

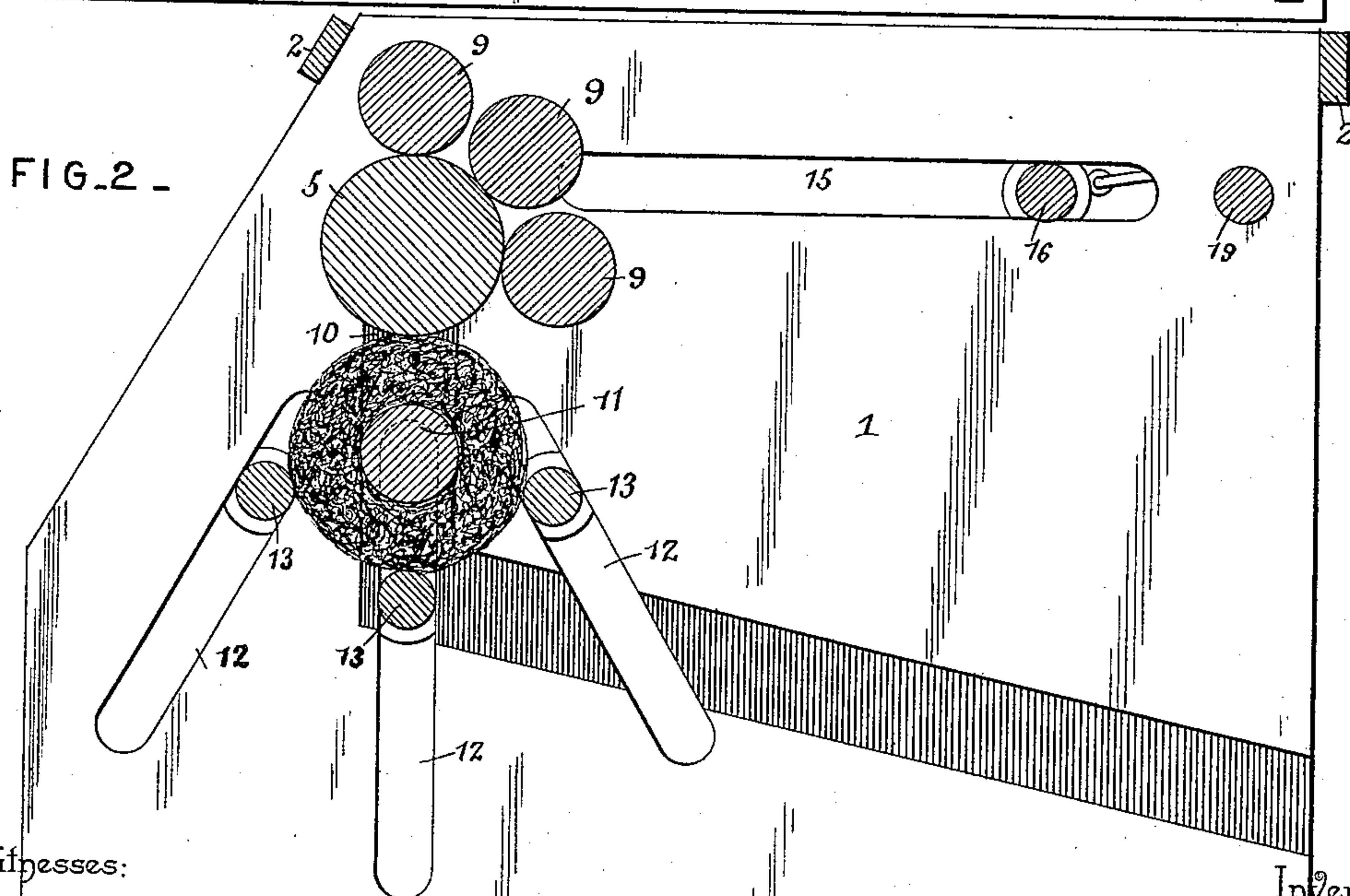
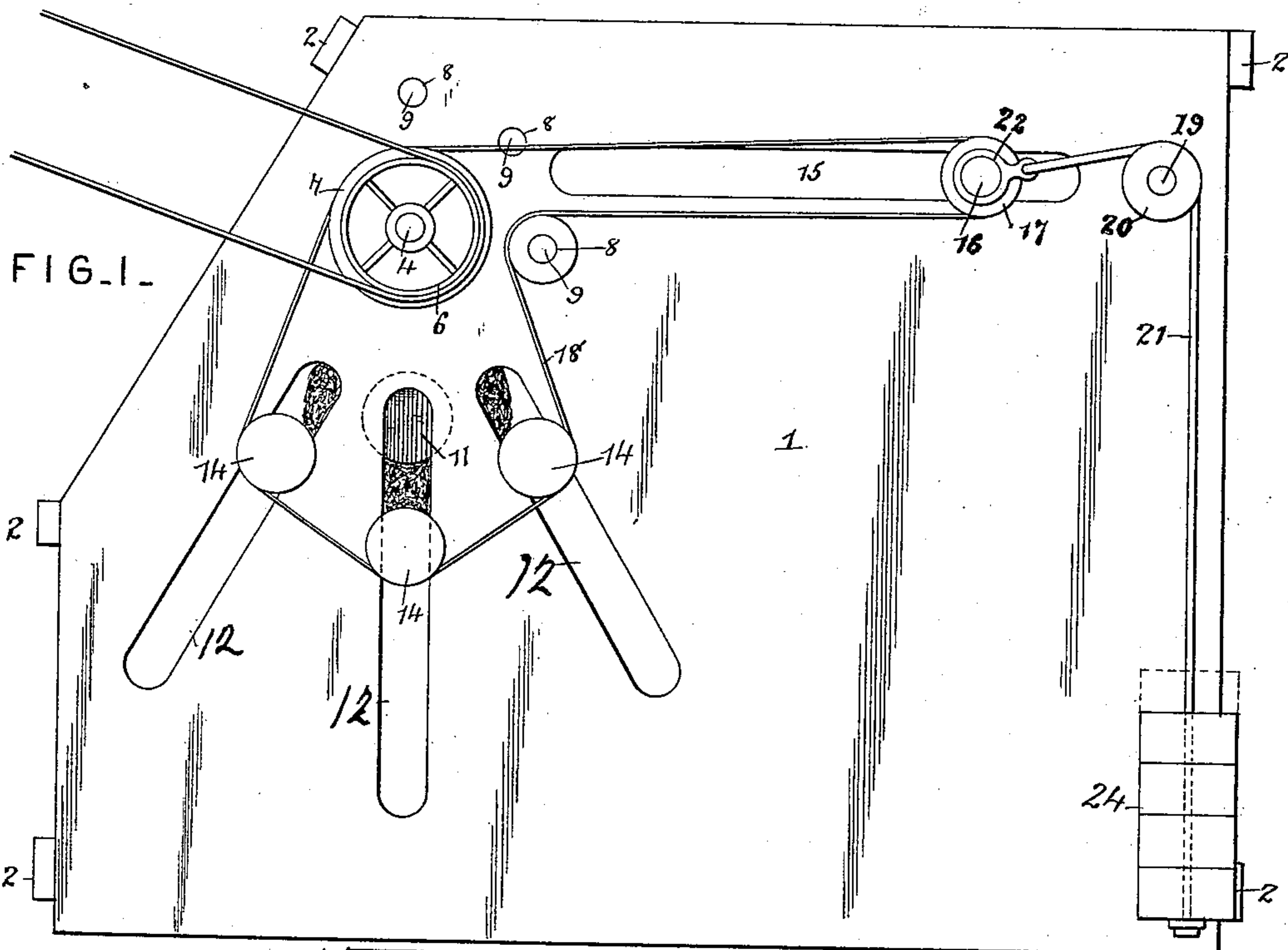
(No Model.)

2 Sheets—Sheet 1.

J. W. BROWN.  
BALING PRESS.

No. 446,128.

Patented Feb. 10, 1891.



Witnesses:

Jas. R. McLaughlin

By his Attorneys,

Junius W. Brown

W. S. Duval

C. A. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

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FIG. 3.

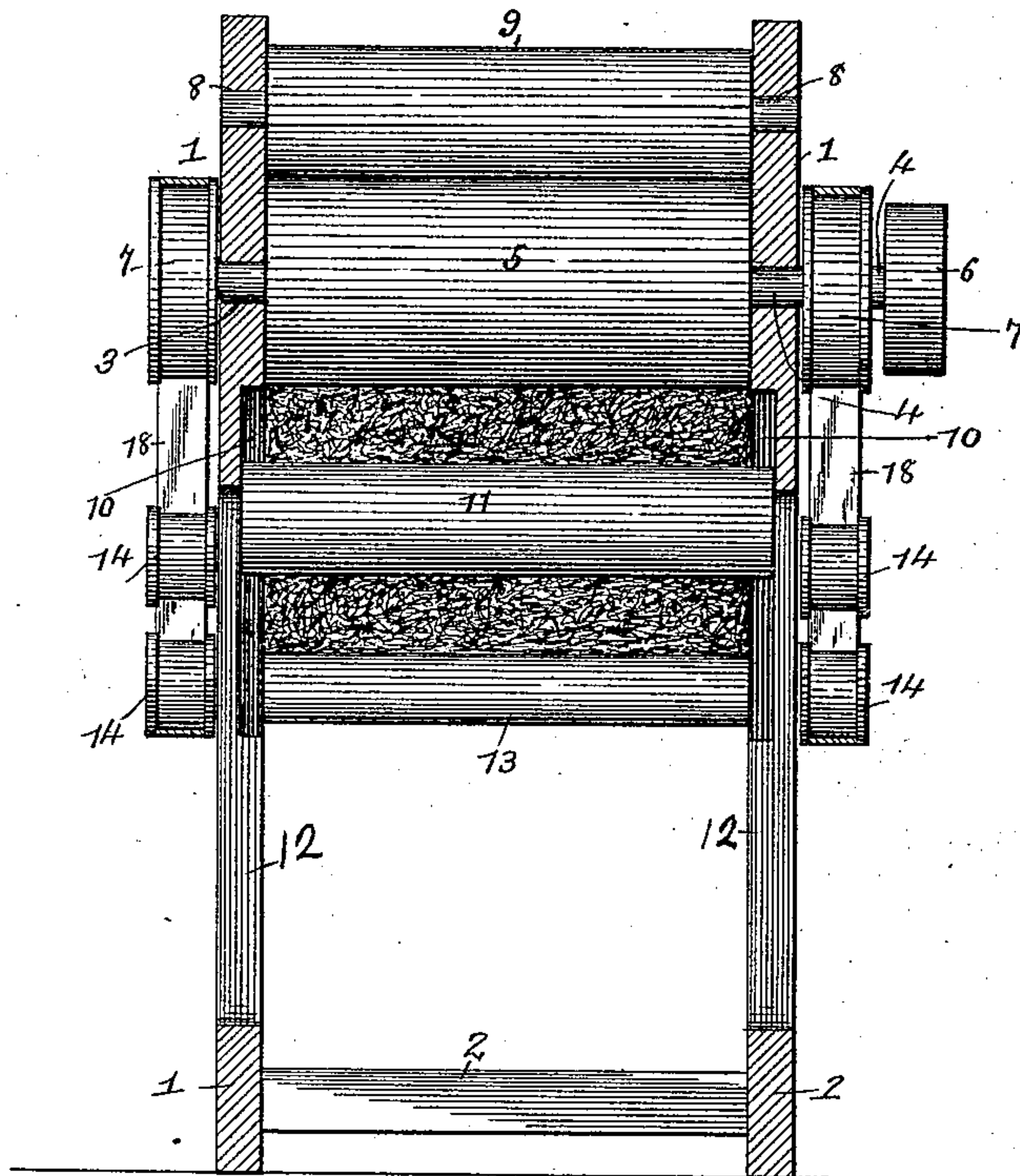
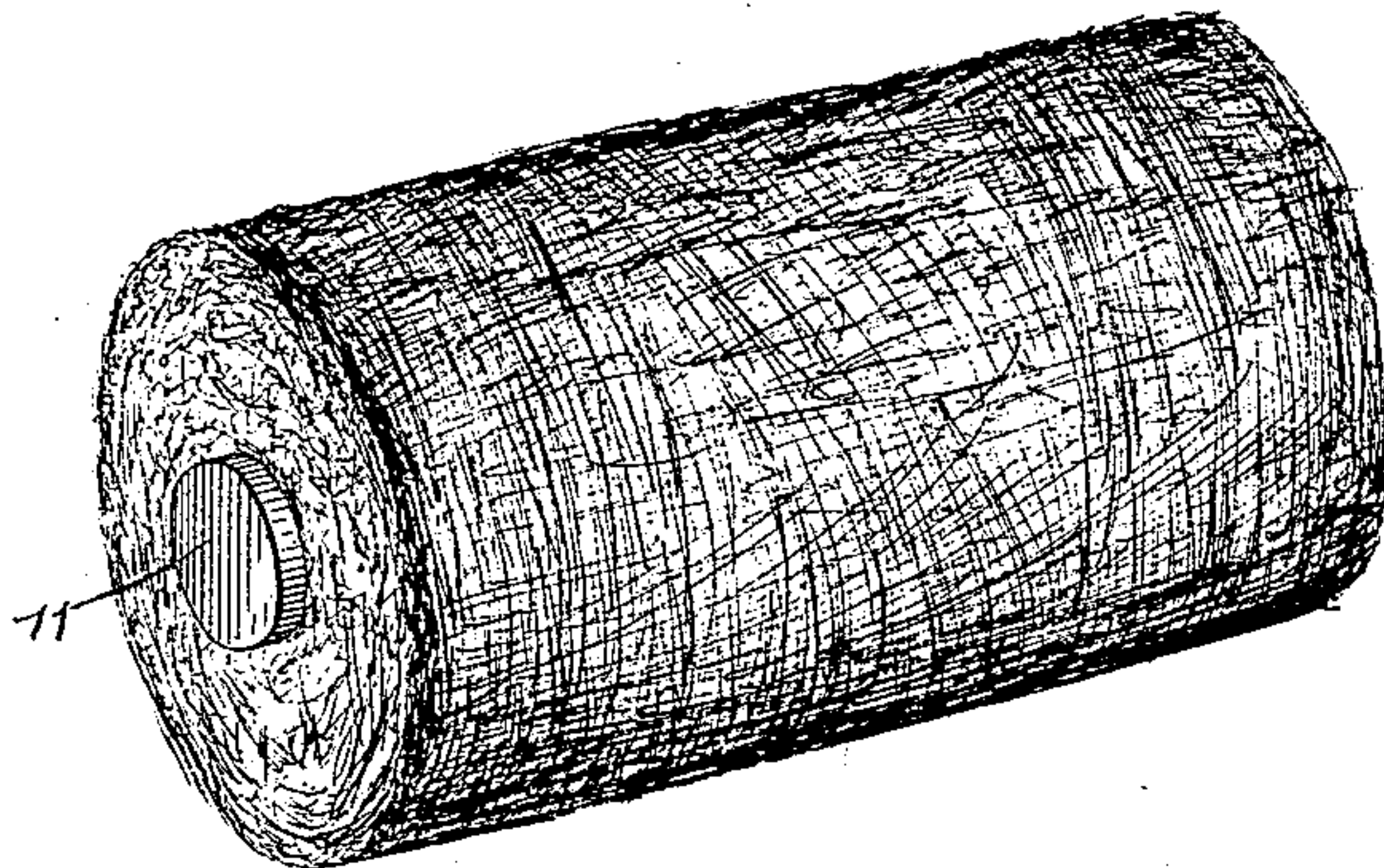


FIG. 4.



Witnesses:

Jas. K. McArthur

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By his Attorneys,

Inventor

Junius W. Brown

C. A. Snow & Co.



# UNITED STATES PATENT OFFICE.

JUNIUS W. BROWN, OF RUSSELLVILLE, ARKANSAS, ASSIGNOR OF ONE-HALF  
TO J. W. WELLS, OF SAME PLACE.

## BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 446,128, dated February 10, 1891.

Application filed July 12, 1890. Serial No. 358,562. (No model.)

*To all whom it may concern:*

Be it known that I, JUNIUS W. BROWN, a citizen of the United States, residing at Russellville, in the county of Pope and State of Arkansas, have invented a new and useful Apparatus for Baling Cotton, of which the following is a specification.

This invention has relation to an apparatus for baling cotton.

Heretofore the operation of preparing cotton for the market has been as follows: The seed cotton after having been ginned is passed through the condenser and there formed into a soft bat or mass, which is placed in what is usually termed a "plantation baling-press" and formed into plantation or country bales. By the transportation of the cotton-bat to the press much of the fiber is lost and the ginnery becomes filled with the floating fiber which has escaped, which is not only disagreeable to the operator and causes a loss, but also is liable to cause a conflagration. After the formation of the country bale the same is hauled in wagons or otherwise to a neighboring point, where is usually located a powerful hydraulic or steam press, and the large bulky country bale of five or more feet is compressed into the compact mass of standard bale size of about twenty-two inches. Oftentimes these large bulky bales previous to compression are stored upon the plantation previous to hauling, and whether stored or in the act of being hauled it will be obvious that they consume by reason of their immense bulk a great amount of space, and consequently the cost of storage and hauling is proportionately increased. Furthermore, considerable expense is incurred in the compressing operation by the compress, which compression is necessary in order to reduce the bale to a size that may be transported at a reasonable rate by the boat or railroad lines.

The objects of my invention are to provide a suitable baling machine or apparatus of such cheap and simple construction as to be within the reach of the planter and adapted to be located at the ginnery, and of such a construction as to take the cotton direct from the condenser and reduce the same to a compact compressed bale, having a density as

great as the usual compressed bale. By such a construction the handling of the bale, transporting the same to the compress, storing, compressing, &c., are all avoided and the expense saved.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a side elevation of my apparatus, the same being arranged in position in connection with a gin and a condenser. Fig. 2 is a longitudinal vertical section of the baling-press. Fig. 3 is a transverse section. Fig. 4 is a detail in perspective of the completed bale.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I construct the press with two opposite side walls 1, said walls being of similar form and construction and connected at suitable points by cross-bars 2. Each of the side walls of the front of the press is provided with a bearing-opening 3, in which is mounted the main shaft 4, the ends of which project beyond one of the side walls. Between the side walls there is mounted upon the shaft a large and main compression-roller 5. Beyond the side wall at which the shaft extends there is mounted a belt-pulley 6 and a main or master pulley 7.

8 designate a series of bearing-openings formed in the opposite side walls, the series being concentric with the bearing-opening 3 and at equal distances from said opening. In each pair of bearing-openings 12 is journaled a secondary compression-roller 9, which rollers have frictional contact with and are operated by the main compression-roller 5.

Below the compression-roller 5 and vertically opposite the same there is formed in the inner sides or surfaces of the side wall vertical ways or recesses 10, in which is adapted to ride a billet or core 11, forming the spindle upon which the bale is formed.

12 designates a series of slots formed in each of the side walls and radiating from a point slightly below and vertically opposite the shaft 4, the central slots being formed in the bottoms of the recesses 10. In each of



these slots is located a bale-binding roller 13, the ends of which project beyond the slots, and each end of each roller is provided with a fast pulley 14.

5 In rear of the bearing-openings 3 of the side walls said walls are provided with a pair of opposite longitudinal horizontal slots 15, in which is mounted for movement a transverse shaft 16, which shaft extends beyond  
10 the walls and is provided with fast pulleys 17. The pulleys 17 7 14 and the lower pulleys 9 of the series at each side of the press are connected by a belt 18, which belt is operated through the medium of the shaft 4 and  
15 pulley 7, the latter driven by any suitable motor, and preferably by the same motor which drives the gin and condenser. By the rotation of the main roller 5 motion is also imparted to the two upper rollers 9, which  
20 have frictional contact with said main roller, and motion is also imparted to the series of binding-rollers 13.

In rear of the slots 15 there is journaled in the side walls 1 a transverse shaft 19, the  
25 ends of which project beyond the side walls and carry pulleys 20. Cables 21 are passed over each of the pulleys and have their forward ends connected to links 22, which links take over the ends of the shaft 16. The lower  
30 and rear ends of the cable are provided with a series of removable weights 24, which weights through the medium of the cables and the shaft 16 exert a drawing influence upon the pulleys 7 and 14, so that the pulley 6 being  
35 mounted upon a fixed shaft the rolls 13 are drawn with equal pressure toward a common point, and at that point is located the billet or core 11.

The operation of forming a bale is as follows: The cotton passes from the gin to the condenser, where, as is well known, it is transformed into a soft mass. As it emerges from the condenser its leading end is passed between the main or primary compressing-roll  
45 and the upper secondary roll, and from thence under the two remaining secondary rolls and between them and said main roll, whereby the thick soft mass is reduced to a thin sheet or web, which is wound around the billet 11  
50 as fast as formed. The billet or cord 11 is revolved through the medium of the binding-rolls 13, which rolls press upon the cotton as fast as wound, the pressure being regulated by the weights 24. After a sufficient quantity  
55 of cotton has been rolled and baled, during all of which time it is subject to constant com-

pression, the belts are loosened until the lower binding-roller 13 is permitted to drop to the bottom of its slot, and with it drops the bale. The bale falls to the bottom of the recess 10, 60 at which point the recess is communicated with by a longitudinal inclined way 25, formed in the side walls of the press and leading to the rear end of the same. When the bale reaches this point the rear binding-roller 13 65 is elevated so as to permit said bale to roll down the inclined way and out of the press. A new core is inserted and the belt readjusted and the operation completed.

A bale formed by my press is of the usual 70 density, and is therefore not subjected to any further compression, the cost of which compression is saved, together with the cost of transporting the bale to the compress.

From the above description it will be ap- 75 parent that I attain the numerous advantageous objects heretofore stated, and succeed in producing an exceedingly cheap and simple baling-press adapted to form bales by the continuous operation in connection with the 80 ginning and condensing of the cotton, avoiding all further compression, cost of transportation, &c.

Having described my invention, what I claim is— 85

In a baling-press, the combination, with the opposite sides 1, provided with the opposite bearings 3, the series of bearing-openings 8, arranged concentric to the bearing 3 and the radiating bearing-slots 12, and the vertical 90 recesses or ways 10, of the main shaft 4, having the pulleys 6 and 7 and main compressing-roll 5, the series of secondary rolls 9, mounted in the bearing-openings 8, the binding-rollers 13, mounted in the slots and provided with 95 pulleys 14, the bale-core mounted in the ways 10, the transverse tension-shaft 16, mounted in longitudinal slots 15 and having pulleys 17 at each end, the transverse shaft 19, having pulleys 20, the cable 21, passing over the pulleys and provided with weights 24, the links 100 22, connected to the cables and introduced over the pulley 17, and the opposite endless belts 18, passing around the pulleys 6, 14, and 17, substantially as specified. 105

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JUNIUS W. BROWN.

Witnesses:

W. J. REYNOLDS,  
JNO. W. WHITE.