

No. 630,373.

Patented Aug. 8, 1899.

G. A. LOWRY.

BALE SUPPORTING DEVICE FOR PRESSES.

(Application filed June 19, 1897. Renewed Jan. 6, 1899.)

(No Model.)

Fig. 2.

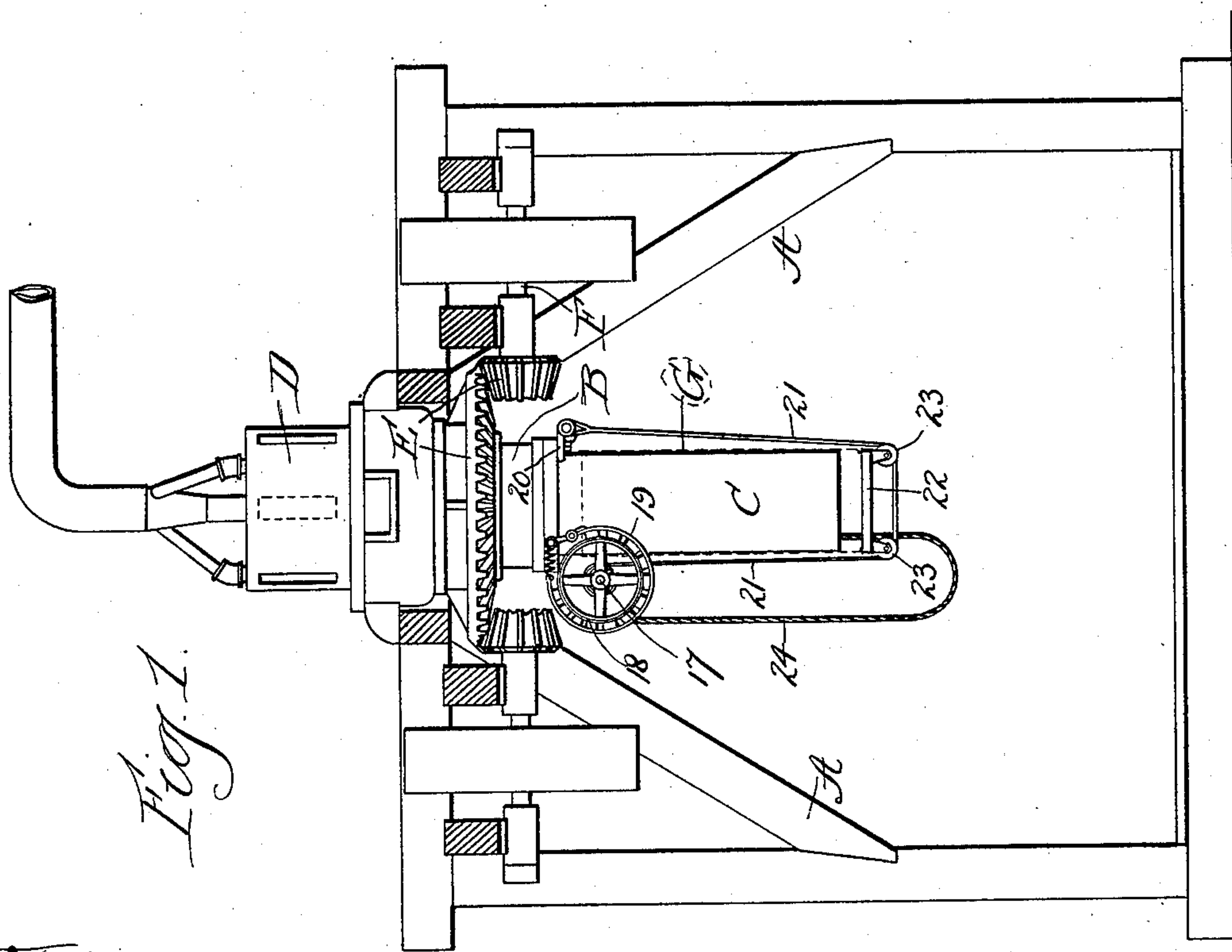
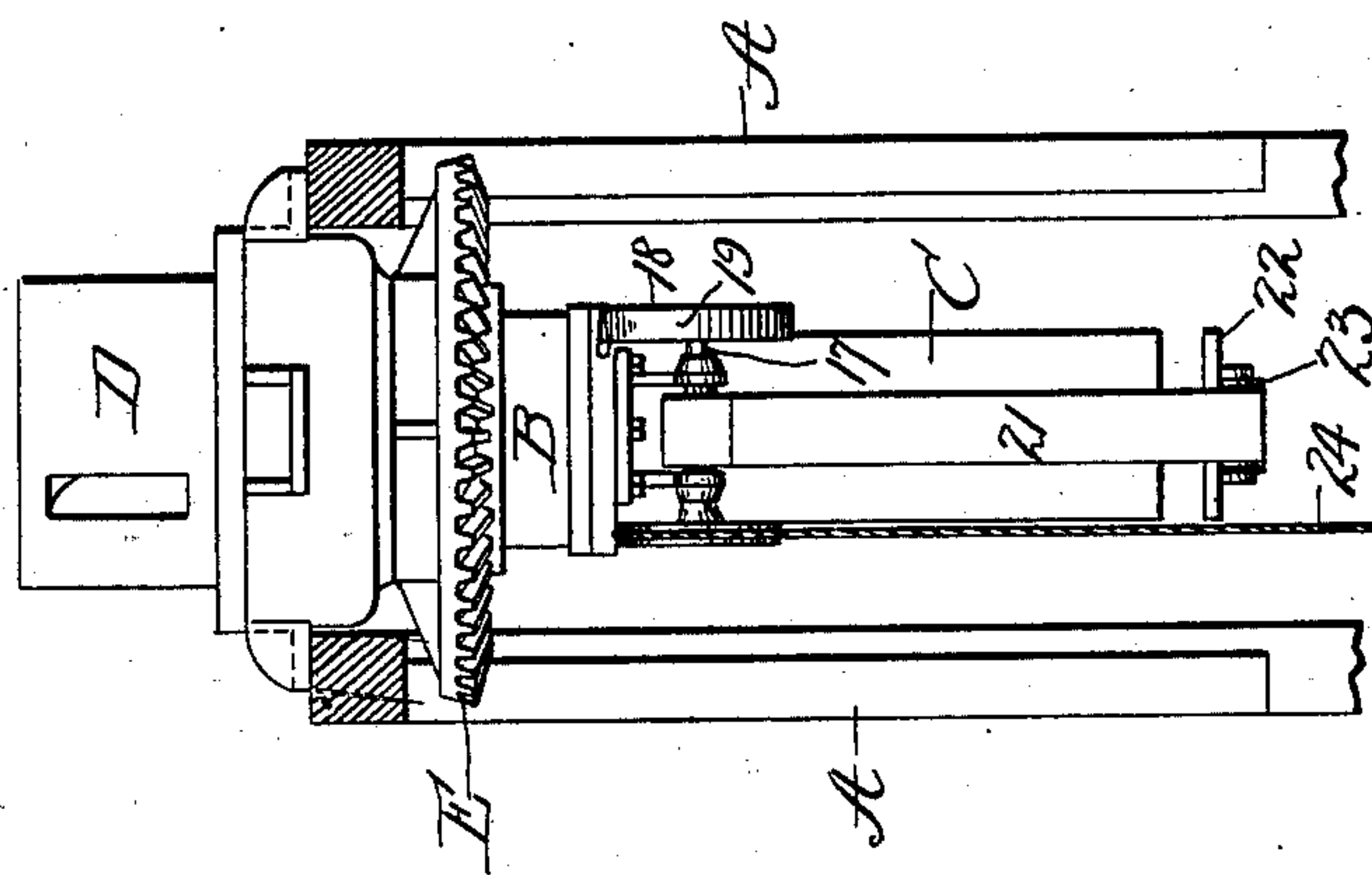


Fig. 1.

Witnesses
Wm. L. Fleming
S. M. Rheem.

Inventor
George A. Lowry
By Brown & Darby
Attys

UNITED STATES PATENT OFFICE.

GEORGE A. LOWRY, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE PLANTERS COMPRESS COMPANY, OF WEST VIRGINIA.

BALE-SUPPORTING DEVICE FOR PRESSES.

SPECIFICATION forming part of Letters Patent No. 630,373, dated August 8, 1899.

Original application filed April 19, 1897, Serial No. 632,773. Divided and this application filed June 19, 1897. Renewed January 6, 1899. Serial No. 701,414. (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 Bale-Supporting Device for Presses, of which the following is a specification.

This invention relates to bale-supporting devices for presses and is a division of my application, Serial No. 632,773, filed April 19, 1897.

The object of the invention is to provide means for supporting the bale as it emerges from the press.

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 views and reference-signs appearing thereon, Figure 1 is a view in elevation of a press, the supporting-framework being in a vertical section, showing a bale-supporting device in accordance with my invention applied thereto. Fig. 2 is a similar view of the same looking from the left of Fig. 1.

In the drawings, A designates a suitable framework of convenient size, form, and arrangement adapting it to support the press.

B is the press-chamber, having the tubular extension C. The material to be pressed is introduced to the press-chamber through a suitably-slotted cap D. A relative rotation is imparted to the cap D and press-chamber B through the intermeshing gears E and drive-shaft F from any suitable or convenient source. The formed bale finally emerges in a compressed condition from the end of the tubular extension C, and in order that such bale may be provided with its permanent covering I telescope a covering or bag G over the extension C, so that as the bale emerges from the extension it is inclosed in the covering.

The parts so far described may be substantially the same as set forth in my application, Serial No. 625,556, filed March 1, 1897, and in my Patent No. 581,600, dated April 27,

1897, and therefore do not require specific description of the construction, function, or mode of operation herein. It will be sufficient, therefore, for a full and complete understanding of the present invention to merely refer to the fact that the material to be pressed is introduced to the press-chamber through the cap-plate D, and the compression of such material is effected by imparting a relative rotation to the cap-plate and the press-chamber, the material being drawn into the press-chamber by such rotation and the bale built up endwise in continuous spiral layers, each succeeding layer compressed upon the preceding layers, and the friction between the material being compressed and the inner surface of the press-chamber D and the tubular extension C thereof opposing a sufficient resistance to secure the required or desired degree of compression. Thus the bale is gradually formed, and as it forms it is correspondingly advanced through and finally emerges from the open end of the tubular extension C completely formed and compressed and inclosed in its permanent covering or bag.

From the foregoing description it will be readily seen that the greatest compression of the bale is endwise thereof, and therefore as the bale emerges from the end of the tubular extension C the bale tends to expand more or less endwise. Moreover, as it is the design and purpose to compress the material—for instance, cotton—into bales of considerable weight—say of several hundred pounds—it is important to provide means for supporting the bale as it emerges from the press. In the drawings I have shown a form of means for securing this result wherein I mount a shaft in suitable bearings formed on or carried by the press-chamber, and on this shaft I arrange a friction-drum 18, around or upon which I mount a friction-strap 19, of any suitable or convenient construction and arrangement, whereby the rotation of shaft 17 may be opposed by a desirable degree of frictional resistance. To a suitable bracket or projection, formed on or carried by the press-chamber, I attach one end of a suitable flexible belt, band, or rope 21, the other end of

which is passed around the open end of the extension C, and thence to shaft 17, to which it is secured, thereby forming a loop over the delivery-mouth of the extension C. This loop
 5 may be sufficient to answer the purpose of a support for the bale as it emerges from the press and also to reduce the tendency of the bale to endwise expansion. In practice, however, I prefer to mount in such loop a plat-
 10 form 22, upon which the bale rests and which carries suitable antifriction-rollers 23, over which the belt or band 21 passes. From this description it will be seen that the emerging bale is supported against the resistance of
 15 the friction-strap, which friction is so regulated as to readily yield as the bale advances, such yielding permitting the shaft 17 to rotate in a direction to unwind the belt or band 21 therefrom, thereby lengthening the loop
 20 formed in said band or belt and which is arranged over the delivery end of the extension C. In case the platform 22 is used the rollers 23 facilitate the adjustment of such platform in the loop as it is lengthened by the
 25 unreeling of one of the runs or legs thereof from the shaft 17, as will be readily understood. In order that the loop formed in the belt or band 21 may be shortened and re-
 30 turned to position to receive another bale after a bale has been formed and removed from the machine and also in order that the end support for the bale may be removed when a sufficient length thereof has been projected
 35 from the press, I mount upon shaft 17 a hand-operated cable or rope 24, by means of which said shaft may be rotated in either direction at will, as the occasion therefor may arise.

It will be understood from the foregoing description that the formation and compression of the bale has been completed by the
 40 time it emerges from the delivery end of the extension C, and therefore the bale-support hereinbefore described is not for the purpose of opposing a compression resistance to the
 45 advancement of the bale, but is for the purpose of supporting the bale as it emerges and preventing endwise expansion thereof.

Having now set forth the object and nature of my invention and a form of apparatus embodying the same, what I claim as new and
 50 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
 55 chamber and a slotted cap-plate therefor and means for relatively rotating said cap-plate and chamber in combination with a band or belt having one end thereof fixed and arranged to pass over the open end of said
 60 chamber and adapted to receive the end of the bale as it emerges from such chamber,

and means for yieldingly securing the other end of said belt or band, as and for the purpose set forth.

2. In a cotton or other press, an open-ended
 65 chamber and a slotted cap-plate therefor, and means for relatively rotating said cap-plate and chamber, in combination with a belt or band arranged in a loop over the open end
 70 of said chamber, a platform mounted in said loop and means for yieldingly resisting the lengthening of said loop as the bale emerges, as and for the purpose set forth.

3. In a cotton or other press, an open-ended
 75 chamber and a slotted cap-plate therefor, and means for relatively rotating said chamber and cap-plate, in combination with a shaft, means for frictionally opposing the rotation
 80 of said shaft, and a belt or band secured at one end and passed around the open end of said chamber and having its other end secured to the said shaft, as and for the purpose set forth.

4. In a cotton or other press, an open-ended
 85 chamber, a slotted cap-plate therefor, and means for relatively rotating said chamber and cap-plate, in combination with a shaft, a friction-strap mounted thereon and arranged
 90 to frictionally oppose the rotation of said shaft, and a belt secured at one end and passed in a loop around the open end of said chamber and having its other end wound upon said shaft, as and for the purpose set forth.

5. In a cotton or other press, an open-ended
 95 chamber, a slotted cap-plate therefor, and means for relatively rotating said chamber and cap-plate, in combination with a shaft, means for frictionally opposing the rotation
 100 of said shaft, a band or belt secured at one end and arranged in a loop around the open end of said chamber, and having its other end wound upon said shaft, and means for rotating said shaft by hand at will, as and for the purpose set forth.

6. In a cotton or other press, an open-ended
 105 chamber, a slotted cap-plate therefor and means for relatively rotating said chamber and cap-plate in combination with a belt or band fixedly secured at one end and arranged
 110 in a loop around the open end of said chamber and yieldingly secured at the other end thereof, and a movable platform mounted in said loop, as and for the purpose set forth.

In witness whereof I have hereunto set my
 115 hand, this 11th day of June, 1897, in the presence of the subscribing witnesses.

GEORGE A. LOWRY.

Witnesses:

H. H. HUMPHREY,
 S. E. DARBY.