a cylindrical casing B, within which the receiving-chamber D is suitably supported. Said chamber is open-ended, as shown, and a cap-plate C is provided there-

for. The cap-plate C and chamber D are so relatively mounted that a relative axial rotation may be imparted thereto. In the particular form shown, to which, however, I do not desire to be limited or restricted, I mount the cap-plate rigidly, and I mount the chamber D for axial rotation. To this end the casing B is rigidly mounted in frame A, and the cap-plate is securely bolted thereto. The chamber D may be mounted in any suitable or convenient manner adapting it to receive axial rotation. In the particular form shown, to which, however, I do not desire to be limited or restricted, I provide the casing B with an inwardly-projecting flange E, and I provide the chamber D with an external peripheral flange or rib F, adapted to rest on said flange E, a suitable friction-reducing strip G, if desired, being interposed between the bearing-surfaces of said flanges. The extreme end of chamber D is arranged to project beyond the casing B, and a suitable driving-gear H may be mounted thereon, through which, from any suitable or convenient gearing, (indicated at J,) rotary motion may be imparted to said chamber.

Projecting from the end of chamber D is an extension K, forming a continuation of chamber D and serving as a support for the cover or bag into which the cotton or other material is forced. The parts so far described may be substantially the same in construction, function, and mode of operation as set forth and claimed in my pending application.

I will now describe the form of cap forming the essential feature of the present application. This cap, as clearly shown in the drawings, is arranged to form a cover for one of the open ends of chamber D and is provided with a flat plane inner surface, as clearly shown. A radial slot or opening L is formed through said cap, through which opening the material to be pressed into a bale is introduced to chamber D. The far edge or wall of said slot or opening is preferably rounded or convexed, as indicated most clearly at M, Fig. 3, and the inner edge or wall of said slot or opening is formed upon a downward incline from the top surface of the plate or cover and is also slightly convexed, as indicated at N, Fig. 3. Through this slot or open-

ing the material to be pressed is continuously introduced to the chamber D in any suitable or convenient manner.

In the operation of the machine the chamber D is first and preliminarily filled with the material, and then a relative rotation is imparted to chamber D and cap C. For instance, in the particular form shown axial rotation is imparted to chamber D, and the material to be pressed is continuously introduced to the chamber through the slot or opening L. The pressure of the material preliminarily introduced to the chamber D against the flat inner surface of cap-plate C serves to draw the material presented to the slot or opening L through such slot or opening and into the chamber, and by reason of the relative rotation of the chamber and cap the material thus drawn into the chamber is coiled into spiral layers. The resistance offered by the inner walls of the chamber D and its extension K to the advancement of the material in bulk therethrough effects the desired degree of compression, and the increment of material introduced to the chamber upon each revolution in the form of a spiral layer serves to add just so much to the body of the bale and to the compression thereof, the bale being gradually formed and compressed and pushed by the increasing pressure of the constantly-accumulating spiral layers through the chamber and extension, finally emerging in compressed bale form through the open end of the extension. By varying the length of extension K, I can vary the degree of compression to which the bale is subjected. The longer such extension the greater the resistance offered to the progression of the bale through the machine, and hence the greater the compression imparted thereto. In order to still further increase the pressure and at the same time to close up the core, which is necessarily left at the axial center of chamber D, I preferably form the internal surface of chamber D conical, as shown and as fully set forth in my prior application.

I have found that a press embodying the principles of my invention, while exceedingly simple and economical in construction and arrangement and easily operated, effects an enormous compression of the material and in a manner that does not in any manner injuriously affect the fiber of the material. The compression is uniform throughout the

entire bulk of the bale, and the completed bale is of a convenient size for securing the greatest economy in handling, covering, and transporting.

Having now set forth the object and nature of my invention and a form of apparatus embodying the same and having explained the construction, function, and mode of operation thereof, I desire it to be understood that I do not limit or confine myself to the specific construction and arrangement of parts shown and described, as many variations therefrom and changes therein would readily suggest themselves to persons skilled in the art and still fall within the spirit and scope of my invention, but

What I do claim as new and useful and of my own invention, and desire to secure by Letters Patent of the United States, is—

1. In a cotton or other press, an open-ended chamber, a cap-plate for one end of said chamber, said cap-plate provided with a plane inner surface, and means for relatively rotating said chamber and cap-plate, as and for the purpose set forth.

2. In a cotton or other press, an open-ended chamber, contracting in internal diameter from one end thereof toward the other, a cap-plate for the larger end of said chamber, said cap-plate being slotted and having a plane under surface, and means for relatively rotating said chamber and cap, as and for the purpose set forth.

3. In a cotton or other press, an open-ended chamber, a stationarily-held slotted cap-plate for one end of said chamber, said cap-plate provided with a plane inner surface and means for rotating said chamber, as and for the purpose set forth.

4. In a cotton or other press, an open-ended chamber, a cap-plate for one end thereof, said cap-plate being slotted and provided with a plane inner surface, the walls of said slot being convexed, and means for relatively rotating said cap and chamber, as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 8th day of February, 1897, in the presence of the subscribing witnesses.

GEORGE A. LOWRY.

Attest:

S. HUTCHISON,
S. E. DARBY.