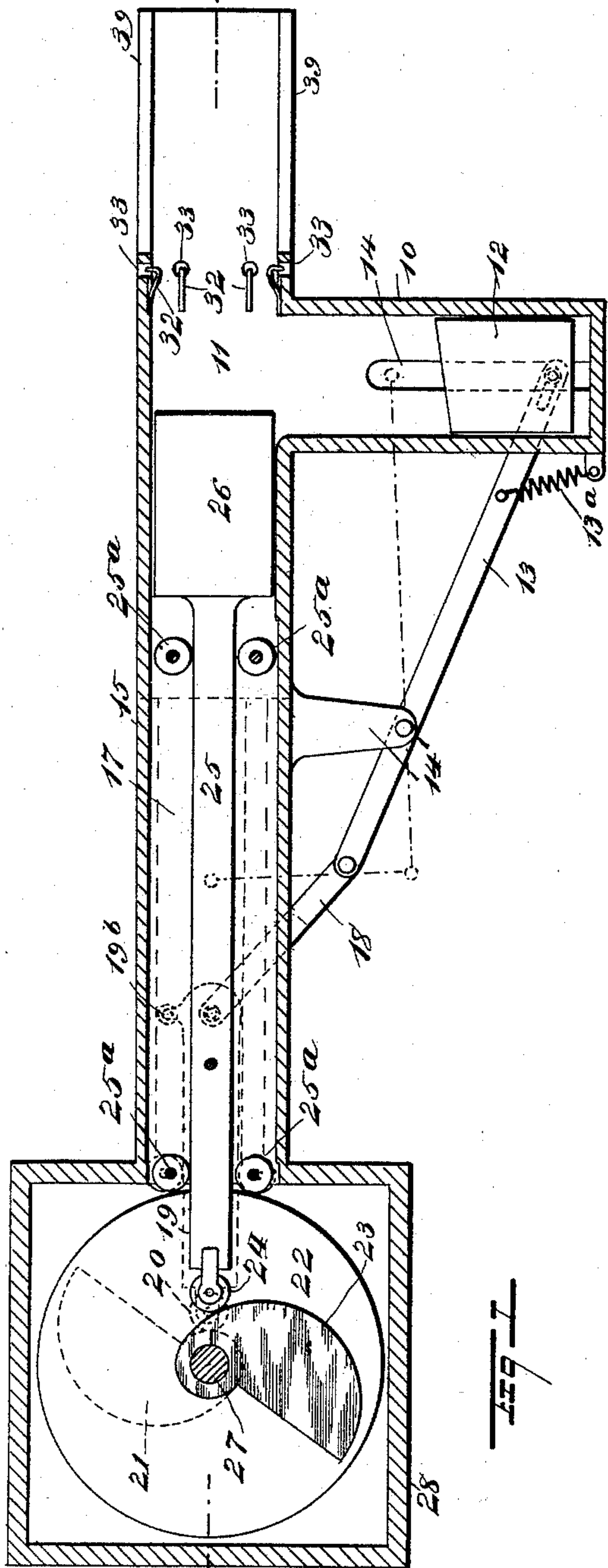


(No Model.)

A. C. MILLER.
BALING PRESS.

No. 524,597.

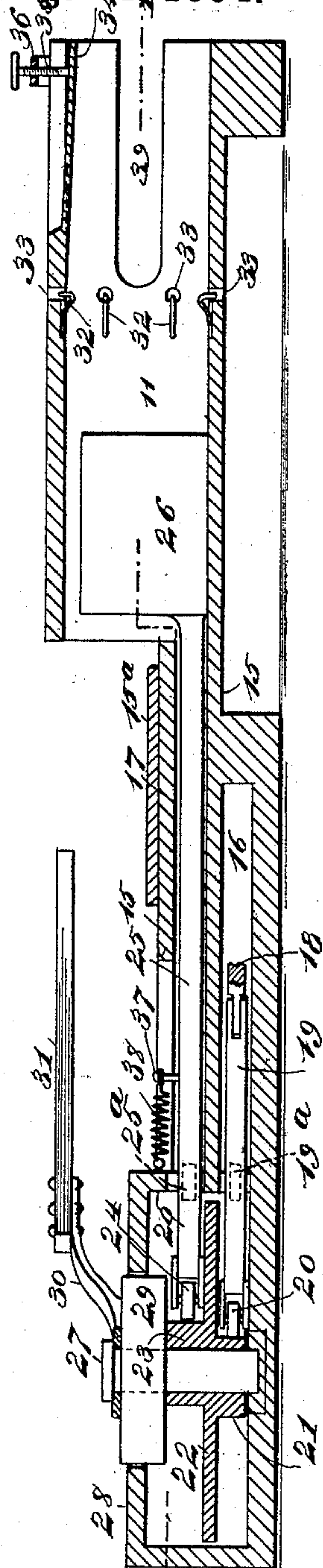
Patented Aug. 14, 1894.



WITNESSES:

H. Walker
C. Sedgwick

Fig. 2



INVENTOR

A. C. Miller
BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ANDREW C. MILLER, OF COMMERCE, MISSOURI, ASSIGNOR OF ONE-HALF TO
EDWARD A. JOHNSON, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 524,597, dated August 14, 1894.

Application filed November 25, 1893. Serial No. 491,989. (No model.)

To all whom it may concern:

Be it known that I, ANDREW C. MILLER, of
Commerce, in the county of Scott and State of
Missouri, have invented a new and Improved
5 Baling-Press, of which the following is a full,
clear, and exact description.

My invention relates to improvements in
baling presses, such as are used for baling hay,
straw and analogous articles; and the object
10 of my invention is to produce a very simple
and powerful press, which may be conven-
iently, easily and rapidly operated, and which
is adapted to bale material of the kind named
in an efficient manner and automatically force
15 the material into the press box and the formed
bales from the press box.

To these ends my invention consists of cer-
tain features of construction and combina-
tions of parts, which will be hereinafter de-
20 scribed and claimed.

Reference is to be had to the accompanying
drawings, forming a part of this specification,
in which similar figures of reference indicate
corresponding parts in both the views.

25 Figure 1 is a sectional plan, on the line 1—1
of Fig. 2, of the press embodying my inven-
tion; and Fig. 2 is a section on the line 2—2
of Fig. 1.

The press is provided with a feed box 10,
30 which is arranged at right angles to the press
box 11 and delivers into the same, the mate-
rial which is placed in the feed box being
forced into the press box by a reciprocating
plunger 12, which is operated by a swinging
35 lever 13, the lever being pivoted to one side
of the plunger, and the feed box is longitudi-
nally slotted, as shown at 14, to provide for
the movement of the pivot pin.

The plunger 12 is drawn normally to the
40 outer end of the feed box by a spiral spring
13^a which is fastened to the lever 13 and to a
lug on the box, see Fig. 1. The lever 13 is
pivoted in lugs 14' on a casing 15, which cas-
ing is arranged at one end of the press box
45 and in longitudinal alignment therewith, the
casing being divided into two lower and up-
per compartments or slideways 16 and 17 in
which the mechanism, to be described below,
works; and the casing is covered on top by a

platform 15^a over which the horses travel 50
when working the press.

One end of the lever 13, the end opposite
that which is pivoted to the plunger 12, is
pivotally connected by means of a rod 18 with
a slide bar 19 which moves longitudinally in 55
the slideway 16 between anti-friction rollers
19^a, and the slide bar carries an anti-friction
roller 19^b which also assists in guiding the
bar. The slide bar is provided at one end
with a roller 20, which contacts with a cam 60
21 on one face of a horizontally rotating wheel
22, while on the opposite face of the said wheel
is a similar cam 23 which contacts with a
roller 24 on the plunger rod 25, which moves
longitudinally in the slideway 17 between 65
anti-friction rollers 25^a and which carries a
plunger 26 adapted to move longitudinally
and snugly in the press box 11.

The wheel 22 and its cams are journaled on
the shaft 27, and the shaft, the wheel, and 70
the cams are held in a suitable housing 28.
The shaft is provided with a collar 29 which
turns in an opening in the housing, and se-
cured to the shaft is a yoke 30 which projects
from diametrically opposite sides of the shaft. 75
The yoke on each side of the shaft is provided
with a projecting arm 31, thus forming a
double sweep to each end of which a horse
may be attached to turn the sweep and the
cam wheel. Only one arm 31 is shown in the 80
drawings, the arm yoke being shown in sec-
tion in Fig. 2.

If desired, the shaft may be provided with
a pulley or gear wheel, so that power may
be used, in any ordinary way, to turn it. 85

When the plunger 26 is thrown forward
into the press box, it carries with it the ma-
terial in the box, which is forced toward the
tail of the box and beyond the springs
32, which are fastened in a transverse line in 90
the press box and have bent ends projecting
into holes in the box so that they may have
the necessary freedom of movement.

The press box 11 is provided at its tail end
with a tension device, of substantially the 95
usual kind, having an inwardly pressible
spring plate 34, which is moved inward by a
screw 35 mounted in a suitable bracket or

support 36, and by adjusting the screw, the plate may be forced inward the desired distance so as to produce the proper tension on the material which is squeezed in the press box.

The plunger 26 is thrown in one direction by the cam 23 striking on the roller 24 at the end of the plunger rod 25, and it is pulled back in the opposite direction when the cam passes the roller 24, by a spring 38 which is attached to a pin 37 on the plunger rod and to the housing 28.

The press is operated as follows:—The material to be baled is placed in the feed box 10 through an opening in the side or top of said box, a door being arranged to close either the side or top openings as desired. Each stroke of the plunger 12 forces a quantity of the material into the press box 11; and by reference to Fig. 1, it will be observed that the arrangement of the actuating cams is such that the plunger 26 will be withdrawn when the plunger 12 is forced inward and vice versa, and consequently after each stroke of the plunger 12, the plunger 26 is thrown into the press box so as to squeeze the material into the rear end of the box, and a bale is thus formed. The rear end of the press box is longitudinally slotted in substantially the usual way, as shown at 39, so that the binding wires may be conveniently placed around the formed bale. The completed bale is forced out of the rear end of the press box as the succeeding bale is formed. The plungers are actuated by turning the shaft 27 either by means of the sweep described, or by equivalent power.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A baling press, comprising a press box, a

box, and delivering into the same, plungers arranged respectively in the press box and feed box, longitudinally reciprocating rods or bars arranged one above the other and one of them connected with each of the said plungers, and a cam mechanism engaging the free ends of said rods or bars to give alternate movements to the plungers, substantially as described.

2. A baling press, comprising a press box, a feed box arranged at right angles to the press box and delivering into the same, a reciprocating plunger in the press box, a plunger rod secured to the plunger, a reciprocating plunger in the feed box, a lever mechanism for operating the feed box plunger, a longitudinally moving slide bar connected with the said lever mechanism, a revoluble cam acting on said slide bar and controlling the said lever mechanism, and a similar cam acting on the plunger rod and controlling the movements of the plunger in the press box, substantially as described.

3. A baling press, comprising a press box, a feed box arranged at right angles to the press box, a reciprocating plunger in the press box, a plunger rod secured to the plunger, a reciprocating plunger in the feed box, a lever mechanism for operating the feed box plunger, a slide bar connected with the said lever mechanism, a revoluble shaft provided with cams adapted to contact alternately with the plunger rod and the slide bar, and operate the said plungers in the feed box and press box, and springs for retracting the said plungers, substantially as described.

ANDREW C. MILLER.

Witnesses:

G. G. MATTHEWS,
CHARLES I. ANDERSON.