

No. 785,645.

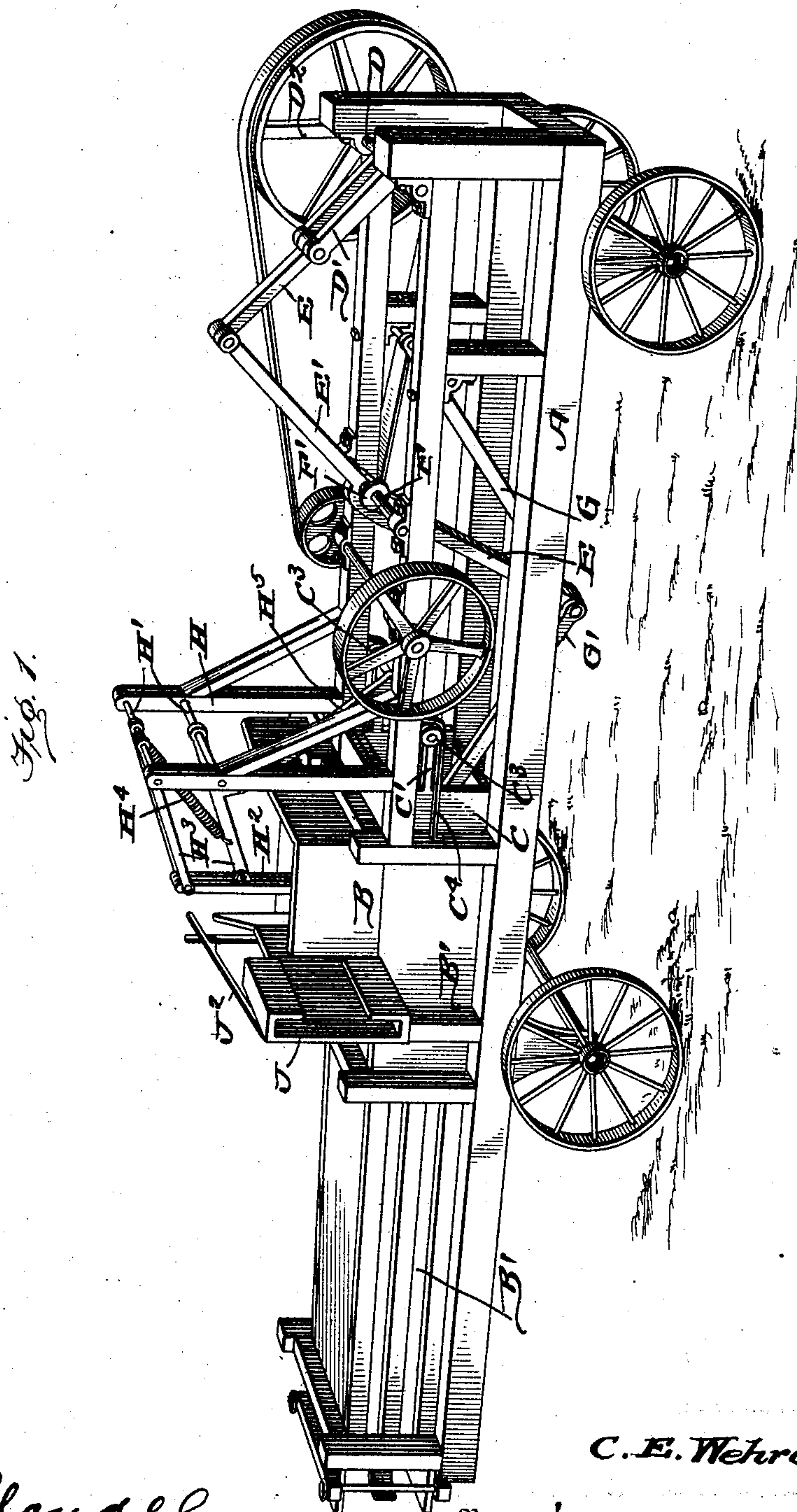
PATENTED MAR. 21, 1905.

C. E. WEHRENBURG.

HAY PRESS.

APPLICATION FILED MAR. 18, 1904.

3 SHEETS—SHEET 1.



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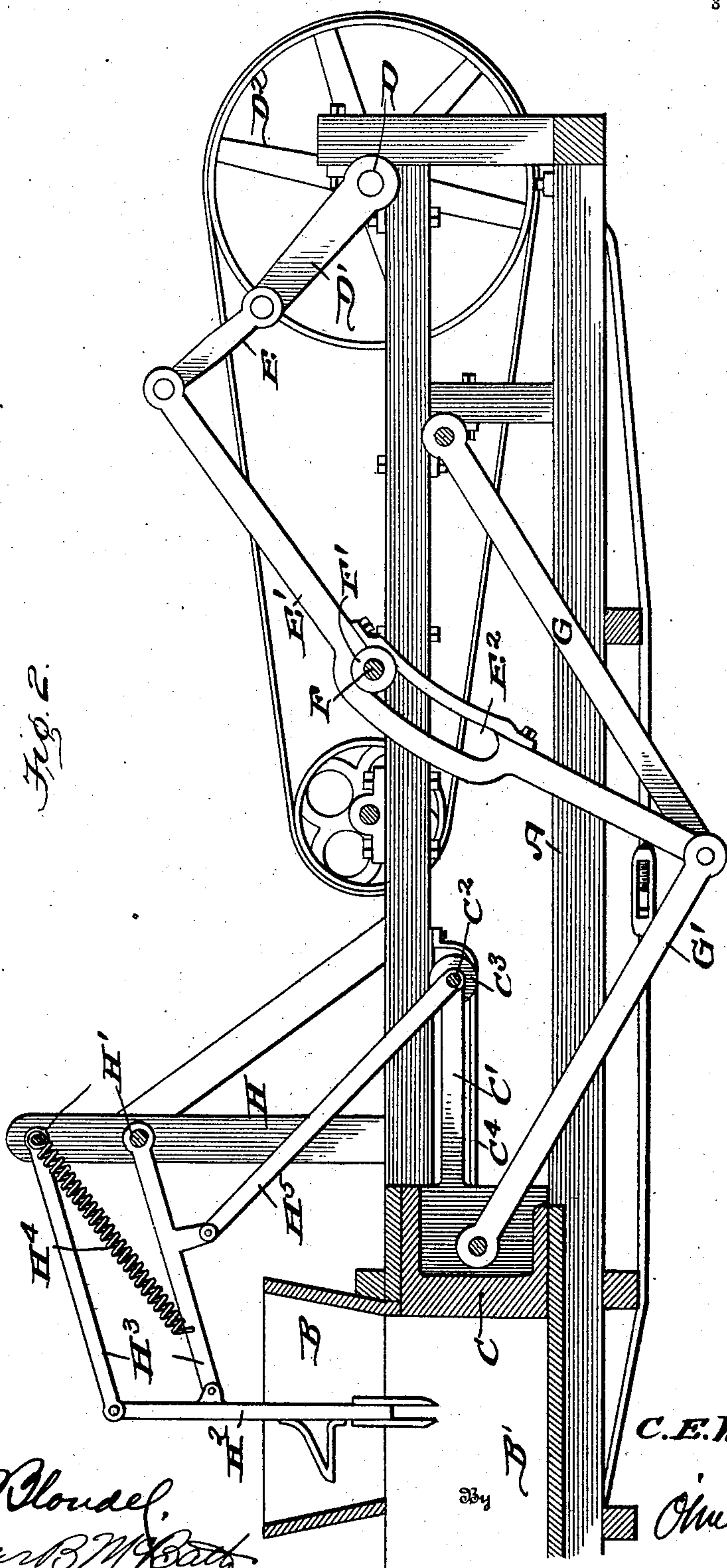
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3 SHEETS—SHEET 2.



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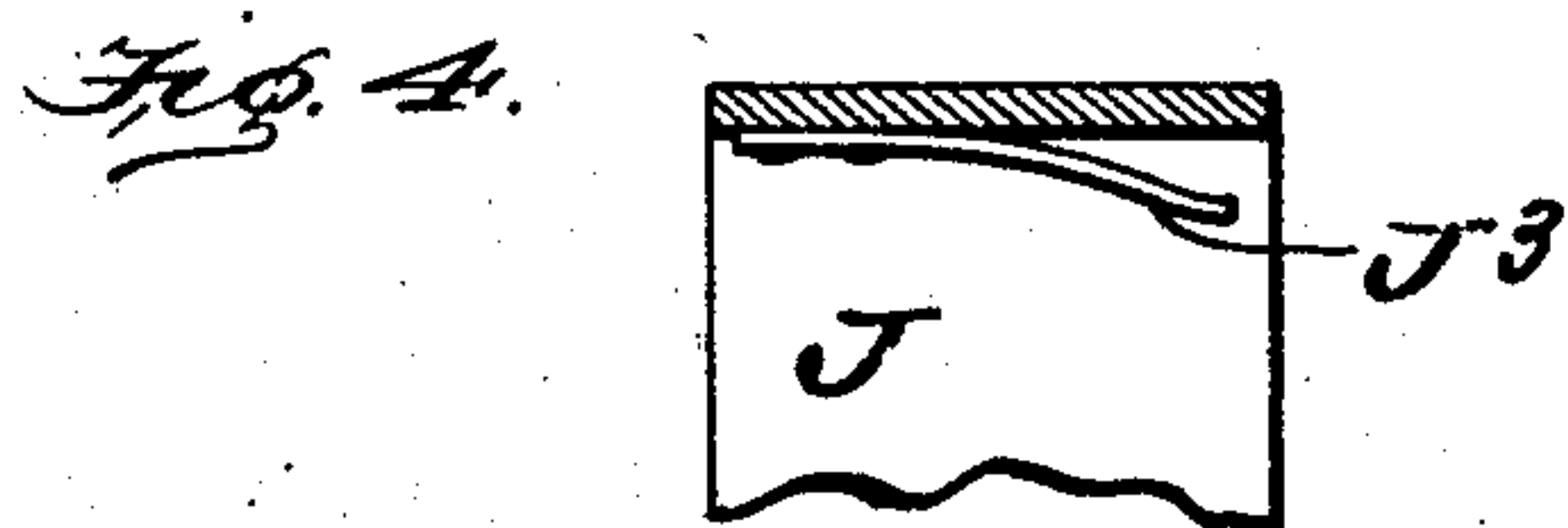
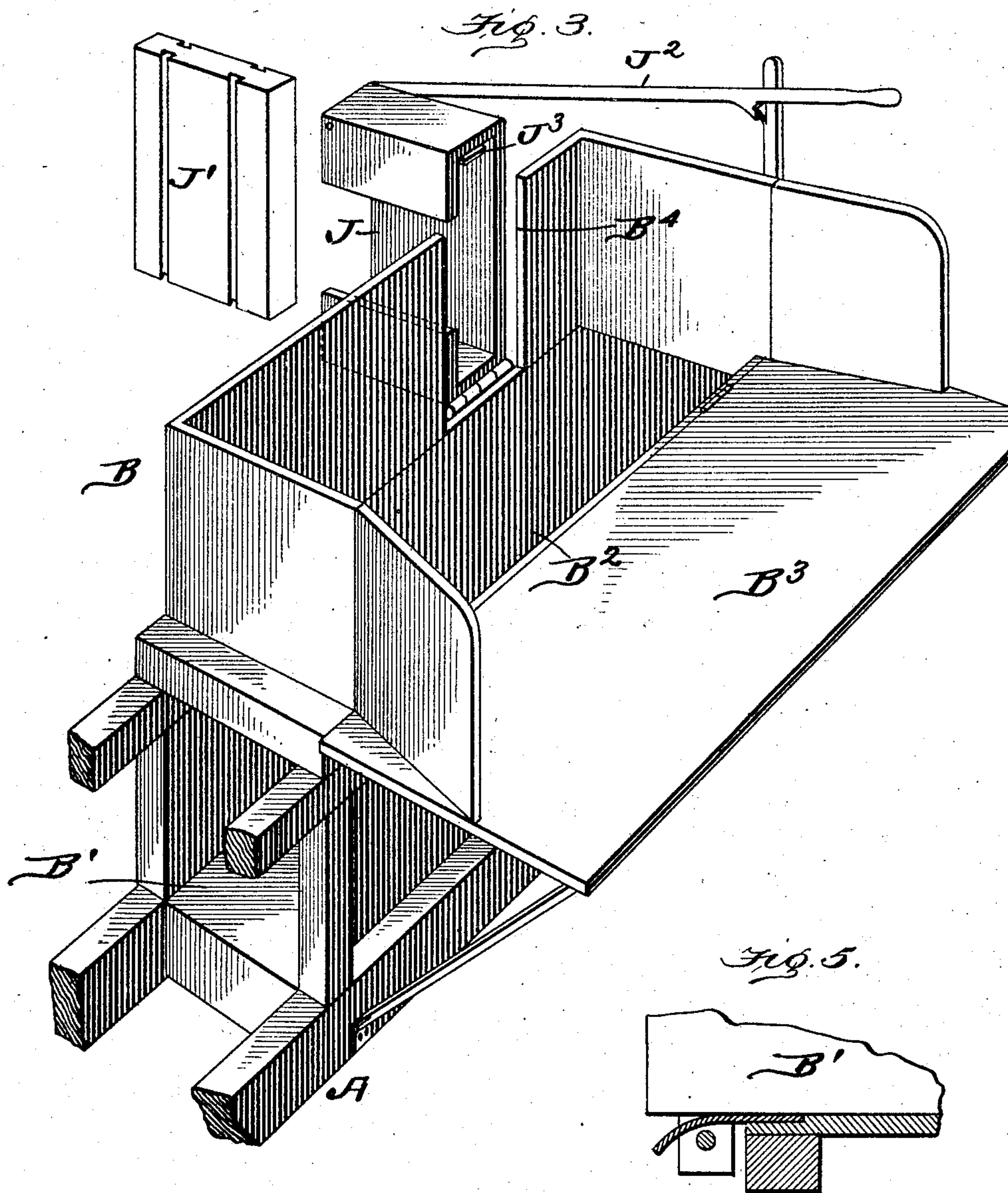
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

CHARLES E. WEHRENBURG, OF MOUND CITY, ILLINOIS.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 785,645, dated March 21, 1905.

Application filed March 18, 1904. Serial No. 198,808.

To all whom it may concern:

Be it known that I, CHARLES E. WEHRENBURG, a citizen of the United States, residing at Mound City, in the county of Pulaski and State of Illinois, have invented a new and useful Improvement in Hay-Presses, of which the following is a specification.

This invention relates to an improvement in hay-presses, and has for its object a press in which the first portion of the forward movement of the plunger will be a rapid quick movement, the plunger pressing against loose hay, and the latter portion of the stroke will be slower, but with increased pressure, the plunger bearing against the tightly-packed hay, and the return movement of the plunger will be a quick rearward stroke.

My invention also consists of the novel features of construction and combination of parts hereinafter described, particularly pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of my press complete. Fig. 2 is a detail view, partly in section, showing in side elevation the means for actuating the plunger. Fig. 3 is a detail perspective view showing the block-dropper. Fig. 4 is a detail sectional view drawn through the upper portion of the block-holder. Fig. 5 is a detail sectional view drawn horizontally through the discharge end portion of the baling-chamber and transversely to the length of the said chamber.

In the drawings, A represents a rectangular frame mounted upon suitable wheels or trucks. Midway the length of the frame A is arranged a hopper B, which opens downwardly into a baling-chamber extending substantially to the rear end of the frame A. On the forward portion of the frame is arranged a toggle-joint-actuated plunger C and mechanism adapted to reciprocate the said plunger. This plunger has an arm C', extending rearwardly from it, and adjacent its rear end the arm C' forms a bearing for an axle C², journaled in the arm C', and on the axle are journaled wheels or rollers C³, one on each side of the arm C', and these rollers travel on tracks C⁴, supported from the frame A.

Adjacent the rear end of the frame A is transversely journaled on said frame a shaft D, having a cranked portion D' and a drive-wheel D². To the crank portion is pivoted a link E, which is pivoted in turn to a slightly-curved link E'. The link E' is of considerable length, compared with the link E, and midway its length a loop or slot E² is formed. A shaft F is arranged on the frame A parallel to the shaft D, and this shaft passes through the loop or slot E² and carries a flanged roller F', which engages the sides of the loop or slot E², and it is obvious that the roller F' forms an antifriction-roller for the link E' to travel on. At its lower end the link E' is pivotally connected to the middle portion of the toggle-joint actuating the plunger, which joint consists of the links G and G', the latter being pivoted to the plunger C.

Adjacent the plunger the frame A carries a vertically-arranged frame H, comprising two standards connected by the bars H'. In the hopper B works vertically a feeder-board H², connected to the bars H' by pivoted arms H³, and a spring H⁴ is secured at one end to the upper bar H' and at its opposite end to the lower arm H³. The lower arm H³ is also pivotally connected intermediate its ends to the rear end of the arm C' by means of the link or bar H⁵, whereby the reciprocation of the plunger C and its arm C' actuates the feeder-board H².

In Fig. 3 I have shown the manner of dropping the blocks inserted in the baling-chamber when a sufficient amount of hay has been compressed to make one bale. The baling-chamber B' is in communication with the hopper B through the feed-opening B², on one side of which the hopper-walls are cut away and a feed-table B³ is arranged. The opposite wall of the hopper is also cut out, as shown at B⁴, and in this cut-out portion B⁴ is hinged the block-holder J. This block-holder J is adapted to receive the blocks J' and to be swung forwardly over the feed-opening B², dropping the block J' into the said opening, the block-holder being open on opposite sides. A handle J² is pivotally connected to the block-holder, and by means of this handle the block-holder

may be readily swung downward to drop a block or swung into a vertical position to receive a new block.

When a bale of hay has been pressed, the operator at the feed-table by means of the lever or handle J^2 swings the block-holder over the feed-opening and the feeder-board H^2 feeds the block into position when the plunger presses it up against the hay, and the block-holder J is returned to its normal position for another block to be inserted therein. To prevent the block from being dropped too soon, a spring J^3 is arranged within the block-holder, which engages and holds the block until it is forced out by the feeder-board H^2 .

Referring again to Fig. 2, it will be noted that the operation of the plunger-actuating mechanism is as follows: When the crank portion D' reaches the highest point during its rotation, the link E , pivoted thereto, is in such a position that it moves with the crank portion D' for a short distance, thus making the first portion of the plunger-stroke a rapid movement. During this portion of the stroke the plunger is working against loose hay and has but little work to do; but during the latter part of the stroke the hay has been compressed, and the construction shown is such that during the last portion of the stroke the link E' swings upon the roller F' with the said roller as a fulcrum-point and the cranked portion D' is kept on center, thus making the load on the engine much less and giving a powerful pressure at the time when it is most desired. This construction also allows for a very quick return of the plunger and also permits the feeder, which is actuated by movement of the plunger, to remain momentarily stationary while at its highest point—that is, while the cranked portion D' is passing over center—

thus giving the operator time to place a large charge of hay under the feeder-board H^2 , and thus increasing the capacity of the machine.

It is thought that the advantages of this construction will be obvious to those skilled in the art to which it relates.

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

1. The combination with the plunger of a baling-press, of a shaft having a cranked portion, a toggle pivoted at one end to the plunger, a link having a loop portion and adapted to work upon a fulcrum-point the said link being pivoted at one end to the toggle, and a link connecting the opposite end of the link having the loop portion to the cranked portion of the shaft.

2. A hay-press comprising a plunger, a toggle, a shaft having a cranked portion, a link pivoted to said cranked portion, a shaft parallel to the crank-shaft, a roller on said shaft, a link having a loop portion adapted to travel on the said roller, said link being pivoted to the link connected to the crank-shaft and to the toggle.

3. The combination with a hay-press hopper having a cut-out portion on one side, of a block-holder open on opposite sides and hinged to the lower edge of said cut-out portion, a spring in the said block-holder adapted to engage a block, and means for swinging the block-holder through the cut-out portion of the hopper into the path of a feeder-board, as and for the purpose set forth.

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Witnesses:

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