(No Model.) 2 Sheets—Sheet 1.

A. A. GEHRT.

BALING PRESS.

No. 438,540. Patented Oct. 14, 1890.

Fig. IV.

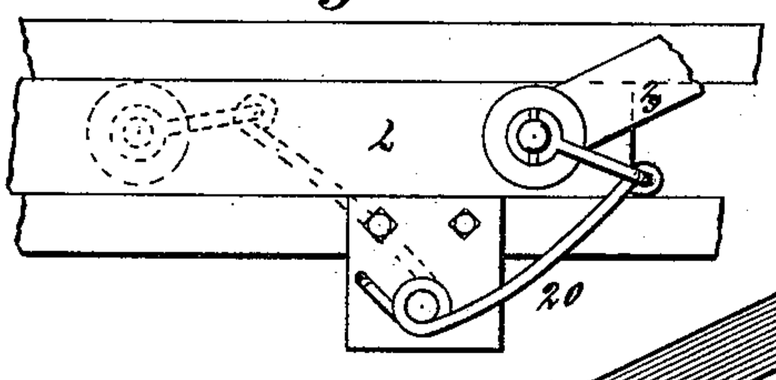


Fig. I.

Fig. V.

Fig. II.

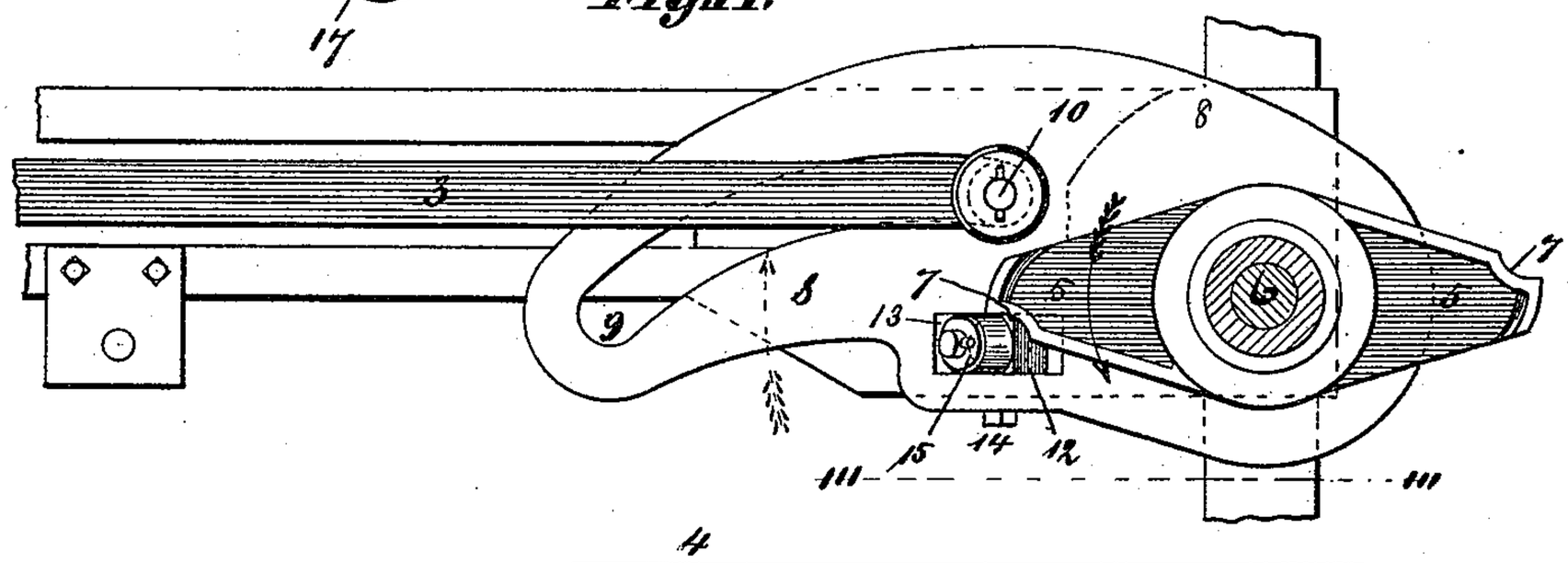
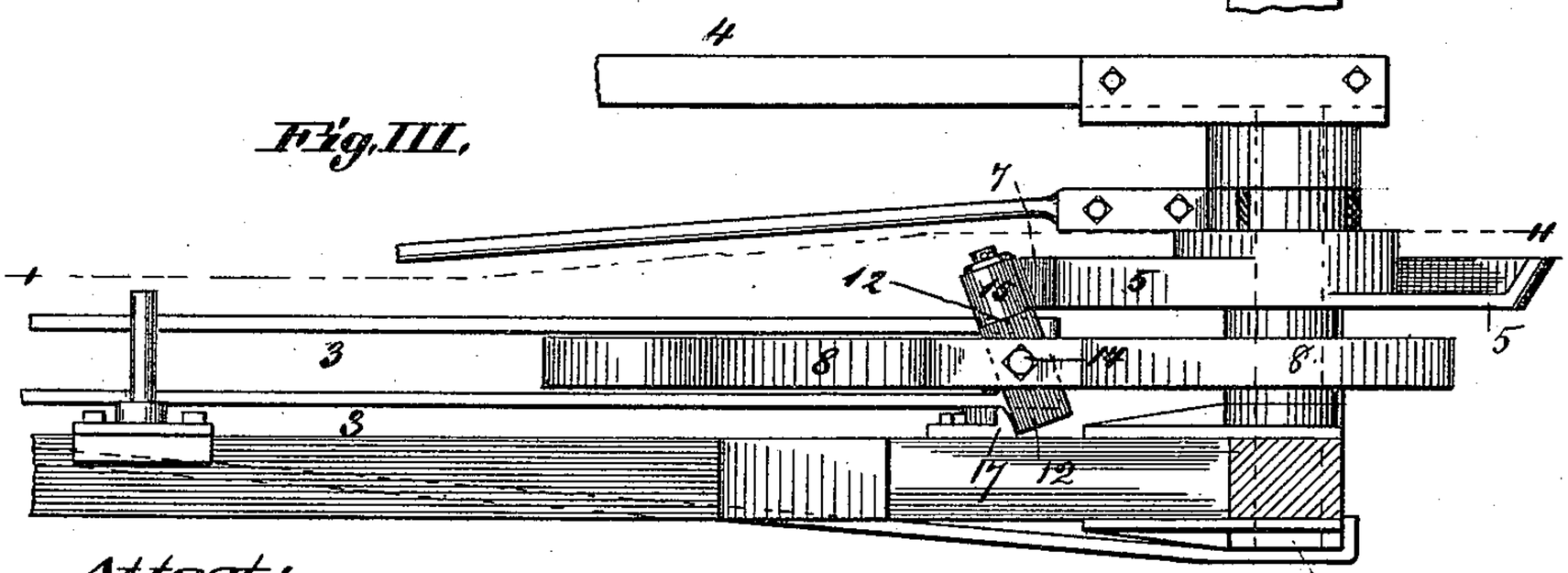


Fig. III.



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Attys

(6)

(No Model.) 2 Sheets—Sheet 2.

A. A. GEHRT.

BALING PRESS.

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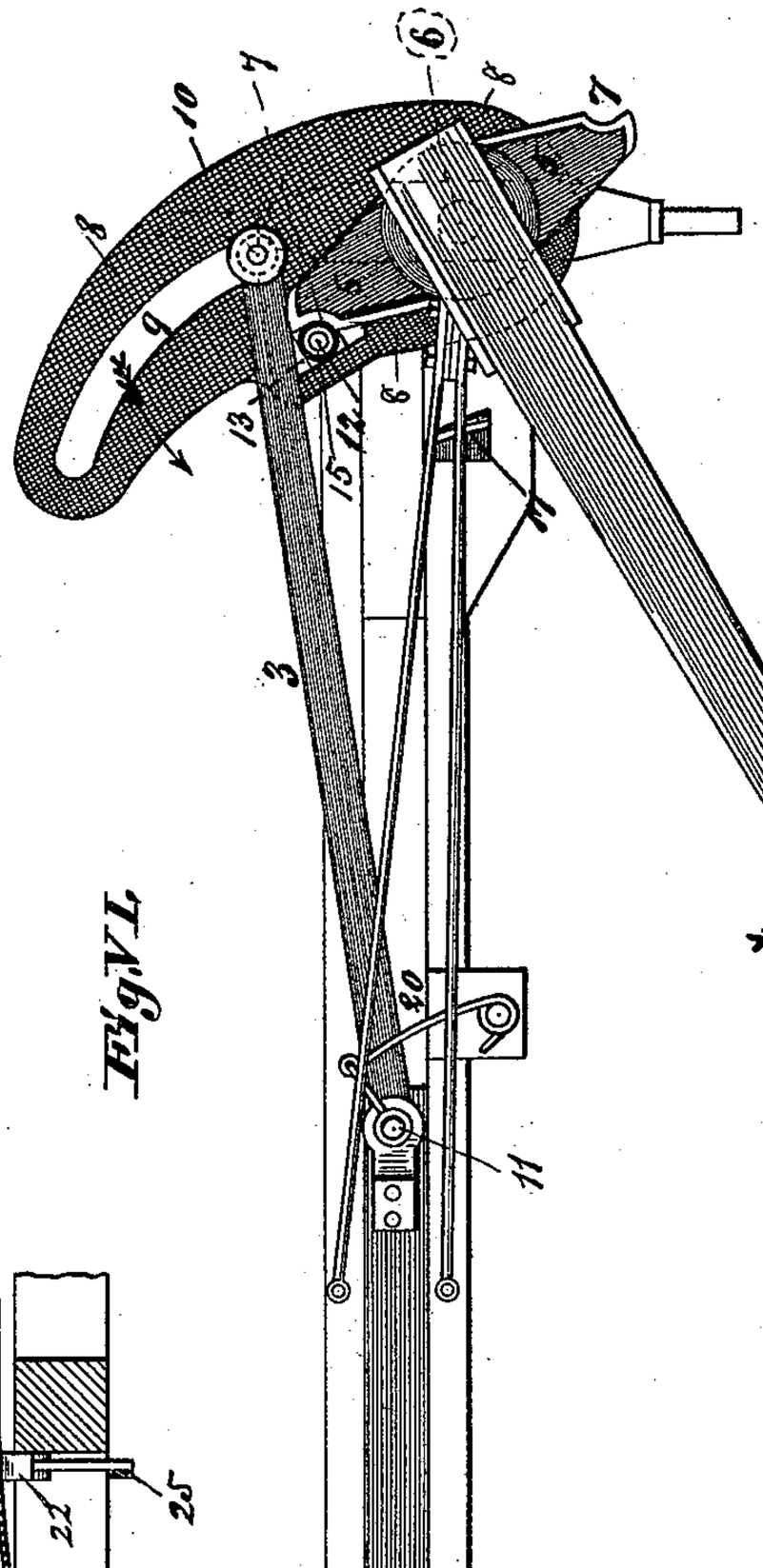

Fig. VI.

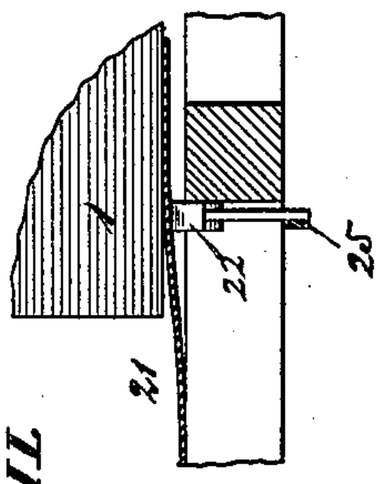

Fig. VII.

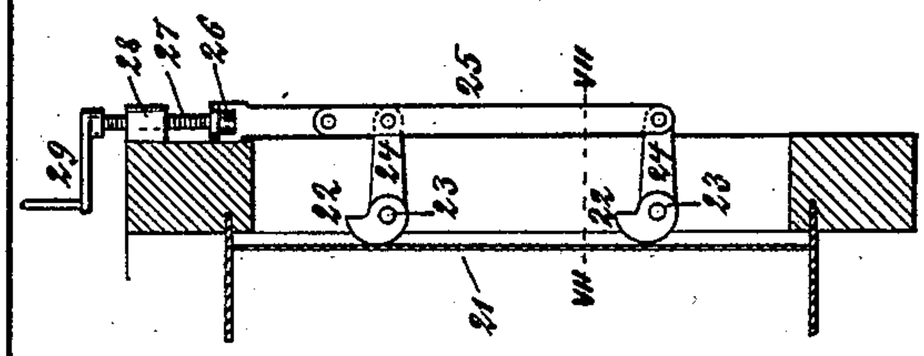

Fig. VIII.

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UNITED STATES PATENT OFFICE.

ALBERT A. GEHRT, OF QUINCY, ILLINOIS, ASSIGNOR TO THE COLLINS PLOW COMPANY, OF SAME PLACE.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 438,540, dated October 14, 1890.

Application filed September 7, 1889. Serial No. 323,237. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. GEHRT, of Quincy, in the county of Adams and State of Illinois, have invented a certain new and useful Improvement in Baling-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in presses for baling hay, cotton, excelsior, straw, and the like; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figures I and II are sections taken on line I II, Fig. III, of the operating devices of my improved baling-press. Fig. III is a vertical section taken on line III III, Fig. II, of the same. Fig. IV is a detail top view of the jointed spring and adjacent parts. Fig. V is a detail section taken on line V V, Fig. I, showing the pivotal block. Fig. VI is a top view of the press. Fig. VII is an enlarged detail view taken on line VII VII, Fig. VIII, showing the collapsible portion of the wall. Fig. VIII is an enlarged vertical section taken on line VIII VIII, Fig. VI, of the same.

Referring to the drawings, 1 represents the traverser of the press.

2 represents the inner section of the pitman, and 3 the outer section.

4 represents the sweep.

5 represents a cross-head loosely mounted on a vertical shaft 6, on which the operating-sweep 4 is also loosely mounted, a rigid connection being made between the sweep and the cross-head, or the sweep-casting and cross-head can be made in one piece. The cross-head is provided near each of its ends with a recess 7.

8 represents an arm loosely mounted on the shaft 6 and provided with a slot 9, receiving a pin 10, by which the outer end of the section 3 of the pitman is connected to the arm. The inner end of the section 3 of the pitman is pivoted at 11 to the outer end of the section 2 of the pitman.

12 represents a block fitting in a slot 13 in the arm 8 and pivoted to the arm, as shown at 14. On the upper end of this block is secured an anti-friction roller 15. The normal position of this block 12 is vertical, which position it may assume by gravity, and it will be seen that as the sweep and cross-head 5 turn on the shaft 6 the notched end 7 of the cross-head will engage the anti-friction roller 15 on the upper end of the block 12. As the sweep continues to move around, the arm 8 and pitman 2 3 will be forced from the position shown in Fig. I to the position shown in Fig. II, the traverser moving forward and the pin 10 moving from the outer end of the slot 9 to the inner end, thus decreasing the speed and increasing the power. As the parts reach the position shown in Fig. II, the lower end of the block 12 comes against a cam 17, secured to the frame of the press, which causes it to tilt or turn on its pivot 14, which disengages its upper end or the friction-roller 15 from the end 7 of the cross-head 5, thus disconnecting the cross-head 5 from the arm 8, and the latter, with the traverser and the pitman 2 3, recedes to the position shown in Fig. I. The sweep and cross-head 5 continuing around, the other end of the cross-head 5 comes against the block 12 again and the operation just described is repeated.

I thus produce a continuous press with a very cheap and effective construction which is not liable to get out of order. The arm 8, with the pitman 2 3, is caused to recede (after the cross-head 5 leaves the block 12) under the expansion of the compressed material, and this may be accelerated or assisted by means of a jointed spring 20, secured at one end to the frame of the press and at the other end to the joint of the pitman 2 3.

To prevent a sudden stop to the backward movement of the traverser, I make one or more walls of the baling-chamber collapsible or capable of being pressed inward into the path of the traverser, which comes against this wall of the press or baling-chamber and its movement is resisted by frictional pressure. This device is shown in Figs. VII and VIII.

21 is the wall of the baling-chamber, which preferably consists of a thin sheet of metal.

22 represents cams secured to the frame of the press by pivots 23 and provided with levers 24, connected by a link 25, the upper end of which is threaded at 26 to receive a screw 27, passing through a threaded box 28, se-

cured to the frame of the press and provided with a handle 29, by which it is turned. It will thus be seen that by turning the handle 29 the wall 21 of the baling-chamber may be forced inward, as shown in Fig. VIII, by the cams 22, for the purpose stated.

I claim as my invention—

1. The combination of a shaft, a cross-head loosely mounted on said shaft, a sweep loosely mounted on said shaft and united to the cross-head, a traverser, a pitman, an arm loosely mounted on the shaft and having a curved slot, a pin by which the pitman is connected to the arm working in the slot, a movable projection on the arm by which the cross-head is connected with the arm to advance the latter, and means for periodically moving the projection out of the path of the cross-head, the arm reciprocating with the pitman, while the sweep and cross-head revolve continuously, substantially as described.

2. In a baling-press, the combination of a traverser, a shaft, a cross-head on the shaft, an arm loosely mounted on the shaft, a pitman having slot-and-pin connection with the arm, a block pivoted to the arm, and a cam against which said block impinges, substantially as and for the purpose set forth.

3. In a baling-press, the combination of a traverser, a shaft, a cross-head on the shaft and having notched ends, an arm loosely mounted on the shaft and to which the traverser is connected by a pitman, a block provided with a friction-roller and pivoted to the said arm, and a cam against which said block impinges, substantially as and for the purpose set forth.

4. In a baling-press, the combination of a traverser, a shaft, a cross-head on the shaft, an arm loosely mounted on the shaft, a pitman connecting the traverser to the arm, a block pivoted to the arm and adapted to be engaged by the cross-head, a cam against which the block impinges, and a spring 20, substantially as and for the purpose set forth.

5. In a baling-press, the combination of a traverser, means for operating the traverser, a baling-chamber having a flexible wall, pivoted cams bearing against the wall of the baling-chamber, levers on the cams, a link connecting the levers, and a screw provided with a handle for moving the cams, substantially as and for the purpose set forth.

ALBERT A. GEHRT.

In presence of—
J. W. BROWN,
T. B. PAPE.