

(No Model.)

2 Sheets—Sheet 1.

F. L. DYER.
COTTON PRESS.

No. 604,029.

Patented May 17, 1898.

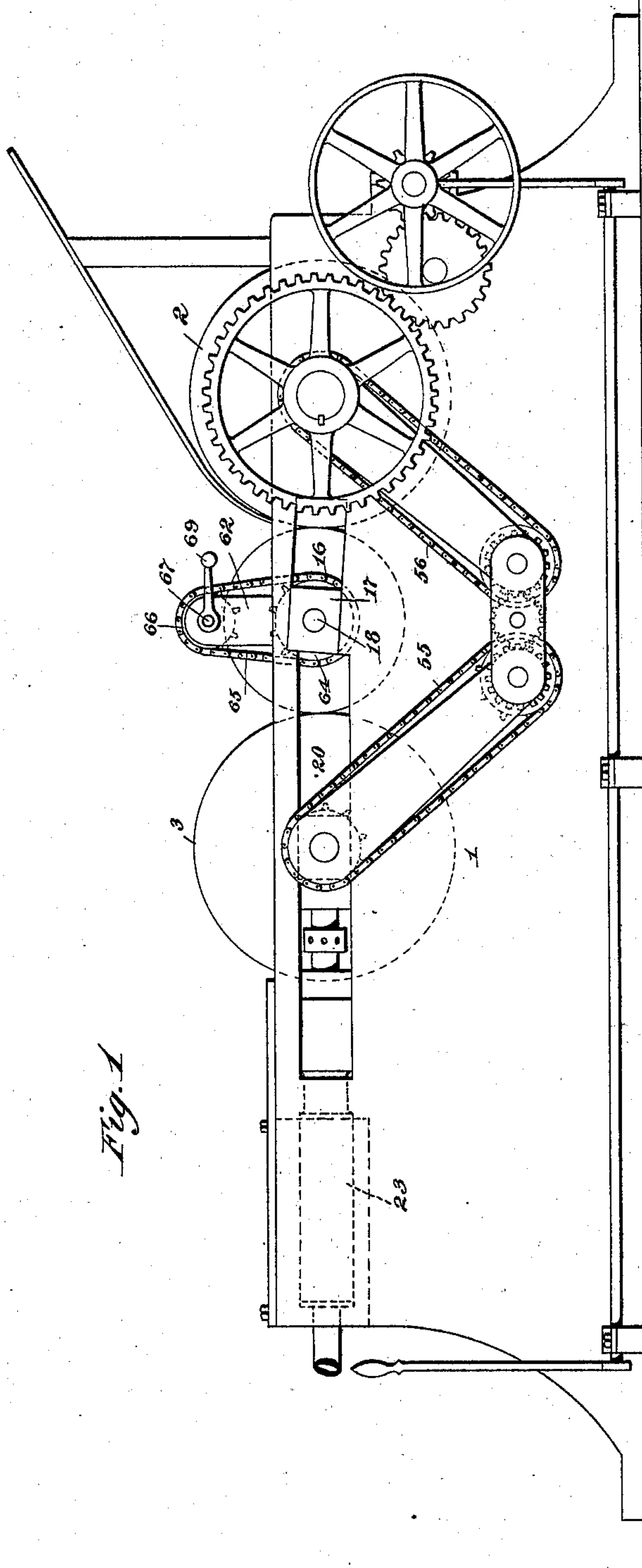


Fig. 1

Witnesses:

Jas. F. Coleman
Jno. R. Taylor

Inventor

F. L. Dyer

(No Model.)

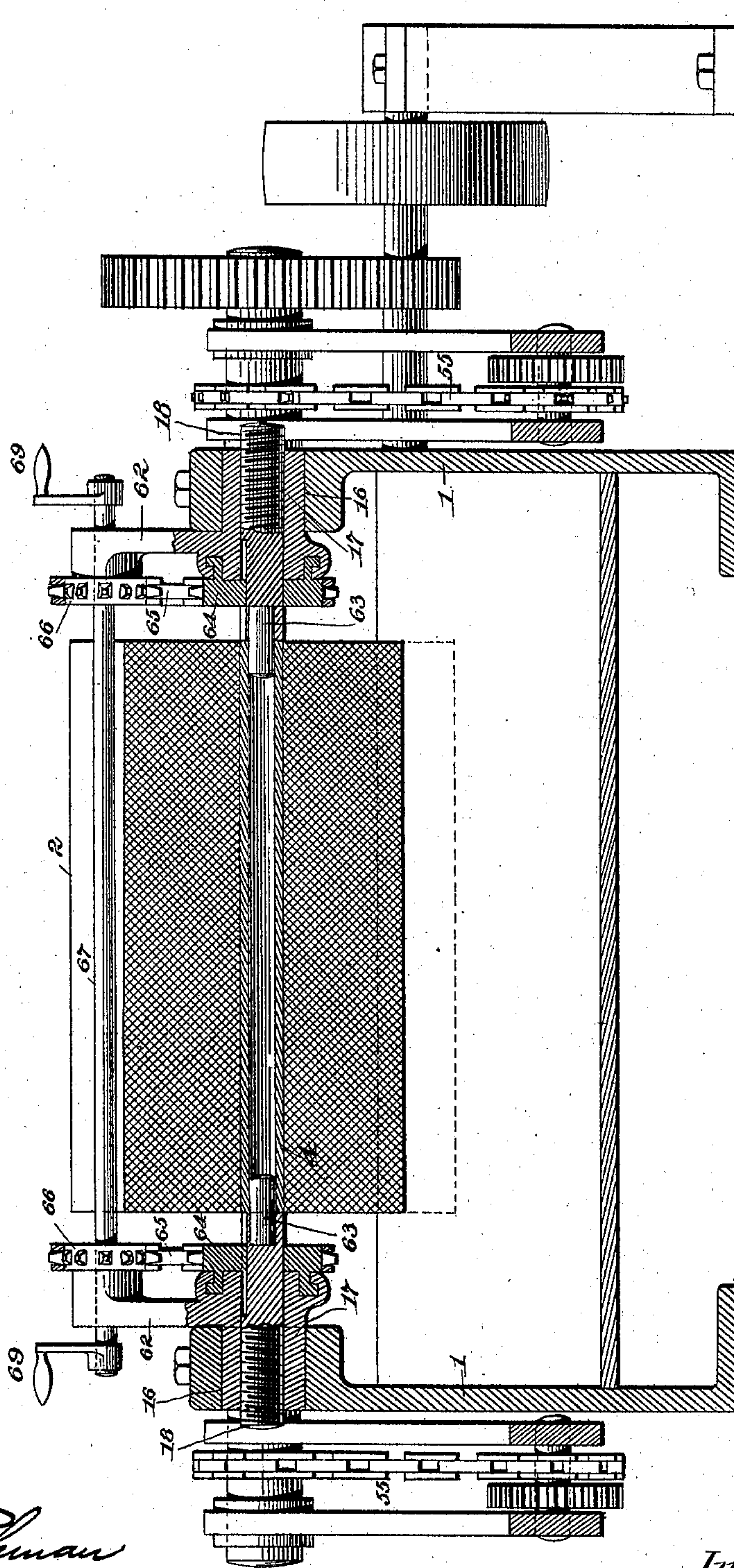
2 Sheets—Sheet 2.

F. L. DYER.
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Fig. 2



Witnesses:

Jas. F. Coleman

Jno. R. Taylor.

Inventor

F. L. Dyer

UNITED STATES PATENT OFFICE.

FRANK L. DYER, OF ORANGE, NEW JERSEY, ASSIGNOR TO THE AMERICAN COTTON COMPANY, OF NEW YORK, N. Y.

COTTON-PRESS.

SPECIFICATION forming part of Letters Patent No. 604,029, dated May 17, 1898.

Original application filed November 28, 1894, Serial No. 530,251. Divided and this application filed January 31, 1898. Serial No. 668,516. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. DYER, a citizen of the United States, and a resident of Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Cotton-Presses, (Case No. 29,) of which the following is a specification.

My invention relates to various new and useful improvements in cotton-presses, the present application being a division of my application filed November 28, 1894, Serial No. 530,251.

The type of cotton-presses to which the invention relates is that intended to form bales cylindrical in shape by winding a continuous sheet or bat in spiral layers on a core or spindle, the sheet or bat being simultaneously subjected to pressure, whereby a very dense and compact bale will be obtained. The means employed for compressing the sheet or bat as it is thus wound in place on the core or spindle comprise, preferably, two baling-rolls; but a greater number of baling-rolls may be employed, or instead thereof a belt may be used to effect the compression. In the operation of such presses it will be convenient to provide means by which the core or spindle on which the bale is formed may be released at both ends from one side of the press and, preferably, by which the core may be simultaneously released at both ends to allow for the removal of the finished bale; and the present invention relates, broadly, to mechanism by which this result will be accomplished.

Generically stated, the invention consists in providing the core or spindle of a rotary baling-press with suitable supports at each end which will allow for the rotation of the core or spindle and to combine with said supports suitable mechanical devices by which from one side of the press the said supports may be preferably simultaneously withdrawn from both ends of the core or spindle, so as to release the same when the finished bale is to be removed. I preferably employ a tubular core and engage within each end thereof a suitable supporting-pin, by which the core will be sustained in its position and be allowed to

rotate, and I mount above the core and extend parallel therewith a rotatable shaft, having connections with said supporting-pins and by which they may be simultaneously withdrawn from engagement with the core or be engaged therewith.

In order that my invention may be better understood, attention is directed to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side view of a two-roll cotton-press, showing my present improvements applied thereto; and Fig. 2, a cross-sectional view through the line of the core on a somewhat-enlarged scale.

In both of the above views corresponding parts are represented by the same numerals of reference.

1 1 represent the side frames of the press, 2 the fixed baling-roll, mounted in stationary bearing-blocks, and 3 the movable baling-roll, mounted in movable bearing-blocks working in slots 20 in the side frames. Pressure is applied to the movable baling-roll 3 in any suitable way, such as by means of a hydraulic cylinder 23. The two baling-rolls 2 and 3 are positively driven in the same direction and at the same peripheral speed by any suitable mechanism—such as, for example, by sprocket-chains 55 and 56, which are so arranged as to allow for the relative separation of the rolls.

4 represents the core or spindle, which is carried between the baling-rolls 2 and 3, with its axis in substantially the same plane as the axes of said rolls. The core or spindle 4 is illustrated as being tubular in form; but it is obvious that it may be a solid bar having recesses or sockets in its ends.

17 are movable bearing-blocks which support the core, said bearing-blocks working in slots 16 in the side frames. Carried by the bearing-blocks 17 are supporting-pins 63, which engage the ends of the core and sustain the same in its position between the baling-rolls. These supporting-pins are preferably carried in the ends of screw-threaded shafts 18, engaging within the bearing-blocks 17. It will be obvious that by simultaneously rotating the said shafts, each in the proper

direction, the supporting-pins 63 will be dis-
engaged from the core, whereby the finished
bale may be removed from the press. The
means illustrated for rotating these screw-
5 threaded shafts may be conveniently used.

62 represents a standard carried by each of
the movable bearing-blocks 17, and mounted
in said standards is a shaft 67, which extends
above and parallel with the core 4. On this
10 shaft are two sprocket-wheels 66. The shaft
may also be provided with a crank or handle
69 at each end thereof, so that it may be ro-
tated from either side of the press.

64 64 are sprocket-wheels which are splined
15 upon the screw-threaded shafts 18 and which,
therefore, will rotate the said shafts and at
the same time allow longitudinal movement
of said shafts. Lateral movement of the
sprocket-wheels 64 may be prevented by form-
20 ing small fingers on the movable bearing-
boxes 17, which engage in an annular groove
concentric with each sprocket-wheel, as
shown. The sprocket-wheels 64 and 66 at
each side of the machine are connected by a
25 sprocket-chain 65.

When it is desired to remove the bale from
the press after the bale has been finished, the
shaft 67 will be rotated by the handle or crank
69, which movement will simultaneously ro-
30 tate the sprocket-wheels 64, and the screw-
threaded shafts 18 will therefore be turned
relatively to the bearing-boxes 17, so as to
move laterally therein and effect a simulta-
neous disengagement of the supporting-pins
35 from the core.

With the specific mechanism described it
will of course be necessary to make one of the
shafts 18 left-handed and the other right-
handed.

40 It will be understood that the specific op-
erating mechanism described may be varied
in many respects without departing from
the essential spirit of the invention, which,
broadly considered, consists in providing a
45 support for each end of the core or spindle
used in a baling-press for making cylindrical
bales and in providing suitable mechanism
by which from one side of the press the said
supports may be preferably simultaneously
50 withdrawn from engagement with the core or
spindle. It will of course be understood that
instead of providing supporting-pins 63, which
engage in sockets or recesses formed in the
core or which engage with a tubular core, it
55 will be possible to engage the ends of the core
within sockets or recesses formed in the ends
of the shafts 18 or their equivalents or formed
in the bearing-boxes 17 themselves, provision
being made when the bale has been finished
60 to provide for the movement of said bearing-
boxes. These modifications are so obvious
and will be so readily understood by those

skilled in the art that illustration thereof is
not necessary.

Having now described my invention, what 65
I claim as new, and desire to secure by Letters
Patent, is as follows:

1. The combination in a rotary press, of
withdrawable baling-core-supporting centers,
a core mounted on said centers, and means 70
for withdrawing and advancing said centers
from one side of the press and independently
of the other movable parts of the press, sub-
stantially as set forth.

2. The combination in a rotary cotton-press, 75
of two baling-rolls, means for driving said
rolls, withdrawable baling-core-supporting
centers, a core mounted on said centers be-
tween said rolls, and means for advancing
and withdrawing said supporting-centers 80
from one side of the press independently of
the movable parts of the press, substantially
as set forth.

3. The combination in a rotary cotton-press, 85
of withdrawable baling-core-supporting cen-
ters mounted in sliding bearing-blocks, and
a connection between said centers whereby
they may be advanced and withdrawn simul-
taneously and independently of the other
movable parts of the press, substantially as 90
set forth.

4. The combination in a rotary cotton-press,
of two baling-rolls, means for driving said
rolls, withdrawable baling-core-supporting
centers mounted in sliding bearing-blocks, 95
and a connection between said centers where-
by they may be advanced and withdrawn si-
multaneously independently of the other mov-
able parts of the press, substantially as set
forth. 100

5. In a cotton-press of the character de-
scribed, the combination of two baling-rolls,
means for driving said rolls, a core mounted
between the same, means for supporting said 105
core at each end thereof, and independent
means for simultaneously releasing both ends
of the core, substantially as set forth.

6. In a cotton-press of the character de-
scribed, the combination of two baling-rolls
in substantially the same plane, means for 110
operating said rolls, a core mounted between
said rolls, movable bearing-pieces for the
ends of said core, and an operating-shaft con-
nected with said bearing-pieces for simulta-
neously moving the same out of engagement 115
with the core, said operating-shaft being
mounted out of the plane of the rolls, sub-
stantially as set forth.

This specification signed and witnessed this
29th day of January, 1898.

FRANK L. DYER.

Witnesses:

JNO. R. TAYLOR,
EUGENE CONRAN.