

(No Model.)

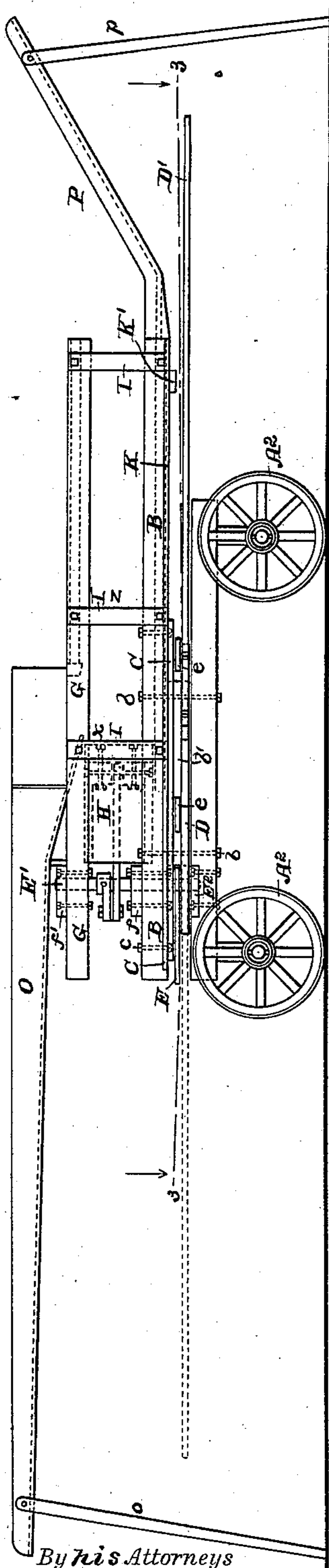
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J. LA DOW.
BALING PRESS.

No. 365,524.

Patented June 28, 1887.

Fig. 1.



WITNESSES

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By his Attorneys

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Baldwin, Hopkins & Keaton

(No Model.)

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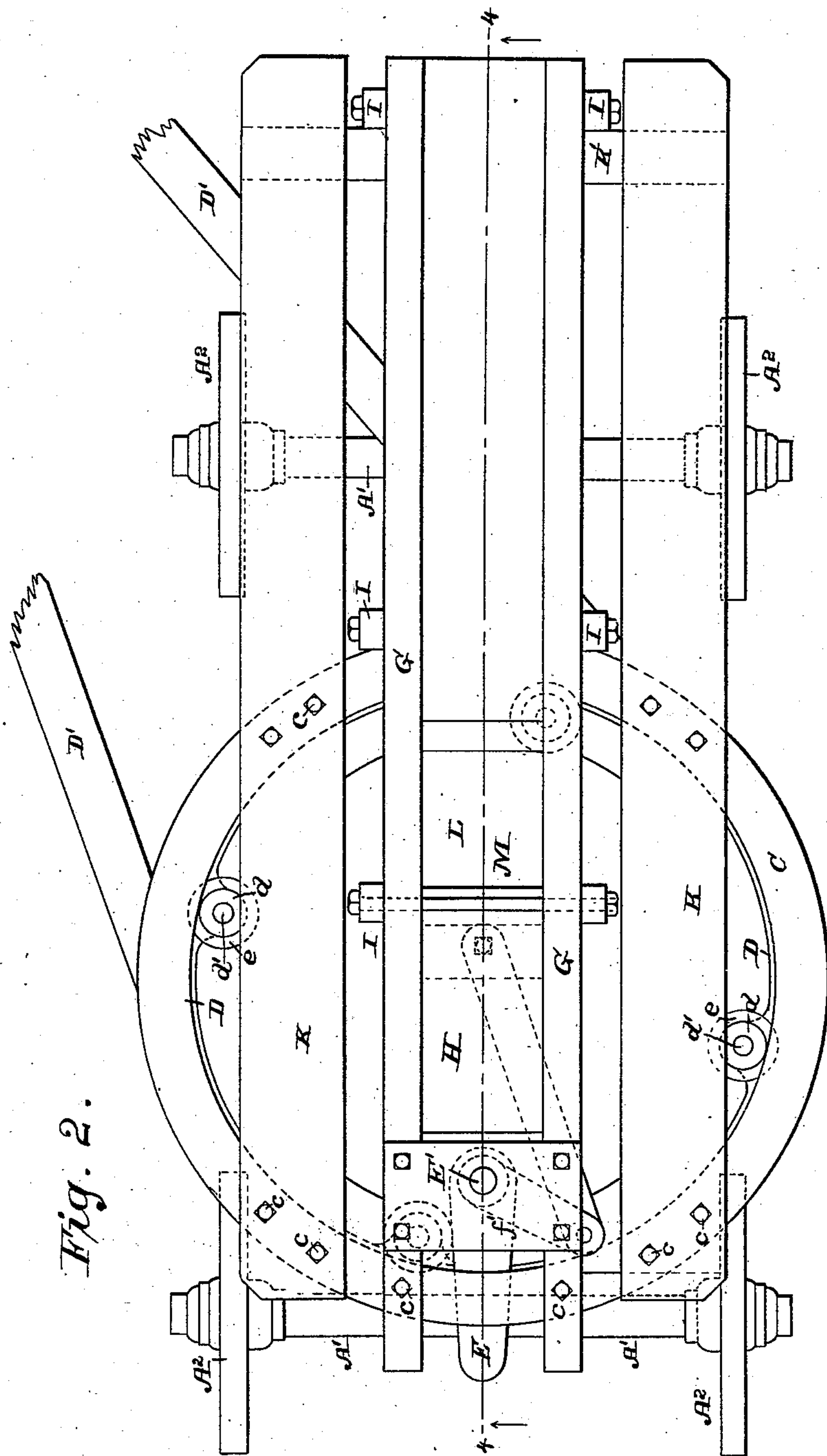


Fig. 2.

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(No Model.)

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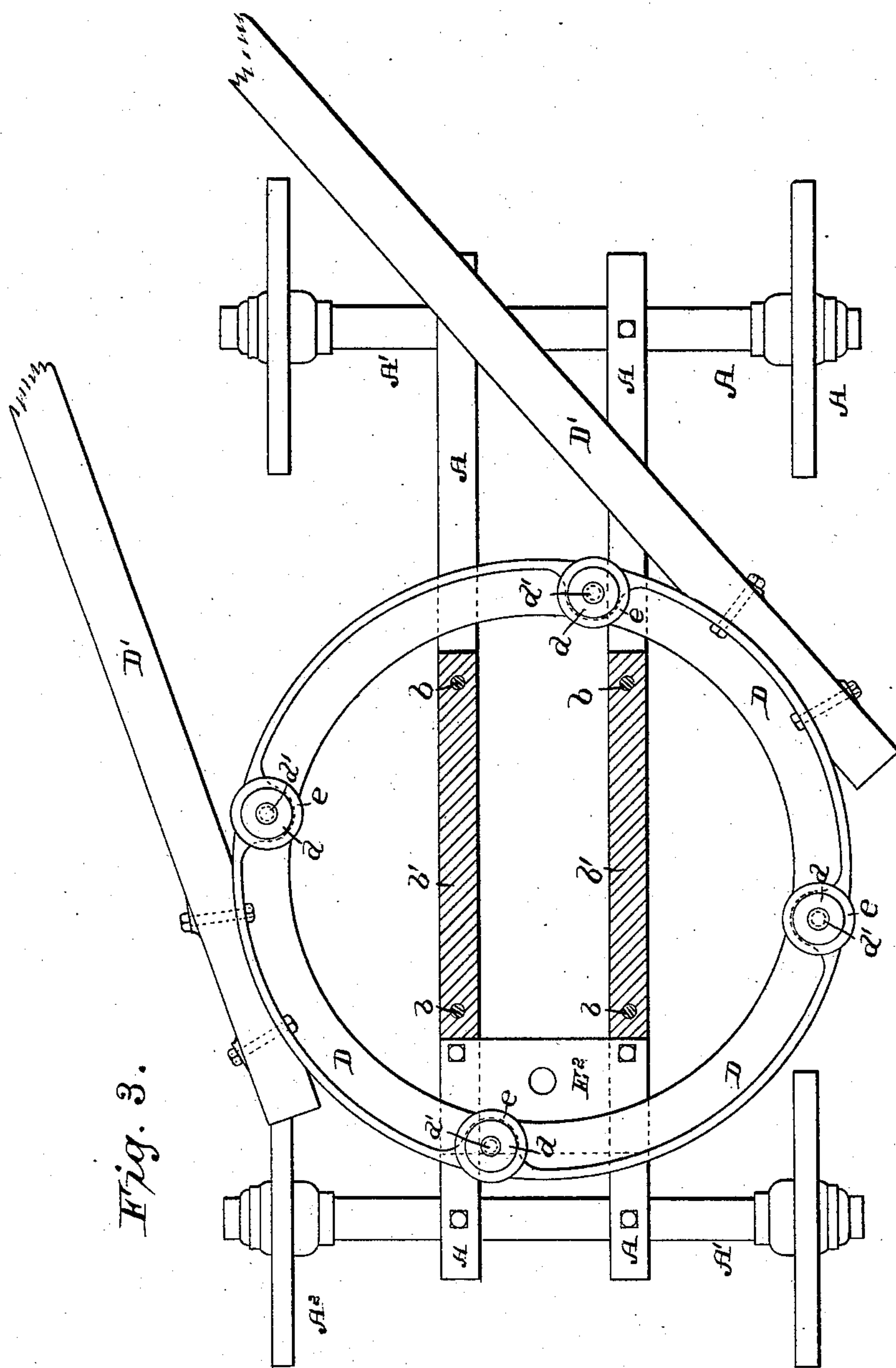


Fig. 3.

WITNESSES

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(No Model.)

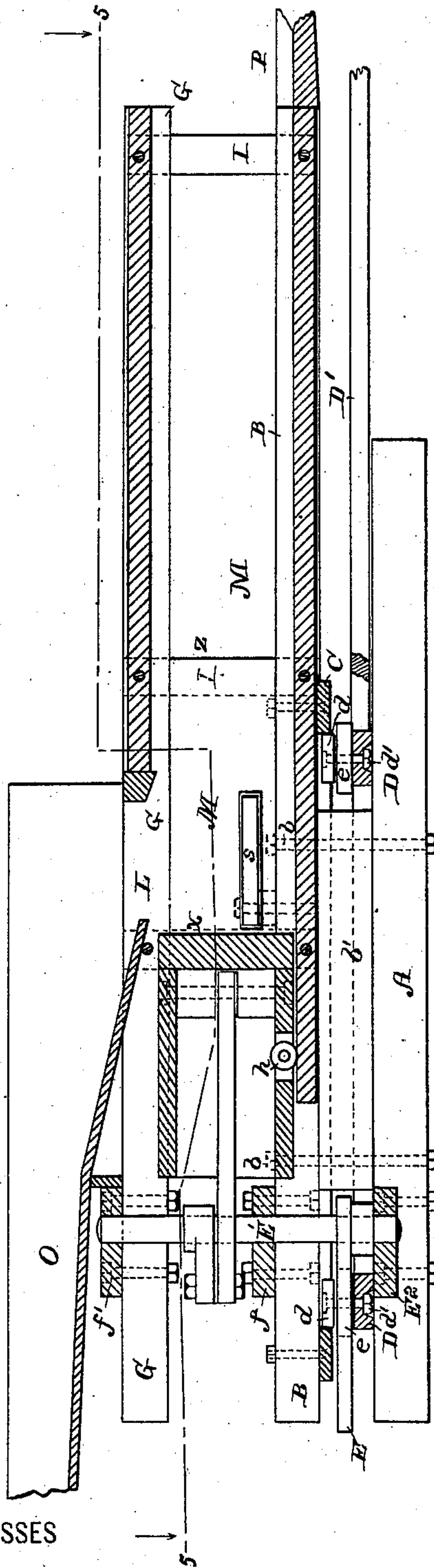
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Fig. 4.



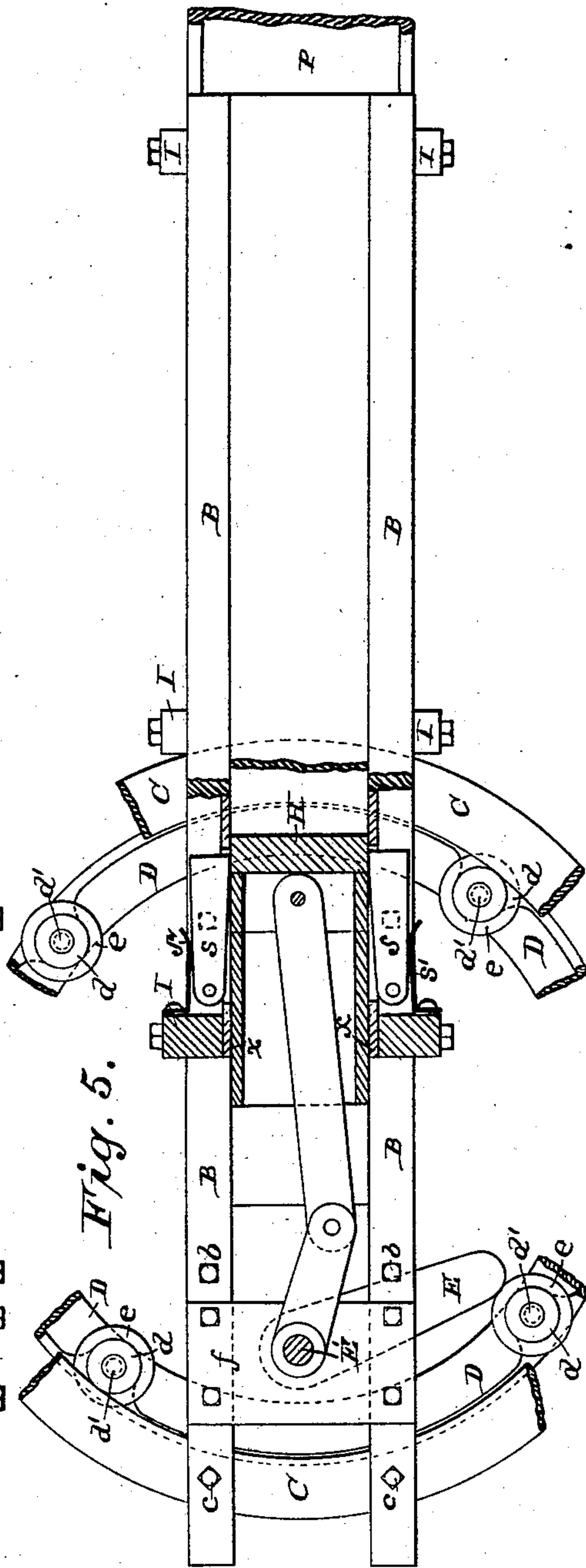
WITNESSES

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Fig. 5.



INVENTOR

John La Dow,

UNITED STATES PATENT OFFICE.

JOHN LA DOW, OF DENVER, COLORADO.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 365,524, dated June 28, 1887.

Application filed March 31, 1887. Serial No. 233,205. (No model.)

To all whom it may concern:

Be it known that I, JOHN LA DOW, of Denver, Arapahoe county, Colorado, have invented certain new and useful Improvements in Baling-Presses, of which the following is a specification.

The object of my invention is to provide a portable horizontal horse-power baling-press of improved simplified construction so arranged that the team may travel around the vehicle or press while operating it. With this primary object in view, I effect the feeding of the hay or straw, whatever it may be, to the press on a level above the team by means of a suitable feed chute or platform, and also may take the bales from the press on a level above the team by a suitable feed-discharge way or platform. By such a construction the press may be continuously operated, and no detention or delay arises from the feeding of the press or discharge of the bales.

Other features of novelty exist in my improved machine, as will appear from the following specification and claims.

In the accompanying drawings, Figure 1 is a side elevation of the machine; Fig. 2, a plan view with the feed and discharge platforms removed and with the draft-poles or sweeps broken away. Fig. 3 is a horizontal sectional view on the line 3 3 of Fig. 1; Fig. 4, a vertical longitudinal sectional view on the line 4 4 of Fig. 2; and Fig. 5, a detail view, partly in section, on the line 5 5 of Fig. 4, and partly broken away, illustrating the manner in which the press-head or plunger is operated.

The sub or main frame is composed of parallel bars or sills A A, supported on axles A', having carrying-wheels A². The upper parallel sills, B, are bolted to the sills A A by bolts b, which pass through the sills and through interposed blocks b', as seen in Fig. 4 and as shown by the section-lines in Fig. 3. On the under face of the upper sills, B, and surrounding the interposed blocks b', an annular track or bearing, C, is secured by bolts c.

The revolving press-driving ring D, with which the sweeps or draft-poles D' are connected, as shown in Fig. 3, rests upon the face of the sub sills A, and is arranged concentrically with reference to the circular-track or guideway C, in which the rotating power-

ring has its bearing in the following manner: Several anti-friction rollers, d—four being shown arranged at equal intervals on the ring D—are carried by short stud axles or bolts d', the lower heads of which next to the sills A are countersunk into the under face of the ring. These rollers d bear and run upon the inner face of the bearing ring or track C, as seen clearly in Figs. 4 and 5.

In addition to the small bearing-rollers d, the same pins or bolts d' also carry press-driving rollers e, which, as the power-ring D is rotated, successively strike against a crank-arm, E, fast upon a vertical spindle, E', which has its bearings in a plate, E², bolted to the sub-sills A, and also has its bearings in a cross-piece, f, bolted to the upper sills, B, and also on a similar cross-piece, f', which connects the upper parallel frame-beams, G, as seen in Fig. 2.

The spindle E' carries a crank above the upper sills, B, which crank is connected by a pitman with the plunger or press-head H. As the driving-ring D is therefore rotated by the team, which may travel around the vehicle, as can be clearly understood from Fig. 1, the crank-arm E is successively struck by the rollers e and the plunger driven forward. In Fig. 4 the plunger is shown as drawn back to its farthest extent, while in Fig. 5 it is pushed forward to about its farthest limit.

The plunger H is of the ordinary construction, having rearwardly-projecting flanges on all four sides, and is provided with a roller, h, which travels upon the floor of the baling-frame. The baling-chamber is formed by the upper sills, B, and upper parallel frame-bars, G G, the space between the sills B B being inclosed by suitable flooring, and that between the upper bars, G G, by a suitable cover.

The sides of the baling-chamber from the point z to the discharge end may be left open, if desired, to afford ready access to the bales for tying.

The sills B B and upper bars, G G, are connected on each side at three or more points by vertical side bars, I, so that a compact, light structure is obtained. Foot-boards K are arranged alongside of the baling-chamber, being supported upon the bearing-ring C, and also at the delivery end of the press upon a

transverse beam, K', bolted to the under side of the sills B. B. That part of the baling-chamber in which the loose hay is delivered is closed at the sides. For instance, referring to Fig. 4, the side walls of the chamber extend from *x*—that is, from the rear face of the plunger, in the position in which it stands in the figure—to *z*, and from there the sides of the baling-chamber are open.

The feed-aperture L is arranged at the top of the closed or baling chamber proper, M. The feed-platform O is supported at one end upon the press in suitable relation to the feed-aperture L, as seen clearly in Figs. 4 and 1, and at the outer end is supported by folding legs *o*. The platform P, for the delivery of the bales from the press, projects from the opposite end of the machine, forming an upwardly-inclined continuation of the floor of the baling-chamber, and is supported by folding legs *p*. The delivery-platform P is supported at the end of the baling-chamber, and may be readily connected and disconnected therefrom by ordinary hook or interlocking connections of any kind. The feed-platform is also readily removable, so that the machine may in a very few moments be set up for operation, and with equal facility be arranged for transportation.

The operation of the apparatus is as follows: The hay or other material to be baled being delivered over the platform into the aperture L and the sweeps D' carried around by the team, the rollers *e* will successively strike the crank-arm E and carry it around into the position indicated in Fig. 5, so as to throw the plunger forward. When the crank-arm E passes out of engagement with the rollers *e*, the recoil of the pressed hay tends to throw the plunger back into the position indicated in Fig. 4, and additional charges of hay being delivered through the feed-aperture L, a bale of the proper character is formed, and being suitably tied is pushed rearward into the extended open sided end of the baling-chamber, and as successive bales are formed in the same way they are gradually driven rearward by the plunger and delivered out over the end of the bale-delivery platform P over the heads of the team.

Pivoted catches *s* work through slits or apertures in the sides of the press-chamber M. (See Figs. 4 and 5.) These catches may be pivoted upon blocks arranged upon the sills B, and have springs *s'*, which normally tend to press them through the sides of the baling-chamber. As the plunger moves forward, the catches are of course forced outwardly, and as the plunger returns their sharp corners enter the chamber and catch the hay at the sides of the chamber and prevent it from following the plunger back too far.

With this construction I am enabled to continuously drive the team, feed the hay, and deliver the bales in a practical and convenient manner. The feeder stands upon the platform O. The other attendant or attendants in

charge of the baling stand upon the foot-boards K, which are, as is of course understood, arranged above the travel of the sweep, and are in convenient position to attend to the tying and delivery of the bales.

Any of the ordinary abutment-heads or follower-boards, as now commonly used in perpetual presses, may be employed in my improved machine. As this portion of the press forms no part of my invention and is not dependent upon any special form of abutment-head, I have not thought it necessary to illustrate or describe it.

I have illustrated my machine as organized in a practical and suitable manner for carrying out the invention; but obviously its structure may be varied without departing from the spirit of my invention.

I claim as my invention—

1. The combination, substantially as set forth, of a horizontal horse-power press, a hay-feed platform arranged to deliver the hay over the heads of the team, and a bale-delivery platform arranged to deliver the bales from the machine over the heads of the team.

2. The combination, substantially as set forth, of a horizontal horse power baling-press and an inclined feed-platform arranged at an elevation above the heads of the team, resting at one end upon the press and having a support for holding up its outer end, whereby the press may be continuously fed without interrupting the working of the machine.

3. The combination of a horizontal horse-power press, its baling-chamber, the bale-delivery platform forming a continuation of the baling-chamber and adapted to deliver bales from the machine over the heads of the team, and a support for sustaining the outer end of the bale-delivery platform.

4. The combination of a horizontal horse-power press, its driving mechanism and sweep arranged below the baling-chamber, and foot-boards for the accommodation of the attendants arranged on the side or sides of the baling-chamber above the line of travel of the sweep, substantially as set forth.

5. The combination of a horizontal horse-power press, a feed-platform which delivers the material to the press over the heads of the team, a foot board or boards arranged at the side of the baling-chamber for the accommodation of the attendant, the press-sweep which rotates below the level of the foot-board, the baling-chamber, and the bale-delivery platform which delivers the bales from the machine over the heads of the team.

6. The combination of the sub-sills A, the upper sills, B, the bearing-ring C, interposed between the upper and lower sills, the power-ring D, arranged to rotate within the bearing-ring, the power-rollers *e*, arranged on the power-ring, and crank-driving mechanism interposed between the power driving ring and the plunger of the press, whereby as the sweep is carried around by the team the crank

plunger-actuating mechanism is successively operated upon by the rollers *e*, substantially as set forth.

7. The combination of the sub-sills A A, the 5 upper sills, B, the blocks or separating devices *b'*, interposed between the sills A and B, for maintaining proper space between them, a power-ring which revolves in suitable bearings between the upper and lower sills, A and 10 B, and around the interposed spacing-pieces *b'*, driving mechanism connected with the power-ring, the press-plunger, and mechanism interposed between the plunger and the power ring, whereby the plunger is operated as the ring is 15 rotated by the team.

8. In a horizontal horse-power press, the combination of a power-ring, mechanism interposed between the power-ring and plunger, by means of which the plunger is operated, a 20 bearing-ring, in which the power-ring rotates, the baling-chamber, and a foot board or boards supported by the bearing-ring and arranged alongside of the baling-chamber, substantially as and for the purpose set forth.

9. The combination of the sub-sills A, the 25 upper sills, B, the interposed power ring, rollers or projections upon the ring, a crank-arm, E, which is struck by said rollers or projections as the power-ring is rotated, the spindle with which the arm E is connected, and a crank- 30 connection between the press-plunger and said spindle arranged above the sills B, substantially as set forth.

10. The combination of a horizontal horse-power baling-press, its baling-chamber, and the 35 bale-delivery extension of the baling-chamber, which extension is inclined upwardly, as illustrated, and is adapted to deliver bales from the machine over the heads of the team.

In testimony whereof I affix my signature in 40 presence of two witnesses.

JOHN LA DOW.

Witnesses:

O. E. ADAMS,
B. BERBOWER.