

No. 645,723.

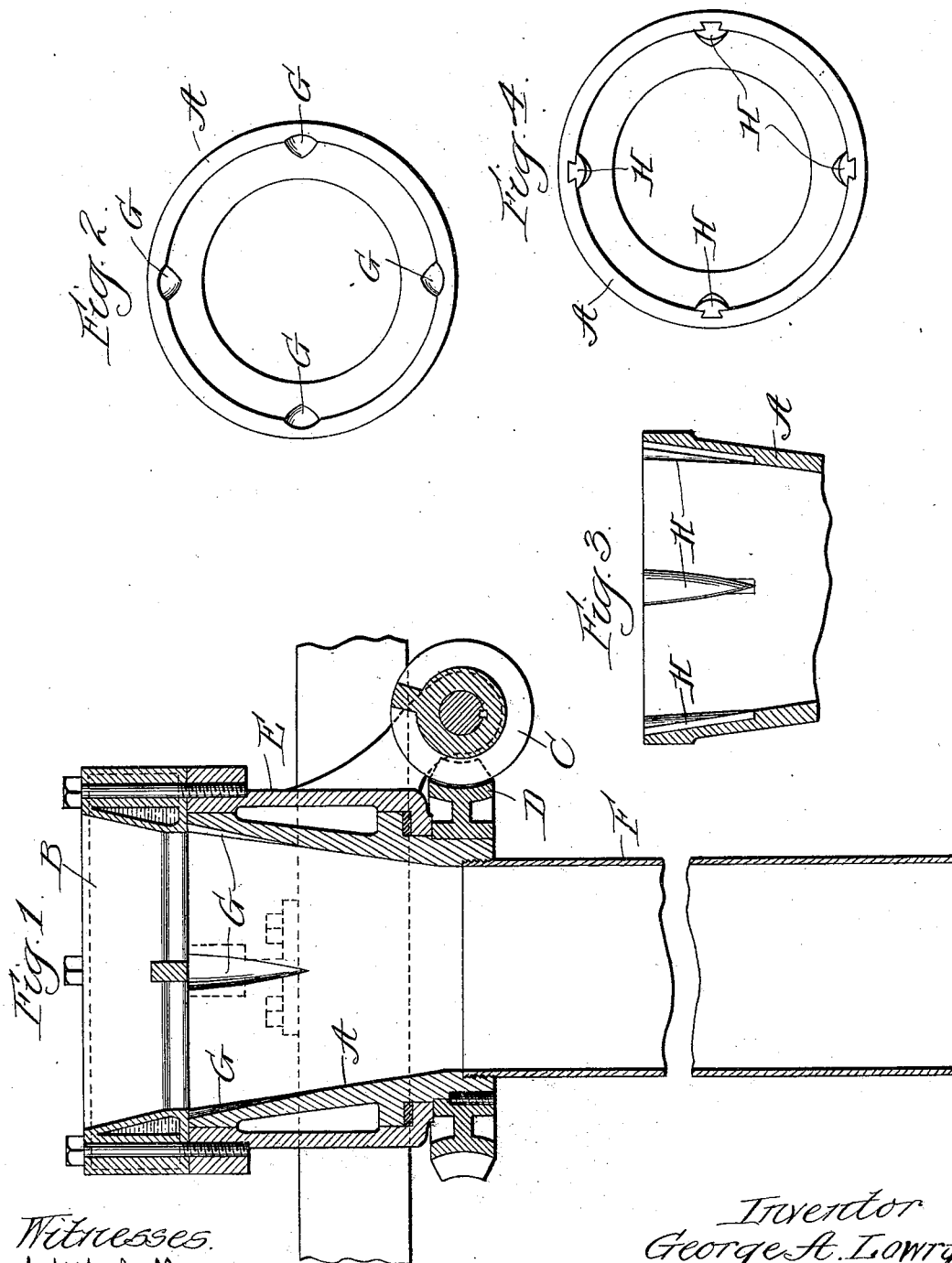
Patented Mar. 20, 1900.

G. A. LOWRY.

PRESS FOR COTTON, WOOL, HAIR, &c.

(Application filed Aug. 23, 1897.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

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PRESS FOR COTTON, WOOL, HAIR, &c.

SPECIFICATION forming part of Letters Patent No. 645,723, dated March 20, 1900.

Application filed August 23, 1897. Serial No. 649,207. (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 Improvement in Presses for Cotton, Wool, Hair, and the Like, of which the following is a specification.

This invention relates to presses for cotton, wool, hair, and the like, and is designed as an improvement on the construction shown, described, and claimed in my Patent No. 581,600, dated April 27, 1897.

The object of the invention is to provide means whereby the material from which the bale is formed is prevented from rotating relative to the compression-chamber.

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

In the drawings, Figure 1 is a view in vertical central section of the parts embodying the principles of my invention. Fig. 2 is an upper end view of the compression-chamber, showing my improvements embodied therein. Fig. 3 is a vertical central section, and Fig. 4 a top end view, of the compression-chamber, showing a slightly-modified arrangement of the improvements.

The same part is designated by the same reference-sign wherever it occurs throughout the several figures of the drawings.

I have shown my invention as applied to the type of press set forth and fully described and claimed in my prior patent and comprising an open-ended compression-chamber A and a slotted cap-plate B for one end thereof, said chamber and cap-plate being mounted for relative rotation. For instance, in the particular form shown the chamber A is rotated through suitable gearing C D, while the cap-plate B is rigidly mounted upon the casing E, in which the compression-chamber A is mounted to revolve.

As fully set forth in my prior patent, the material to be pressed is introduced to the compression-chamber A through suitable slots in cap-plate B, and by imparting a relative

rotation to the chamber and cap-plate the material is fed into the compression-chamber through the slots in the cap-plate and the bale is formed in spiral endwise layers, each succeeding layer being compressed upon the preceding layers, thus compressing the material into bale form and upon each relative rotation of the chamber and cap-plate advancing the material through the compression-chamber and the extension F thereof, thereby not only forming the material into a bale, but also subjecting the same to the desired degree of compression. I have found in practice that by reason of the enormous pressure to which the material is subjected while being advanced through the compression-chamber and extension the tendency is to cause the body of the material to rotate within and relative to the said compression-chamber during the relative rotation of said chamber and cap-plate, thereby not only arresting the progress of the material through the press, but also arresting the feeding of the material to the chamber and its compression. In order to obviate this tendency, I have conceived the idea of an engagement between the material and the inner walls or surface of the compression-chamber, whereby the material is held against movement within and relative to the compression-chamber. This idea of an engaging or locking means between the material and the inner surface or walls of the compression-chamber may be embodied in many specifically-different forms of construction. For instance, and as shown in Figs. 1 and 2, I may provide grooves or recesses G in the inner wall of the compression-chamber, into which the material introduced to the chamber may enter and whereby such material is held or locked against movement within and relative to said chamber. These grooves or recesses may be arranged in any suitable or convenient manner. A convenient arrangement thereof is shown, wherein these grooves or recesses are formed in the interior surface or wall of chamber A and extend endwise therein from the upper edge of said chamber part way the length thereof. Any suitable or desirable number of these grooves may be provided, as will be obvious. The operation of the grooves is as follows:

When the material is introduced to the compression-chamber, the pressure to which it is subjected crowds or presses portions of the periphery of the forming bale which are adjacent to the grooves into said grooves, thereby effecting the desired engagement, and by arranging said grooves to extend longitudinally of the chamber A the progression or advancement of the material through the chamber is not materially interfered with. In order that this result may be efficiently accomplished, I prefer to make the grooves G of decreasing depth from the upper edge of the chamber, such grooves finally disappearing into the internal surface or walls of the chamber.

In Figs. 3 and 4 I have shown a modified arrangement and construction embodying the same principles, wherein I provide the inner surface or walls of the chamber A with projections arranged to engage the material and prevent its rotation within and relative to the chamber. These projections may be provided and arranged in any suitable manner. For instance, and by way of illustration of the principles involved, I may provide the inner surface or wall of the chamber A with grooves adapted to receive blocks H, said blocks arranged to project into the chamber. A convenient way of arranging these blocks or projections is to form the same with dovetails and to suitably shape the seats in the inner wall or surface of the chamber to receive said dovetailed projections, whereby such blocks are efficiently held. In case of the use of blocks, as above indicated, I arrange the same at suitable points around the inner periphery or surface of the chamber and form said blocks of decreasing thickness from the upper toward the lower end thereof.

While I have shown in Figs. 3 and 4 a modified form of engagement between the material and the interior surface or wall of the

chamber A, and as illustrating the generic idea of my invention, the form shown in Figs. 1 and 2 is the preferred construction for the reason that such construction affords less obstruction to the progression of the material through the chamber.

Having now set forth the object and nature of my invention and various constructions embodying the principles therein, and having set forth the function and mode of operation thereof, what I 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 contracting in internal diameter from one end thereof to the other, and provided with suitably-spaced grooves or depressions in the interior surface thereof, said grooves or depressions being of decreasing depth and extending lengthwise of said chamber, a slotted cap-plate for one end of said chamber 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 provided with suitably-spaced recesses or depressions arranged lengthwise on the interior surface thereof, said recesses or depressions being of decreasing depth from one end of said chamber toward the other, a slotted cap-plate for the end of said chamber adjacent to the deeper ends of said recesses or depressions, and means for relatively rotating said chamber and cap-plate, as and for the purpose set forth.

In witness whereof I have hereunto set my hand this 20th day of August, 1897, in the presence of the subscribing witnesses.

GEORGE A. LOWRY.

Witnesses:

S. E. DARBY,

H. H. HUMPHREY.