

(No Model.)

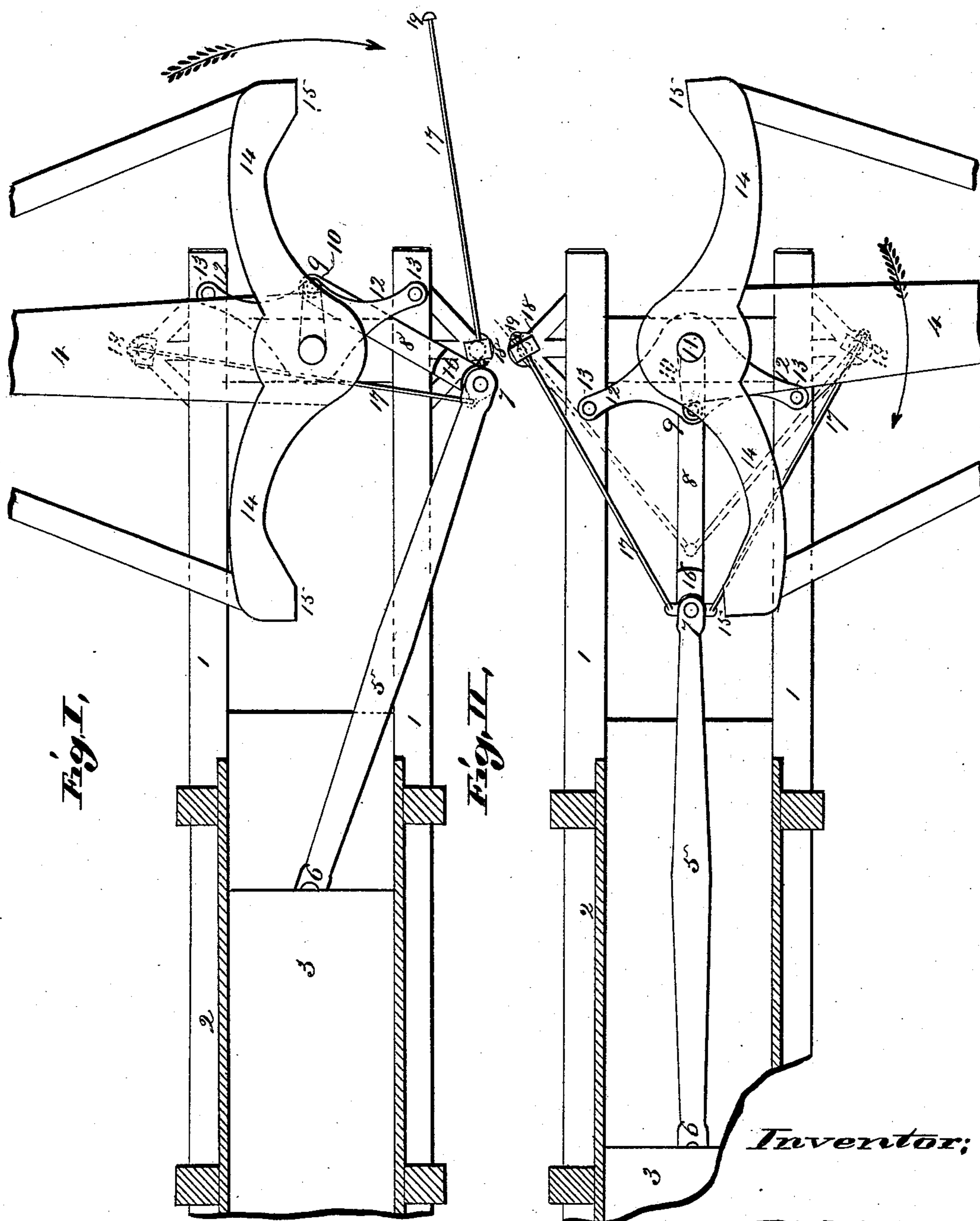
2 Sheets—Sheet. 1.

C. E. WHITMAN.

BALING PRESS.

No. 363,928.

Patented May 31, 1887.



Attest:
Emma Arthur.
Geo. L. Wheelock.

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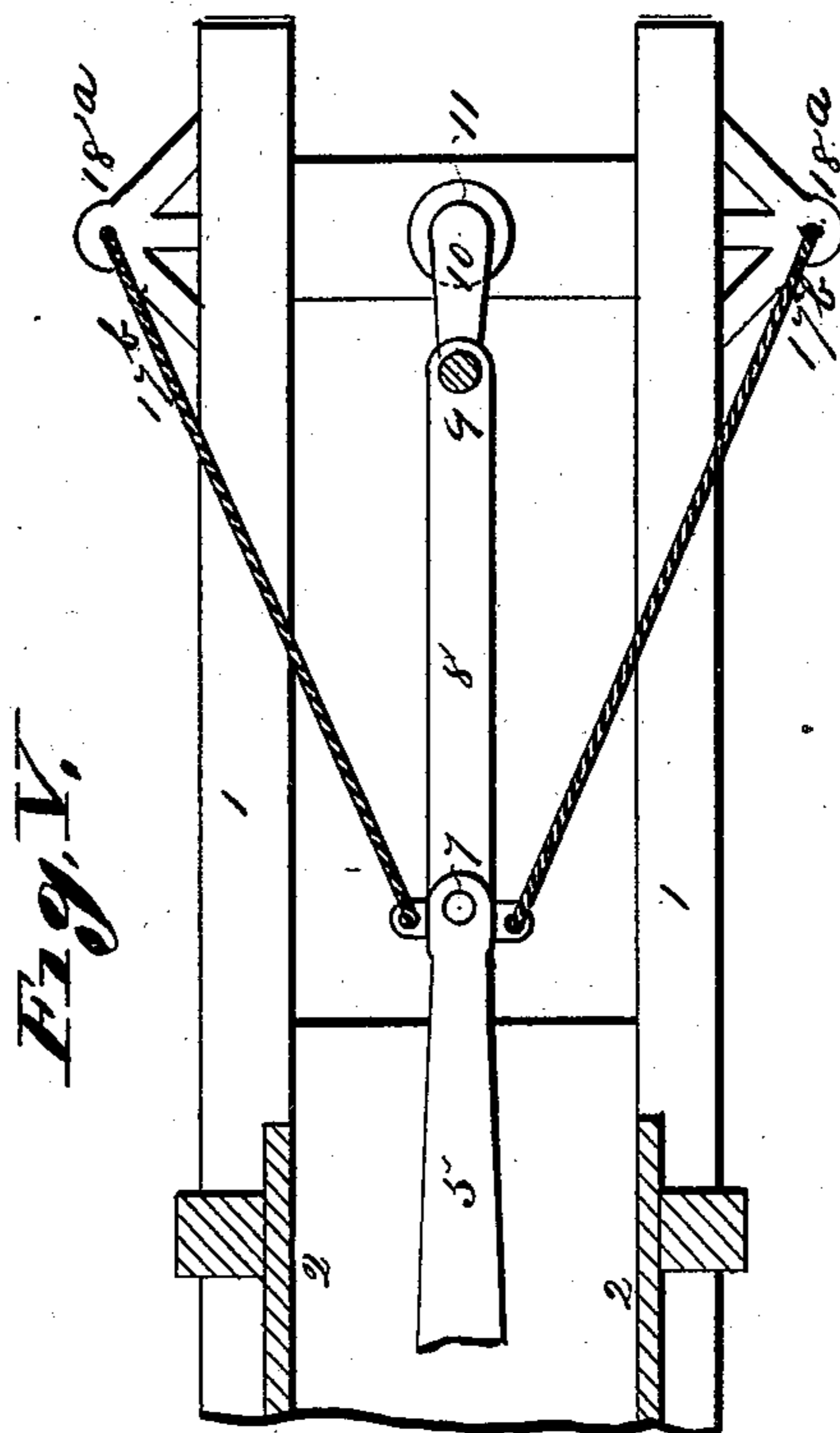
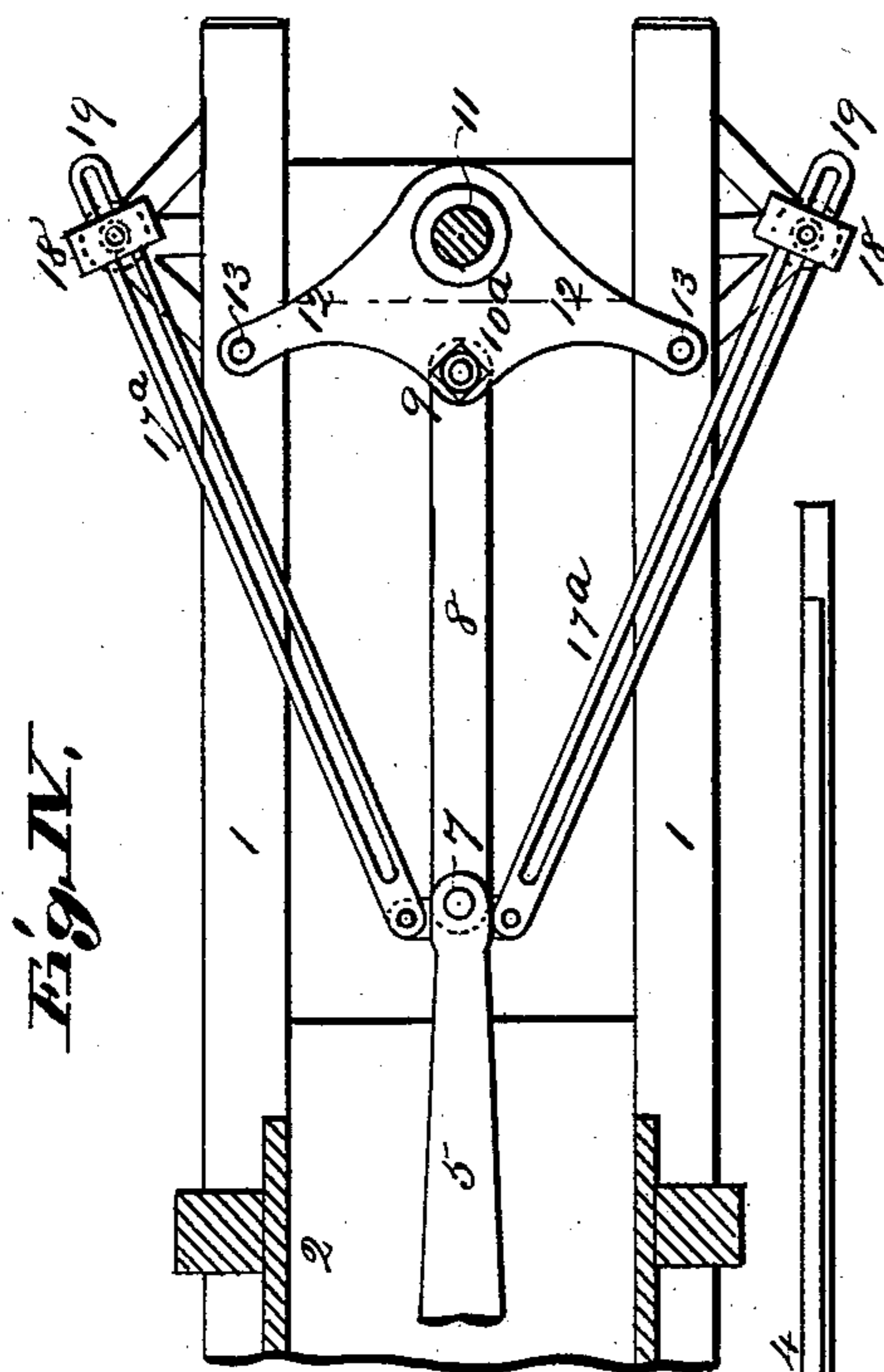
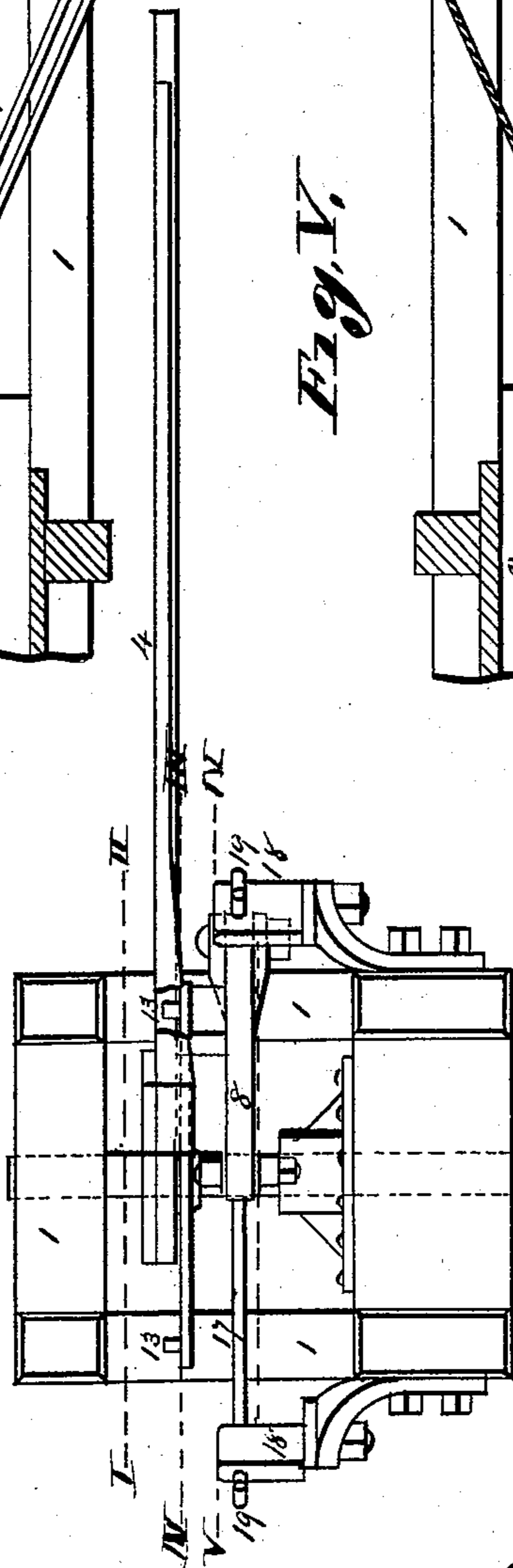


Fig. III.



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UNITED STATES PATENT OFFICE.

CHARLES E. WHITMAN, OF ST. LOUIS, MISSOURI.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 363,928, dated May 31, 1887.

Application filed January 15, 1887. Serial No. 224,448. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. WHITMAN, of the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements 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, and in which—

Figure I is a horizontal longitudinal section at I I, Fig. III, showing in top view that part of the baling-press to which my invention applies. Fig. II is a similar view, except that the parts are shown in a different position. Fig. III is an end view of the press as seen in Fig. I. Figs. IV and V are horizontal sections, illustrating in top view modifications of the device.

This invention applies to that class of baling-presses classed as having reversible rebound plungers or traversers, and it is an improvement on the class of devices described in the specifications of applications for patents filed in the Patent Office by myself December 30, 1886, (Serial No. 223,024,) and H. L. Whitman, January 3, 1887, (Serial No. 223,250.) In the devices shown and described in said applications, as in the one here shown and described, the traverser has a long throw, while the actuating-crank or equivalent actuating device is short or has a small throw.

In the present improvement the traverser is moved forward by power applied to the end of a sweep.

No novelty is claimed in the main frame 1, the box 2, traverser 3, or in the sweep 4, except in as far as the sweep is constructed to act on the novel parts between the sweep and the traverser.

5 is a pitman or connecting rod, which is hinged to the traverser at 6 and connected at the other end by a hinge, 7, to a connecting rod or link, 8, whose other end, 9, is strapped to the crank 10. The crank-shaft 11 has journal-bearings in the frame, and carries arms 12, having at their ends standing projections 13, against which the central bar of the sweep acts to swing the crank from side to side. The sweep turns freely on the crank-shaft. The sweep has arms 14, whose ends 15 are formed to impinge against either the link 8 or a pro-

jection, 16, upon the link. The projection 16, against which the arms 14 act, is shown close to the joint or hinge 7; but the parts 15 of the arms may act against a projection on any part of the link, or against any part of the link itself. The purpose is to push the hinge 7 past the dead-center as the sweep attains either of its extreme positions. When the hinge passes its dead-center, the pressure of the hay against the end of the traverser throws it violently backward and opens the space in the box for a fresh supply of hay.

The transverse movement of the hinge 7 is limited by ties 17, one upon each side, which are shown connected at one end to the hinge 7, and also to heads or studs 18 upon the main frame. In Figs. I, II, and III the ties are shown as round rods passing freely through holes in the pivoted studs 18, and having heads 19, preventing their withdrawal from the holes. In Fig. IV the ties are shown as flat bars 17^a, slotted from end to end, so that they may work longitudinally on the studs 18. In Fig. V the ties are shown as flexible ropes or cables 17^b, connected to the joint 7 at one of their ends, and to the main frame, or, rather, brackets 18^a thereon, at the other ends. As they act as simple ties, they would perform a precisely similar function in either form.

In the modification shown in Fig. IV the arms 12 are upon a plate or head which is attached to or oscillates on a straight shaft or arbor, 11. The head or plate has an extension, 10^a, which takes the place of the crank 10, and to which the end of the link 8 is hinged. The sweep in this case would be similar to that shown in Figs. I, II, and III, and would turn on the shaft or arbor 11 in like manner.

In Fig. V the arms 12 and the sweep are removed. These parts are similar to those shown in Figs. I, II, and III.

It will be evident that with a very small throw of the crank a very considerable throw of the traverser is had, and also a free throw-back movement of the traverser. It will also be seen that this is accomplished without decreasing the power exerted on the traverser when it is about reaching its most advanced position, because then the crank 10, link 8, and pitman 5 are almost in a straight line, and so in a position to exert the utmost power upon

the traverser as the transverse pressure is had by the arms of the sweep upon the link 8 at or in proximity to the hinge 7.

In Fig. I the traverser is shown in its retracted position, while in Fig. II it is shown in its most advanced position, when a slight movement of the sweep in the direction of the arrow would carry the joint 7 past the dead-center, when the traverser would fly backward.

I have shown the ties 17 in three forms. It is obvious that other forms might be used to perform the essential function—namely, to govern the transverse movement of the hinge 7.

The studs 18, as shown in Fig. I, limit the backward movement of the hinge 7, and consequently of the traverser; but any other suitable stop may be used for this purpose.

I have shown a crank, 10, to which one end of the link 8 is connected, and by which it is actuated. In place of the crank 10, an eccentric or any well-known or suitable mechanical equivalent may be used, as shown in my application referred to.

I have shown and described the ties 17 as working through the studs 18; but it is obvious that the ties might be fixed to the studs 18 and work through their connection at the joint 7.

Chains or other flexible equivalent may be used in place of the cords shown in Fig. V.

I claim as my invention—

1. The combination, with the traverser,

pitman, and actuating sweep of a baling-press, of a crank connected to the pitman by a rod or link and having arms against which the sweep impinges, for the purpose set forth.

2. The combination of the crank 10, with arms 12 secured thereto, the pitman connected to the traverser and connected by a link to the crank, and the sweep constructed to act on the arms 12 and on the link, substantially as and for the purpose set forth.

3. The combination of the pitman connected to the traverser and connected by a link to the crank, arms upon the crank, a sweep constructed to act on the crank-arms 12 and the link, substantially as set forth, and the ties 17, for the purpose set forth.

4. In a baling-press, in combination with the traverser and means for imparting movement to the traverser, a jointed connection between the traverser and said means, and means securing the jointed connection to the frame of the press on each side, substantially as and for the purpose set forth.

5. In a baling-press, the combination of the traverser, pitman, and link connecting the traverser to means for imparting power to the traverser, and means connecting the pitman and link to a fixed object on each side, substantially as and for the purpose set forth.

CHARLES E. WHITMAN.

In presence of—

SAML. KNIGHT,

EDW. S. KNIGHT.