

(No Model.)

2 Sheets—Sheet 1.

I. L. STOVER.
CAR COUPLING.

No. 267,034.

Patented Nov. 7, 1882.

Fig. 1

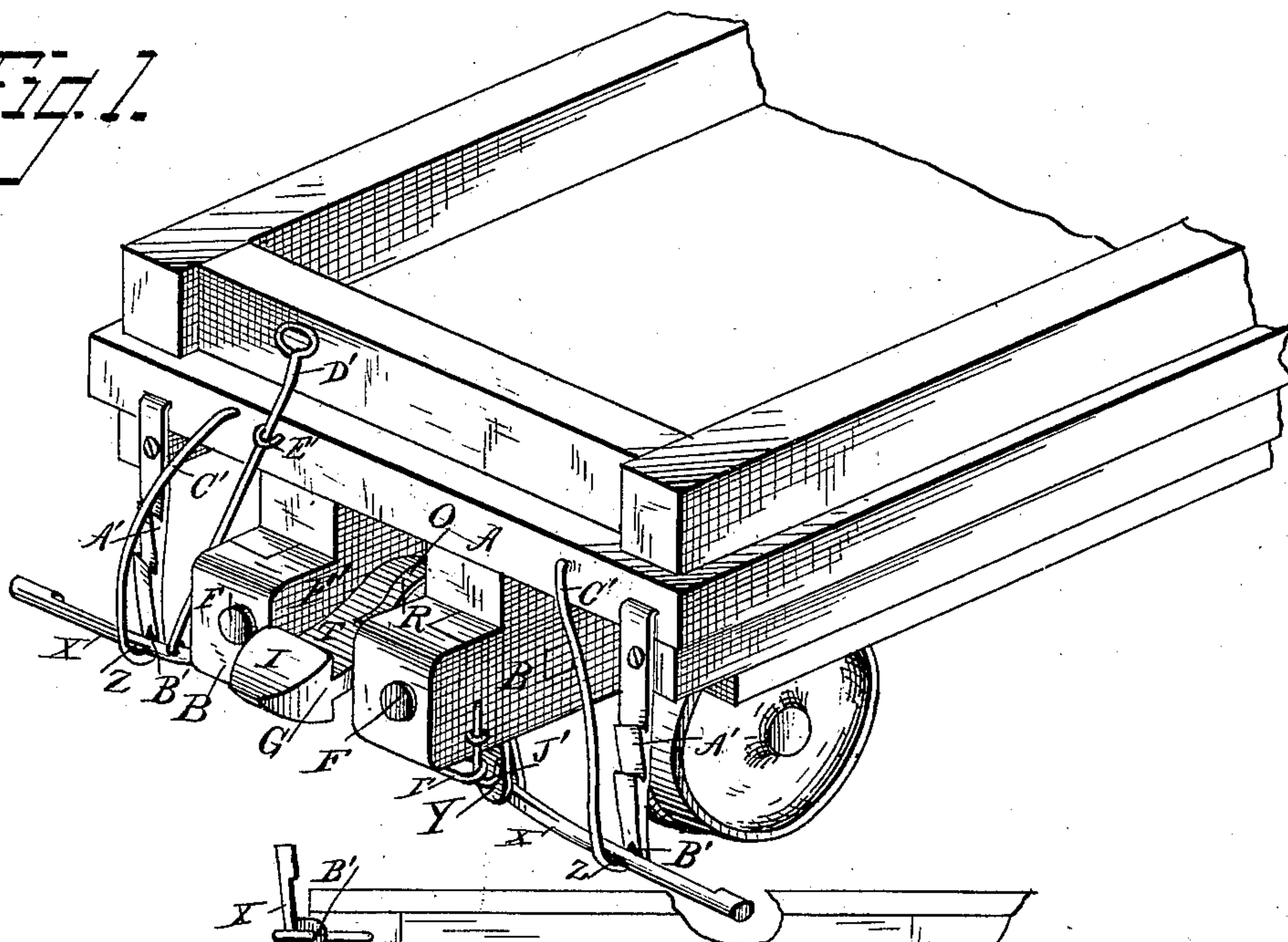


Fig. 2

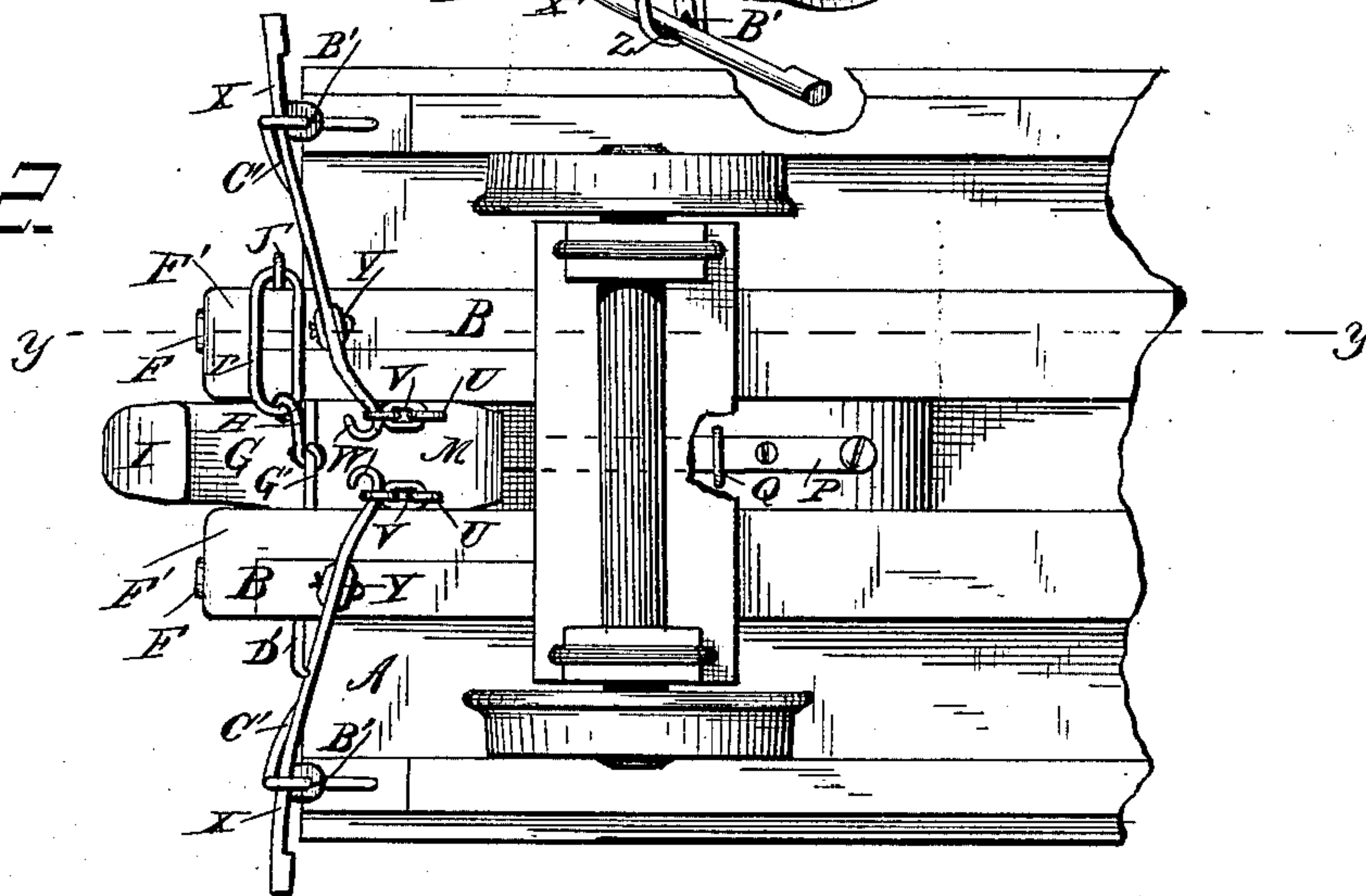
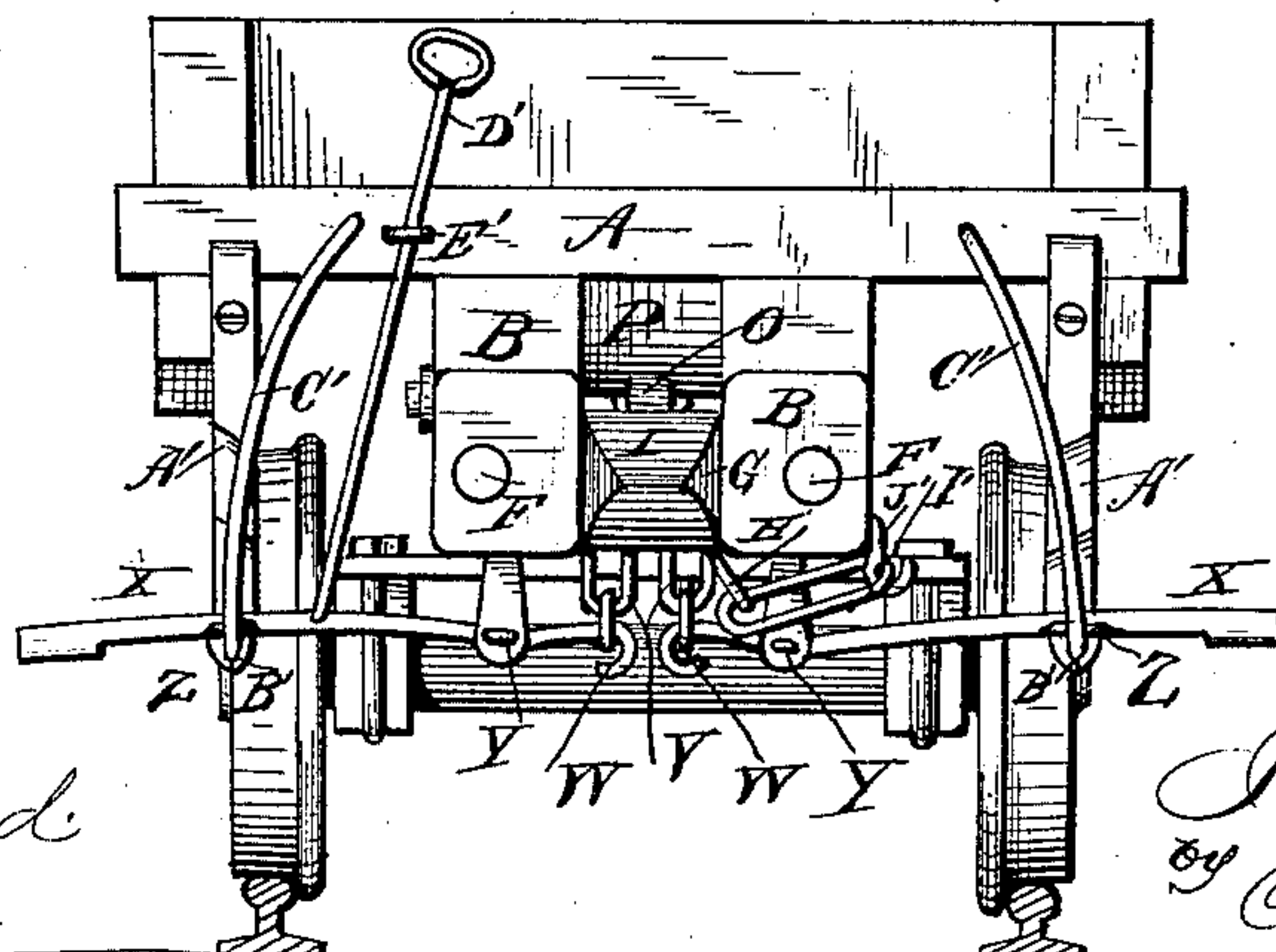


Fig. 3



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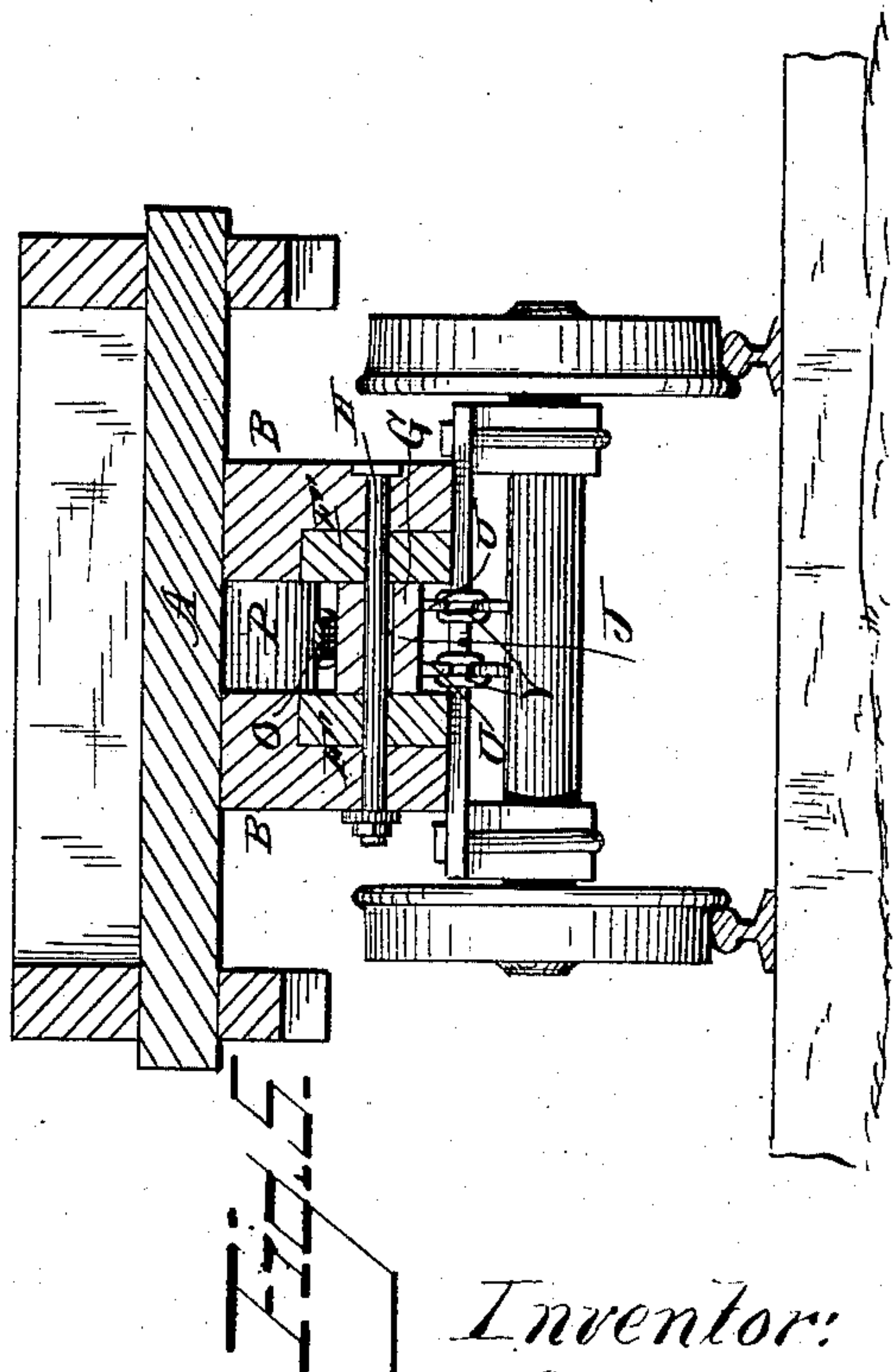
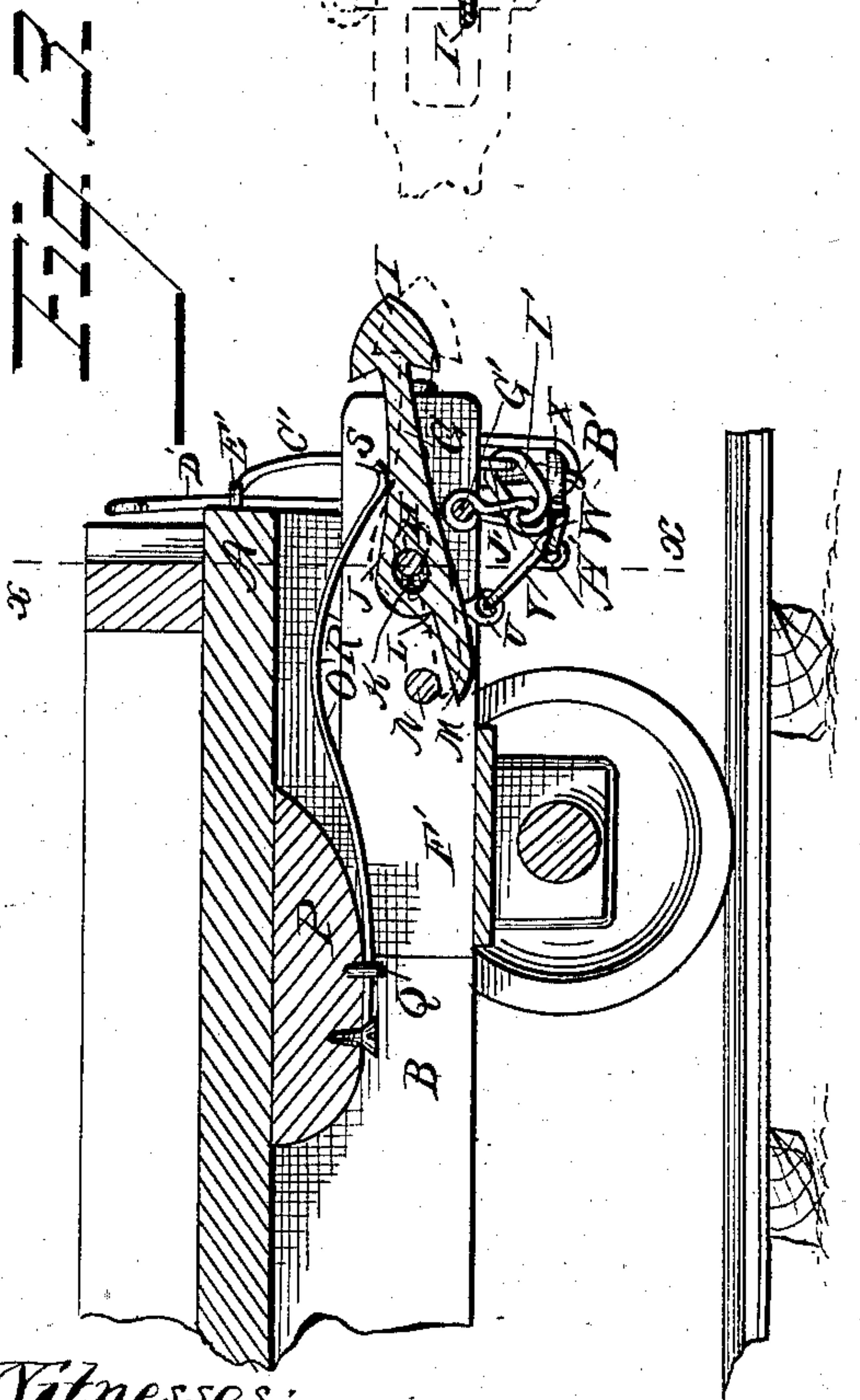
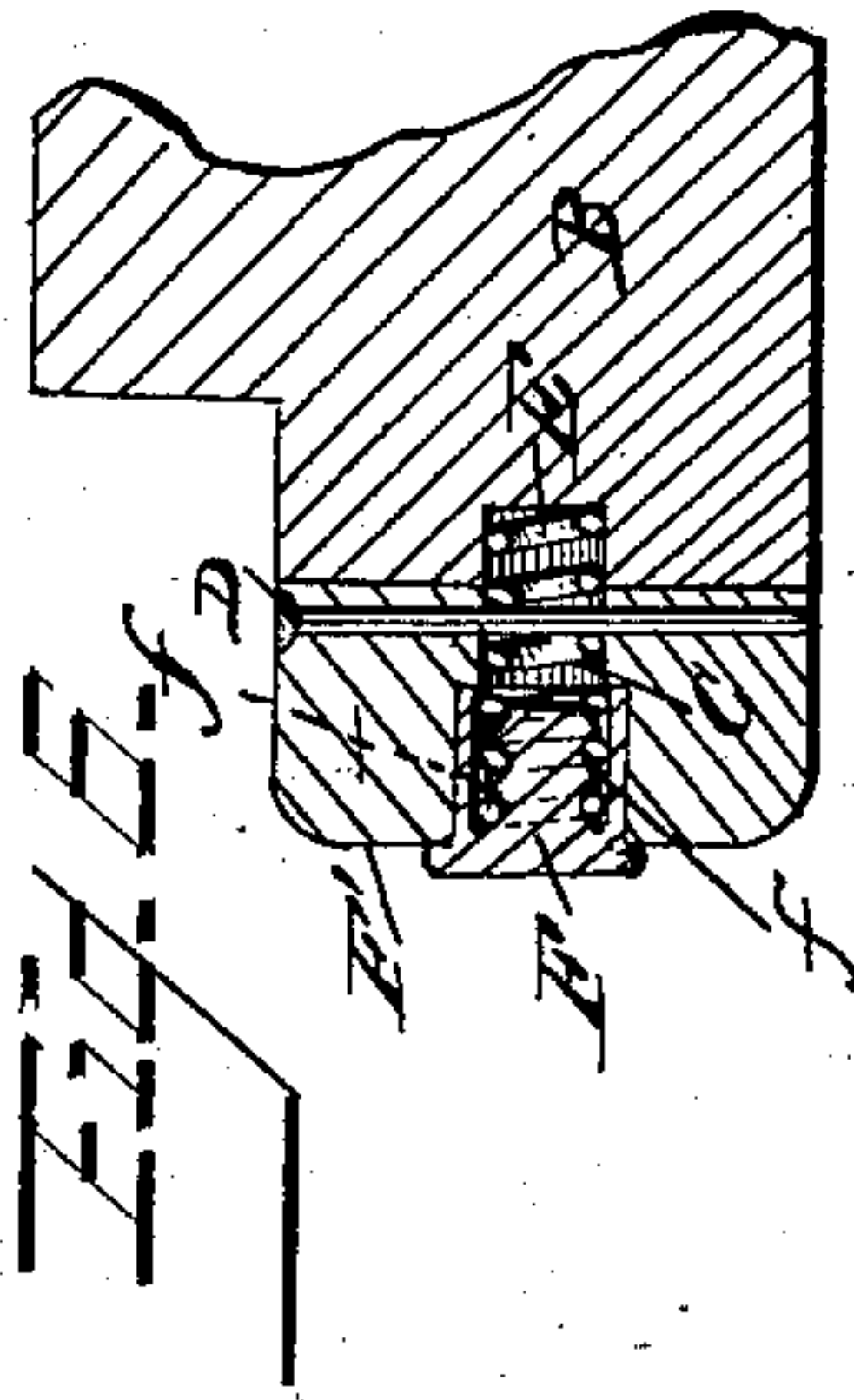
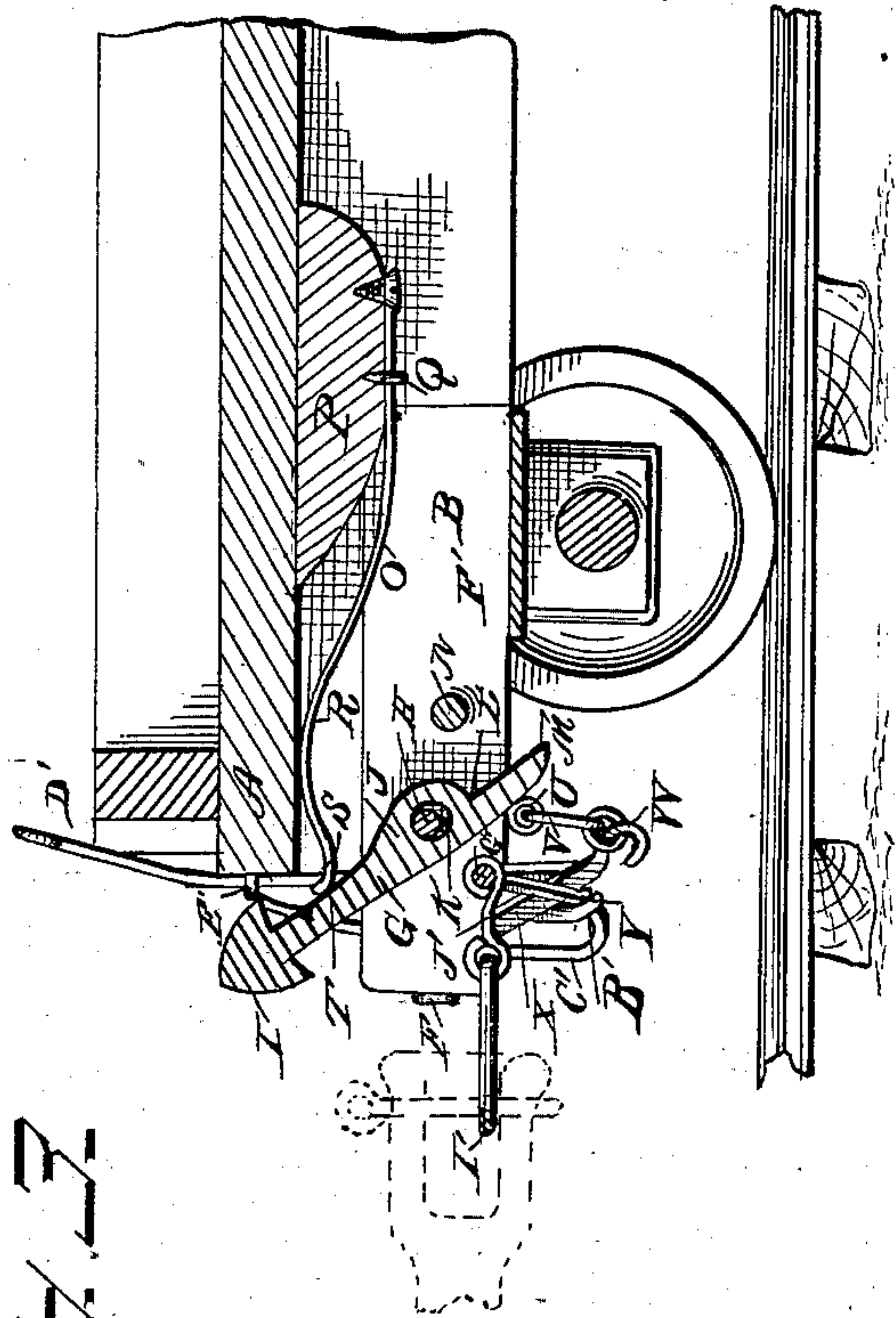
(No Model.)

2 Sheets—Sheet 2.

I. L. STOVER.
CAR COUPLING.

No. 267,034.

Patented Nov. 7, 1882.



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UNITED STATES PATENT OFFICE.

ISAAC L. STOVER, OF CENTRALIA, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 267,034, dated November 7, 1882.

Application filed August 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, ISAAC L. STOVER, of Centralia, in the county of Marion and State of Illinois, have invented certain new and useful Improvements in Car-Couplings; 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.

This invention relates to car-couplings that are automatic in operation, and that can be uncoupled without going between the cars, and has for its object to provide a simple, durable, and inexpensive device.

In the drawings, Figure 1 is a perspective view of the end of a car embodying my improvements. Fig. 2 is a bottom view thereof. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is an end view; Fig. 5, a transverse vertical sectional view on the line *xx*, Fig. 3. Fig. 6 is a vertical sectional view on the line *yy*, Fig. 2.

Referring to the drawings, A designates the end of the car, which is provided on its bottom with parallel beams B B, forming buffers or bumpers, for which latter purpose their ends are formed with a socket, C, having a vertical pin, D, which secures a coiled spring, E, having its other end retained in a boxing, F, by screw-threads *f* on the latter, said boxing projecting from the end of beams B B. Elastic bumpers are thus provided.

Between beams B B is pivoted the coupling-hook G, by means of a transverse pin or bolt, H. Hook G has an arrow-shaped head, I, and enlarged shank J, in which latter is formed its opening K for pin H. Opening or bearing K is formed oval, with its larger end at the front, by which arrangement the hook H has slight longitudinal play to relieve the car from strain in starting. Besides, this oval form tends to lower the head I of the hook G when the hook is drawn forward in starting or otherwise, and thus retain the coupling and more securely engage the head of the adjoining hook. (See Fig. 3 of the drawings.) At or near the rear end of hook G is preferably provided a shoulder, L, in rear of which is the extension M, which

engages a cross bar or pin, N, and prevents or limits further downward movement of the hook.

O is a flat spring arranged longitudinally between beams B B, its rear end being secured preferably to a block, P, having a safety-staple, Q, arranged over the spring. The front portion of spring O is bowed, as at R, with its end S curved or turned up. End S bears on the top face, T, of the shank J of hook G to force the latter downwardly, and the face T is curved forwardly and downwardly to facilitate this. Hook G is provided on its under rear end with staples U U, connected by links V with the inner hooked ends, W', of operating-levers X. The latter are journaled in standards Y Y on the under side of beams B B, and have a portion of their length beveled, as at Z, to engage a rack or ratchet plate, A', depending from the end of the car. The lower end, B', of rack A' is bifurcated, so as to be engaged by the bracket C', extending around the same and inclosing the lever.

To one or both of levers X is pivoted an upright operating-rod, D', extending in bearings E' to the top of the car, from whence it is operated. The inner faces of beams B B are provided with metallic friction-plates F', as shown.

G' is a cross-bar, extending between beams B B at their front ends, on which is hooked a link or rod, H', attached to an ordinary coupling-link, I', which, when not in use, can be hooked over a hook, J', depending from one of beams B. By means of this link attachment a coupling can be effected with ordinary pin-and-link couplings.

The operation and advantages of my invention will be readily understood.

When the cars come together the beveled arrow-shaped heads will engage each other and pass over, when the springs O depress the hooks and effect the coupling. To uncouple, it is only necessary to operate one of the levers X or rod D' on the cars whose coupling-hook is above or on top the other hook.

This coupling is very safe and effective, and should a car jump the track it will automatically uncouple from the adjoining cars.

I claim as new—

1. The combination, with a transverse circu-

lar pivot pin or bolt, H, and rear stop-bar, N, to limit the upward movement of the rear end of the coupling-hook, and a flat spring, O, bearing on the top of the hook in front of the pivot, of a coupling-hook having an oval pivotal bearing, as set forth.

2. The combination, with the bumper-beam B, having a socket, C, in its end, of the boxing F, having screw-threads *f* on its central interior portion, and a coiled spring, E, screwed onto said threads *f* and retained in socket C by a vertical pin, D, as set forth.

3. The combination, with the parallel beams B B, between which is pivoted a coupling-hook, said beams having a transverse rod, G', at their front ends, and one having a depending hook, J', of the link H', carrying a coupling-link, I', whereby pin-and-link coupling may be effected, as set forth.

4. The combination, with a depending rack or ratchet plate, A', having its lower end bifurcated, of the bracket C', engaging said bifurcated end and inclosing a lever, X, as set forth.

5. The combination of parallel beams B B, forming buffers or bumpers, a coupling-hook, G, pivoted between, and having arrow-shaped head I and extension M, the rear stop cross-bar, N, a transverse pivot pin or bolt, H, a flat spring, O, secured at its rear end and bowed

at its front end, and operating-levers X X, working in brackets C', and connected to hook G in rear of its pivot, as set forth.

6. The combination of beams B B, arranged parallel and to form bumpers, the intermediately-pivoted coupling-hook G, having an arrow-head, I, shank J, provided with a curved upper face, T, and substantially oval pivotal bearing K, a flat spring, O, secured at its rear end and bowed at its front end, R, with turned-up or curved point S, a cross-bar, N, and pivot-bolt H, as set forth.

7. The combination of parallel beams B B, forming buffers or bumpers, and having standards Y on their under sides, rear stop-bar, N, pivot pin or bolt H, coupling-hook G, pivoted between, having curved face T and extension M, and rear staples, U, flat spring O, secured at the rear end on block P, bowed at its front end, and having turned or curved point S, levers X X, links V, rack A', and bracket C', as set forth.

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

ISAAC L. STOVER.

Witnesses:

JOHN F. MITCHEL,
WM. SNOW.