

(Model.)

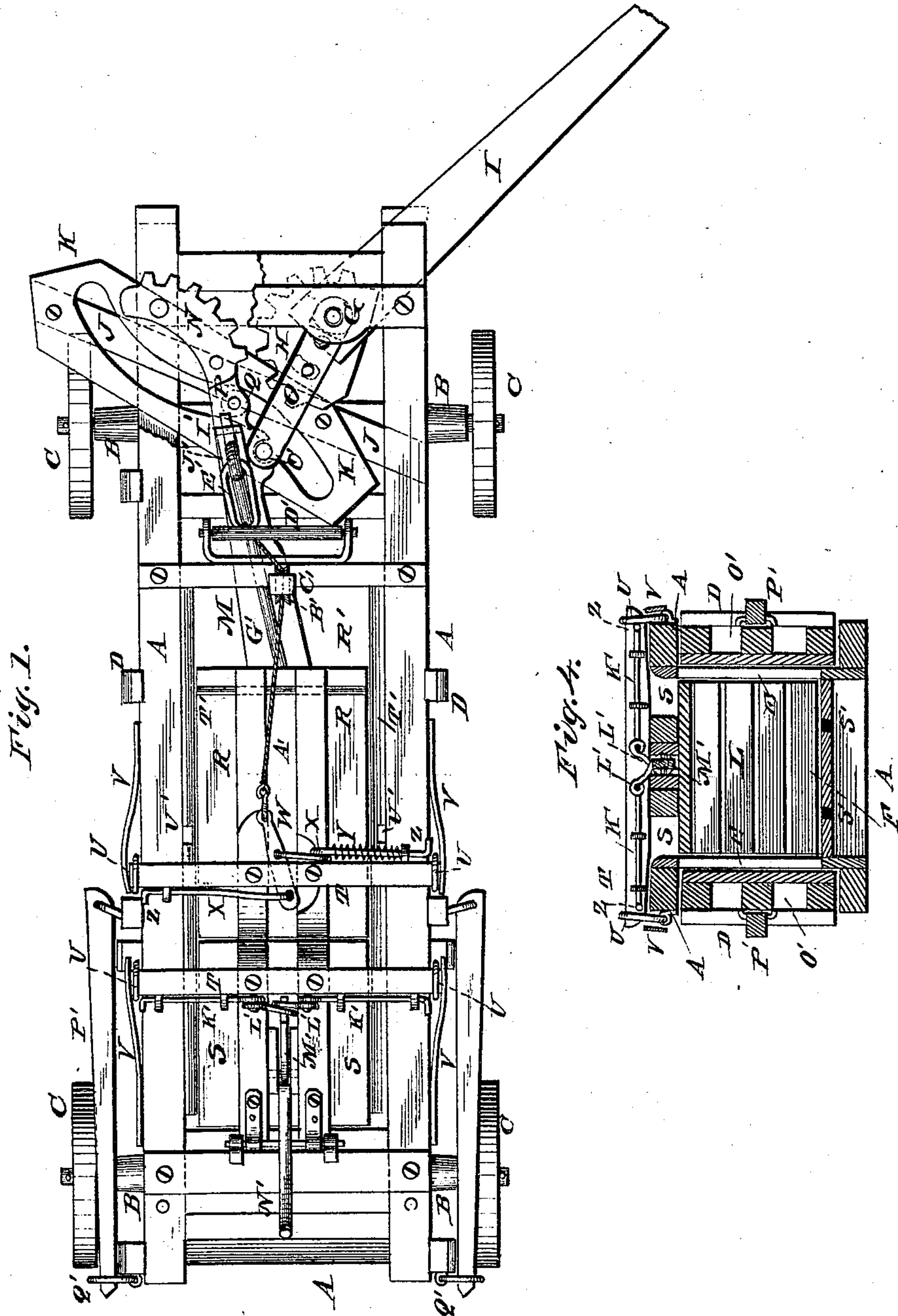
3 Sheets—Sheet 1.

W. J. H. KAPPE.

HAY PRESS.

No. 250,445.

Patented Dec. 6, 1881.



WITNESSES

Ad. L. Dietrich
D. Dietrich

By his Attorneys

INVENTOR
Wm. J. H. Kappel
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(Model.)

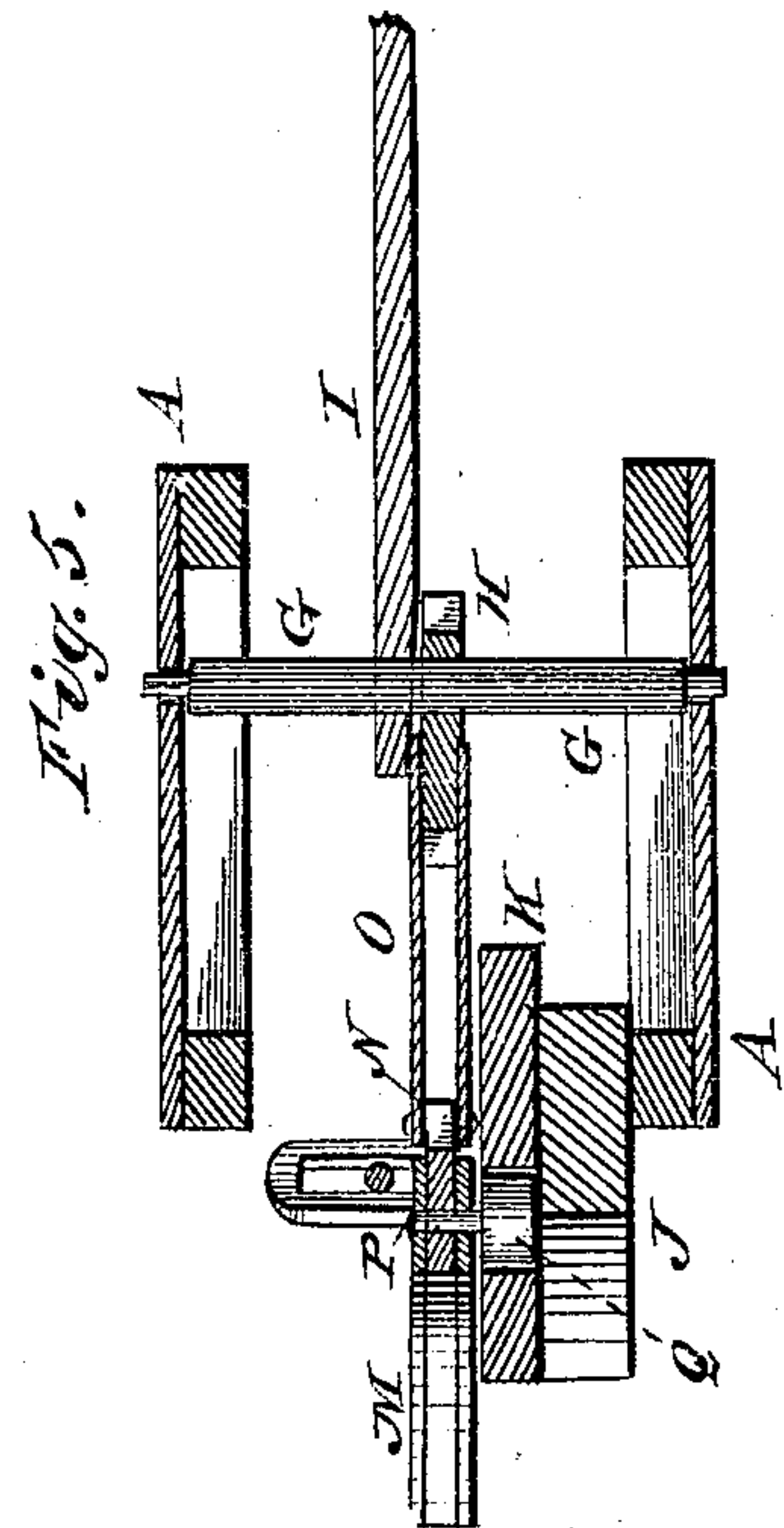
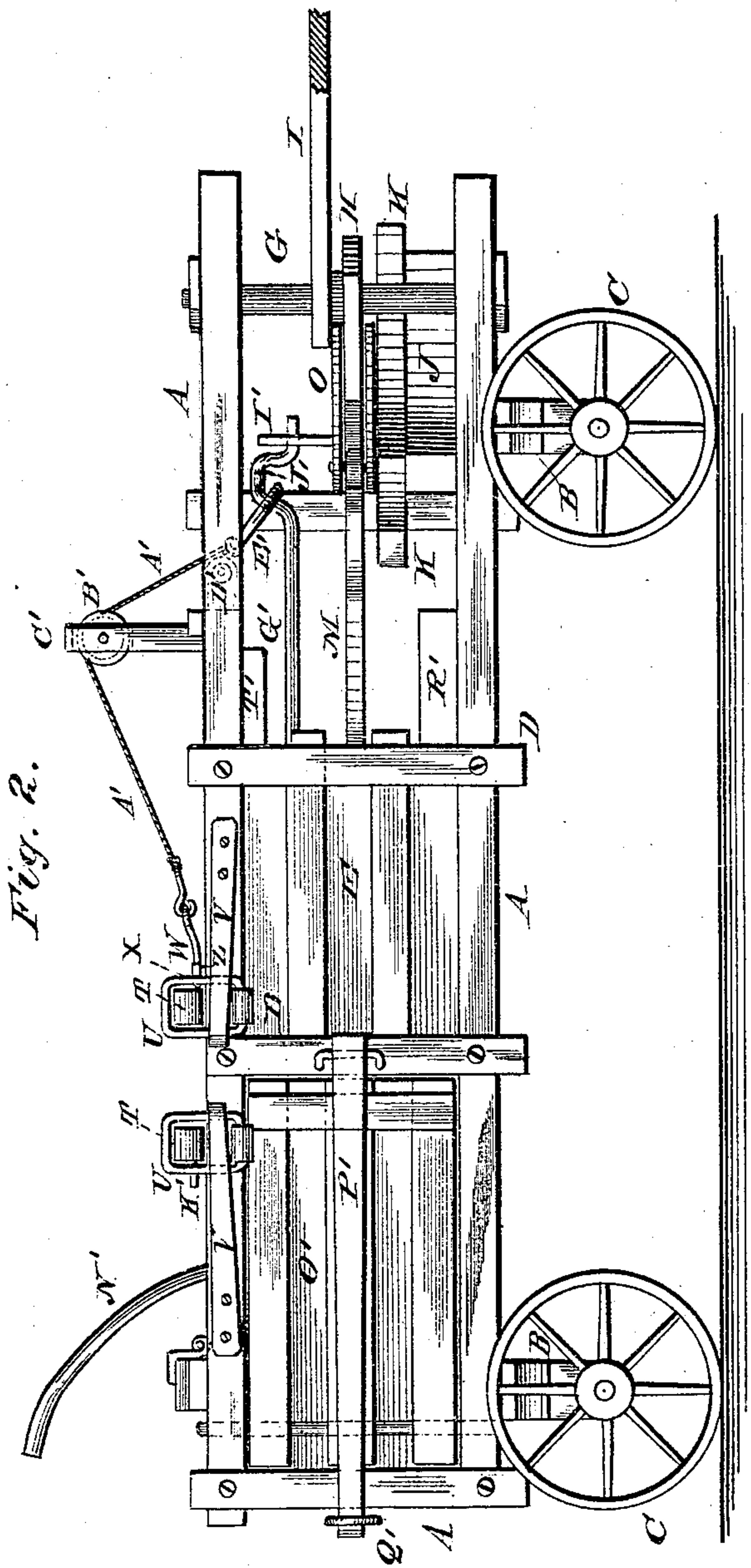
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WITNESSES

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(Model.)

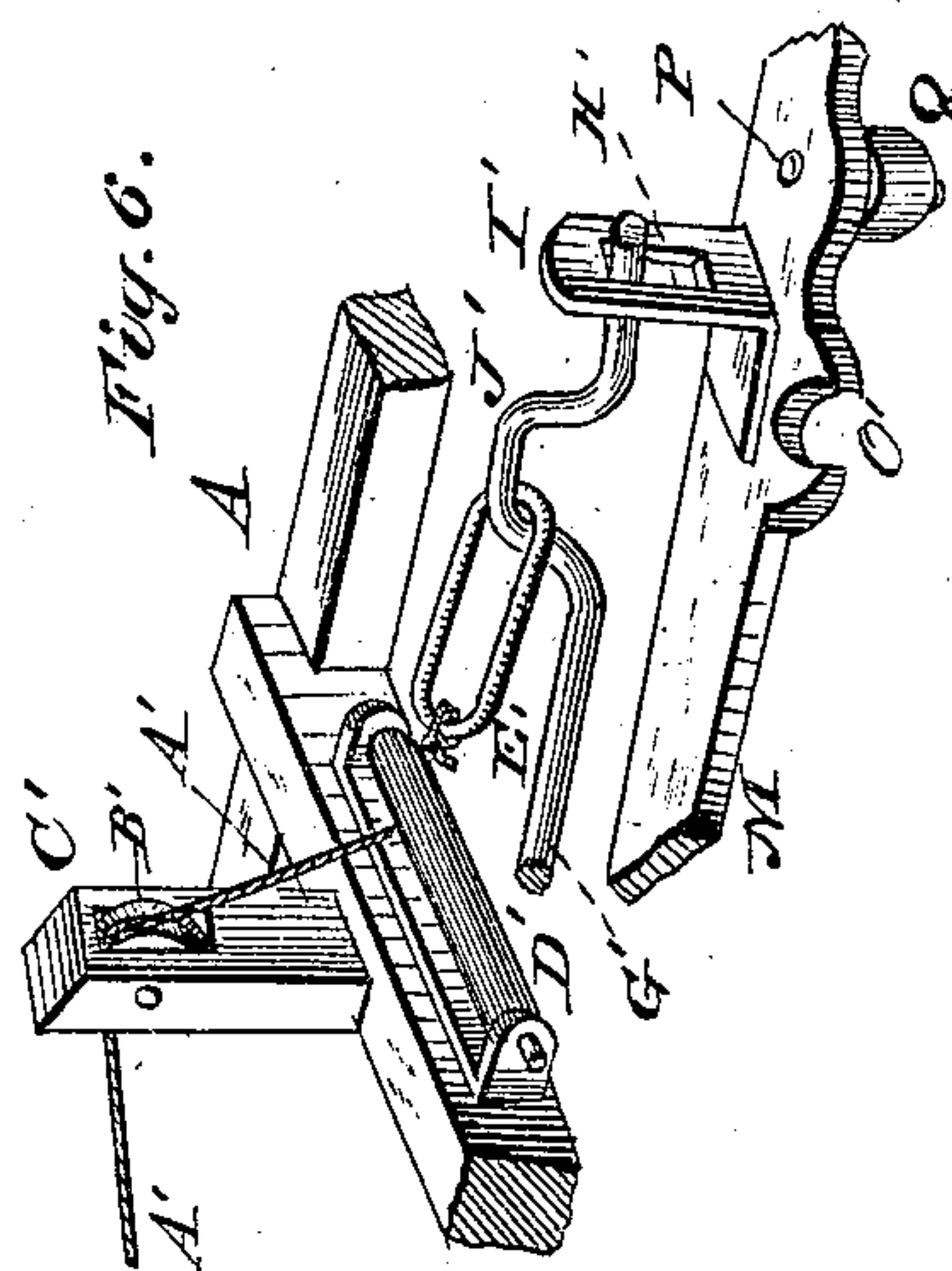
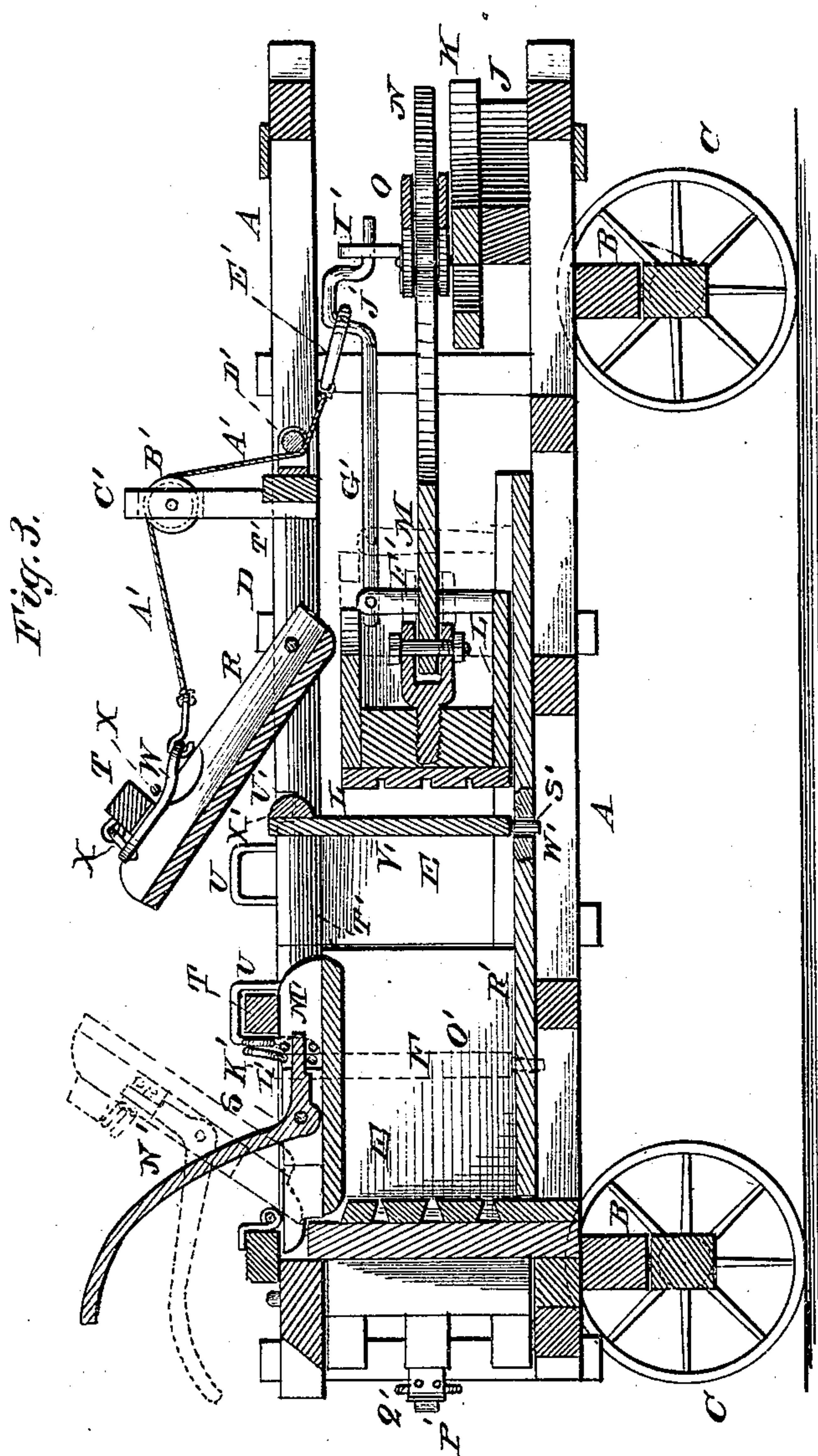
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UNITED STATES PATENT OFFICE.

WILLIAM J. H. KAPPE, OF QUINCY, ILLINOIS.

HAY-PRESS.

SPECIFICATION forming part of Letters Patent No. 250,445, dated December 6, 1881.

Application filed March 26, 1881. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM J. H. KAPPE, of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Hay-Presses; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a plan view. Fig. 2 is a side view. Fig. 3 is a longitudinal sectional view. Fig. 4 is a vertical cross-section through the baling-chamber proper. Fig. 5 is a vertical cross-section taken through the shaft of the main lever, eccentric rack, and guide; and Fig. 6 is a detail view, in perspective, of the automatic device for opening the main cover of the baling-chamber.

Corresponding parts in the several figures are denoted by like letters of reference.

This invention relates to hay-presses; and it consists in certain improvements in the construction of the same, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A represents a frame mounted upon cross-bars or axles B B, having wheels C C, upon which the machine may be transported from place to place. The sides of the frame A are provided with uprights D D confining the sides E of the baling-chamber F.

A vertical shaft, G, arranged in suitable bearings near the front end of frame A, carries a horizontal elliptical or cam-shaped rack, H, to which the main lever or sweep I is firmly bolted, or otherwise secured, as shown. A diagonal cross-bar, J, arranged upon the frame, just behind the shaft G, carries a grooved guide-board, K, the function of which will be understood from the following:

Sliding longitudinally in the baling-chamber F is the follower L, to the rear end of which is pivoted a pitman, M, the outer end of which is curved, as shown, and provided with a rack, N.

To the cam-shaped rack H are bolted, or oth-

erwise secured, a pair of arms, O, connected at their free ends by a lug or bolt carrying a roller, which engages a recess, O', in the pitman for withdrawing the follower from the baling-chamber. The bolt P, secured to the pitman, carries at its lower end a guide-roller or caster, Q, traveling in the grooved guide-board K, thus holding the pitman properly to work, as shown.

R S are covers hinged to the top of the baling-chamber and facing each other, as shown. Each cover is provided with a cross-bar, T, extending beyond the sides of the baling-chamber and held down, when locked, by means of loops or clasps U, pivoted upon the sides of the baling-chamber, and forced in an inward direction by means of suitably-arranged springs V.

To the under side of the cross-bar T of the front cover, R, is pivoted a lever, W, to which, on opposite sides of its fulcrum, are pivoted rods X, forced in an inward direction by means of suitably-arranged springs, Y, and having their ends, which are bent, as at Z, arranged to press against the loops or clasps U.

A cord or chain, A', attached to the rear end of lever W, is passed over a pulley, B', journaled at the top of an upright, C', at the rear end of the baling-chamber. From thence the said cord is passed over a roller or guide, D', and a ring or link, E', is attached to its end, as shown.

The pitman M is provided, near the point at which it is pivoted to the follower L, with an upright, F', to the upper end of which is pivoted a rod, G', the outer end of which travels vertically in a slot, H', in an upright or bracket, I', secured upon the said pitman at a point near its junction with the arm O of cam H.

Upon the rod G', at or near the bracket I', is formed a loop, J', in which the link E' may catch or engage, as shown in the drawings.

To the cross-bar T of the rear cover, S, are pivoted a pair of sliding rods, K', bent at their outer ends, so as to bear against the loops or clasps U, and having their inner ends connected by pivoted rods L' L' to the end of a bell-crank lever, M', having a handle, N', by bearing down upon which the rods K' are pushed apart so as to spread the clasps U, thus

permitting the cover to be opened by bearing down upon the lever-handle.

The sides of the baling-chamber are provided with hinged covers O', opening at the rear end, and capable of being held closed by levers P', held by means of hinged loops or clasps Q'.

The baling-chamber proper is larger at its rear than at its front end, so as to give proper expanding-room to the bale after being tied; but in order to make the bale readily ejected through the side doors, I cause the cover S to project into the enlarged end of the baling-chamber, as shown, so that the bale shall not be likely to expand beyond the limits of the height of the side doors.

The bottom R' of the baling-chamber is provided at suitable intervals with perforations S', and the longitudinal flanges T', at its upper sides, with corresponding notches U', in which to adjust dividing boards or partitions V', having studs W' and brackets X', adapted to fit in said perforations and notches. By thus dividing the baling-chamber into compartments the hay fed into said compartments may be thoroughly packed and tamped, after which said dividing-boards are removed and the hay compressed. This mode of operation forms the hay into layers, which, when the bale is cut away, will permit the hay to be more readily separated for feed.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood. Suitable draft being attached to the sweep or main lever, the latter is drawn in such direction as to withdraw the follower from the baling-chamber. At the same time, and by the same operation, the loop J' of the rod G' pivoted upon pitman M catches the link E', thus drawing upon the cord or chain A' and operating, through it, the lever W, so as to open or raise the cover R to permit the hay to be fed into the baling-chamber by any suitable means. When the latter is raised the cord or chain is slacked, thus permitting the link E' to drop, when the cover may be readily closed by the operator as soon as the baling-chamber is full. By operating the lever N' the cover S may be readily opened and closed as required. When the baling-cham-

ber has been packed the dividing walls or partitions V' are removed, the covers closed, and pressure applied. When the bale has been sufficiently compressed and tied (suitable provision being made for carrying out the latter operation) the side doors are opened and the finished bale ejected, when the press is ready to be repacked.

This invention is simple, durable, portable, and furnishes, at a comparatively small expense, a very powerful press, which is capable of being handled advantageously by one or two hands.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of the baling-chamber F, follower L, pitman M, having recess O' and rack N, vertical shaft G, eccentric rack H, connecting-arms O, guide K, caster Q, traveling in the latter, and the sweep or main lever I, all arranged and operating substantially as and for the purpose herein shown and specified.

2. The combination, with the baling-chamber F, of the follower L, pitman M, hinged to said follower and provided with a pivoted rod, G', having loop J', hinged cover R, having cross-bar T, lever W, sliding rods X, cord or chain A', and link E', all arranged and operating substantially as and for the purpose set forth.

3. The combination of the baling-chamber F, having covers R S, provided with cross-bars T, loops or clasps U, and springs V, and horizontal lever W, to which are pivoted rods X, having bent ends Z, and springs Y, substantially as and for the purpose specified.

4. The baling-chamber F, having perforations S' and flanges T', provided with notches U', in combination with the partitions V', having studs W' and brackets X', substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM J. H. KAPPE.

Witnesses:

W. S. FLACK,
J. W. BASHFORTH.