

No. 753,539.

PATENTED MAR. 1, 1904.

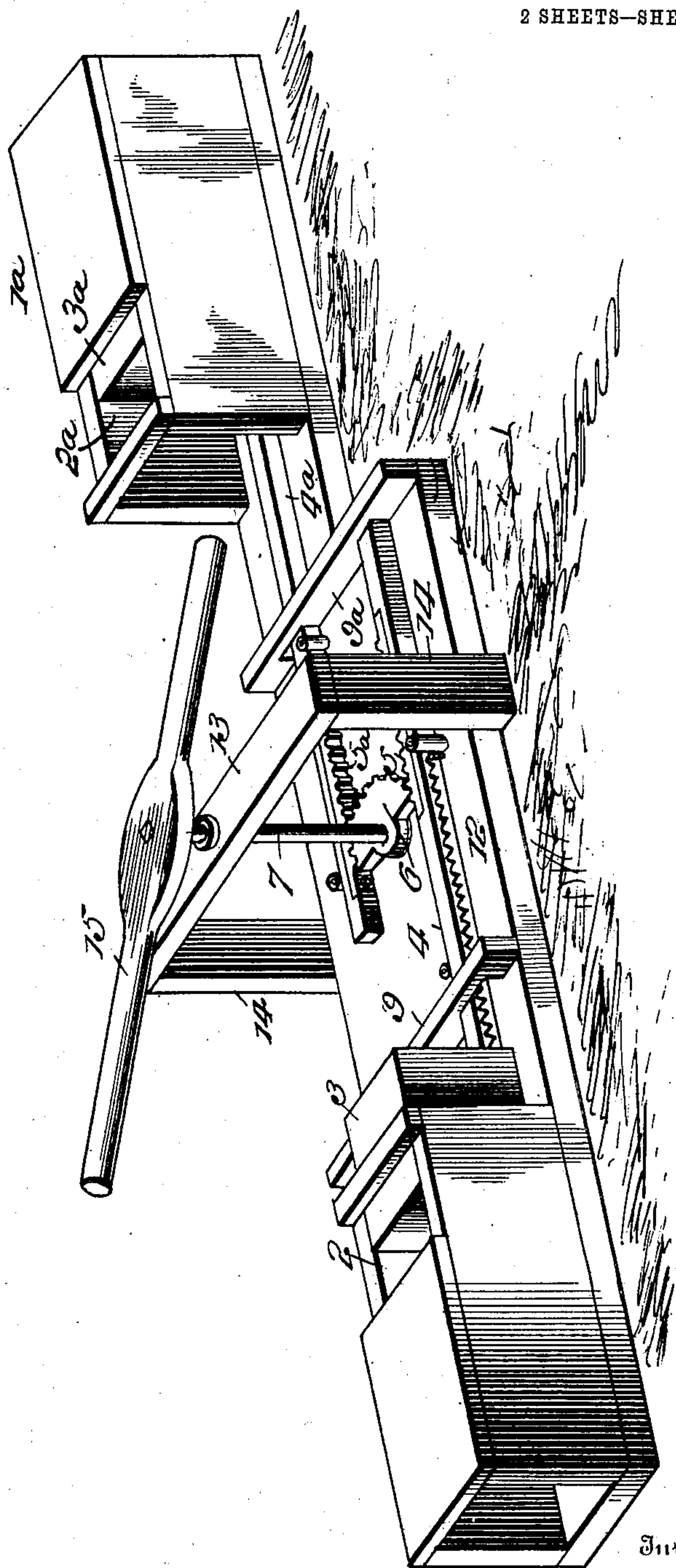
M. BROWN.

PRESS.

APPLICATION FILED JULY 10, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Inventor

Michael Brown

Witnesses -

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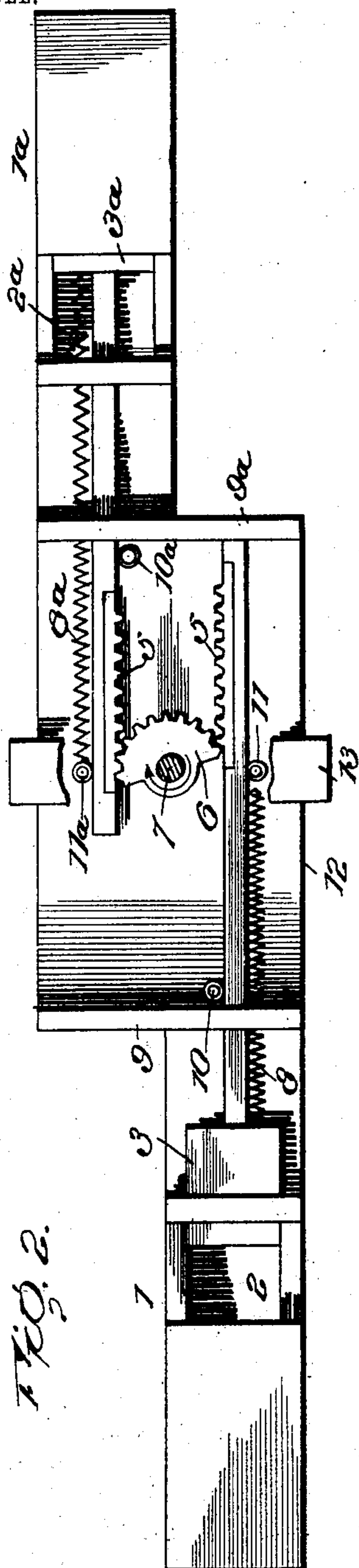
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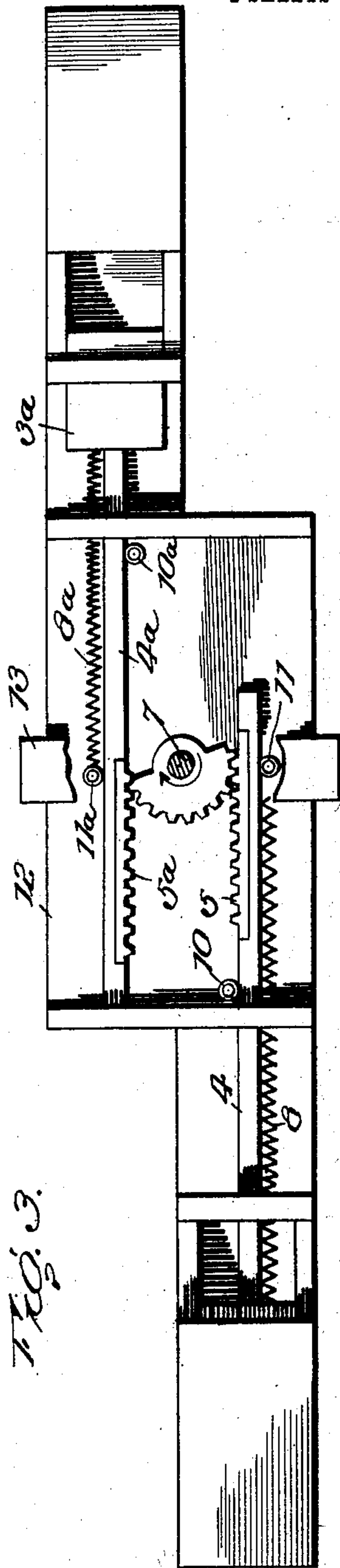
2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

MICHAEL BROWN, OF GATESVILLE, TEXAS.

PRESS.

SPECIFICATION forming part of Letters Patent No. 753,539, dated March 1, 1904.

Application filed July 10, 1903. Serial No. 165,021. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL BROWN, a citizen of the United States, residing at Gatesville, in the county of Coryell and State of Texas, have invented certain new and useful Improvements in Presses, of which the following is a specification.

This invention has relation to means for compressing hay, clover, fodder, grass, and like edible fibrous material into bales for convenience of handling, storage, and transportation.

The press is of the double-acting type, comprising two baling-chambers, a plunger working in each baling-chamber, and actuating means for alternately advancing and withdrawing the plungers.

The present invention deals more particularly with the actuating means, the same consisting of rebounding plungers, a rack-bar attached to the rod of each plunger, and a toothed sector arranged for alternate coöperation with the rack-bars for forcing them into the baling-chambers.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a press embodying the invention. Fig. 2 is a top plan view, the sweep and the cross-bar of the frame supporting the upper end of the sector-shaft being omitted. Fig. 3 is a view similar to Fig. 2, showing the parts differently arranged.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The press comprises two baling-chambers 1 and 1^a, diametrically arranged upon opposite sides of a medial longitudinal line. These baling-chambers may be of any desired formation and are provided near their inner ends

with feed-openings 2 2^a, preferably formed in the top side. Plungers 3 3^a are arranged to operate in the respective baling-chambers, and their stems or rods 4 4^a are provided with cog-teeth 5 5^a for coöperation with the complementary teeth of the sector 6, secured to the lower end of the vertical shaft 7. The plungers 3 3^a are held in a given position by springs 8 8^a, which serve to return the plungers to an initial position when released from the advancing or compressing force. Transverse strips 9 9^a are notched to receive the rods 4 4^a, so as to direct them in their movements. These strips 9 9^a also act as stops to limit the movement of the plungers on the return stroke. Guide-pulleys 10 10^a and 11 11^a are disposed upon opposite sides of the respective plunger-rods 4 4^a to give proper direction thereto and insure intermeshing of the teeth 5 5^a with the teeth of the sector 6. The baling-chambers may be secured to any suitable support, as the bed-piece 12, which consists of a platform or frame of any formation. The vertical shaft 7 is journaled at its lower end in the bed-piece 12 and near its upper end in the cross-piece 13 of a frame comprising said cross-piece and uprights 14. The sector 6 is secured to the shaft 7 in any manner so as to turn therewith, and a sweep 15 is secured to the upper end of the shaft 7, so as to cause rotation thereof when applying turning force to the sweep.

In order to reduce the length of the press for convenience of storage and transportation, it is proposed to construct the bed piece or frame 12 of sections, which may be hinged or detachably connected in any manner. When the component parts are properly assembled, the plungers 3 3^a occupy a position at the inner ends of the respective baling-chambers, so as not to obstruct the feed-openings through which the baling-chambers are charged with the material to be formed into bales. Upon imparting rotary movement to the sweep 15 the plungers are alternately advanced by engagement of the teeth of the sector 6 with the cog-teeth 5 5^a. Normally the cog-teeth 5 5^a occupy a diagonal arrangement. Hence one plunger only can be advanced at a time, thereby affording opportunity for charging the

baling-chamber whose plunger is at rest. When the advancing plunger reaches the limit of its forward movement and the teeth of the sector clear the cog-teeth of the plunger-rod, 5 the latter is quickly returned to a normal position by the resetting or rebounding spring. Just before disengagement of the last tooth of the sector from the cog-teeth of the advancing plunger the tooth at the opposite end of the 10 sector makes engagement with the cog-teeth of the other plunger-rod. Hence the sector is at all times in engagement with the teeth of one plunger-rod or the other, and there is no time in its rotation when it is wholly dis- 15 engaged from both plunger-rods. The baling operation is continuous, since during the compressing of the charge in one baling-chamber the other baling-chamber is receiving a charge, and vice versa.

20 Having thus described the invention, what is claimed as new is—

1. In a press, the combination of baling-chambers, plungers operating therein, rods connected with the plungers and provided with 25 cog-teeth, means for returning the plungers and rods to a normal position, and a toothed sector arranged between the plunger-rods in

the plane thereof and having its toothed portion of such circumferential length as to engage with the cog-teeth of one plunger-rod 30 prior to disengagement from the cog-teeth of the other plunger-rod, substantially as set forth.

2. In a press, the combination of two baling-chambers having a diagonal arrangement, 35 plungers operating therein, toothed rods connected with the plungers, springs cooperating with the plungers to return them and the toothed rods to a normal position, a toothed sector arranged between and in the plane of 40 the toothed rods and having its toothed portion of such relative circumferential length as to engage with the cog-teeth of one plunger-rod prior to disengagement from the cog-teeth of the other plunger-rod, and means for ro- 45 tating the toothed sector in one direction for alternate actuation of the plungers, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

MICHAEL BROWN. [L. s.]

Witnesses:

EDWARD WRIGHT,
BOB WELLS.