(No Model.) 2 Sheets—Sheet 1.

A. G. VOGT.

CAR COUPLING.

No. 488,857. Patented Dec. 27, 1892.

Fig. 1.

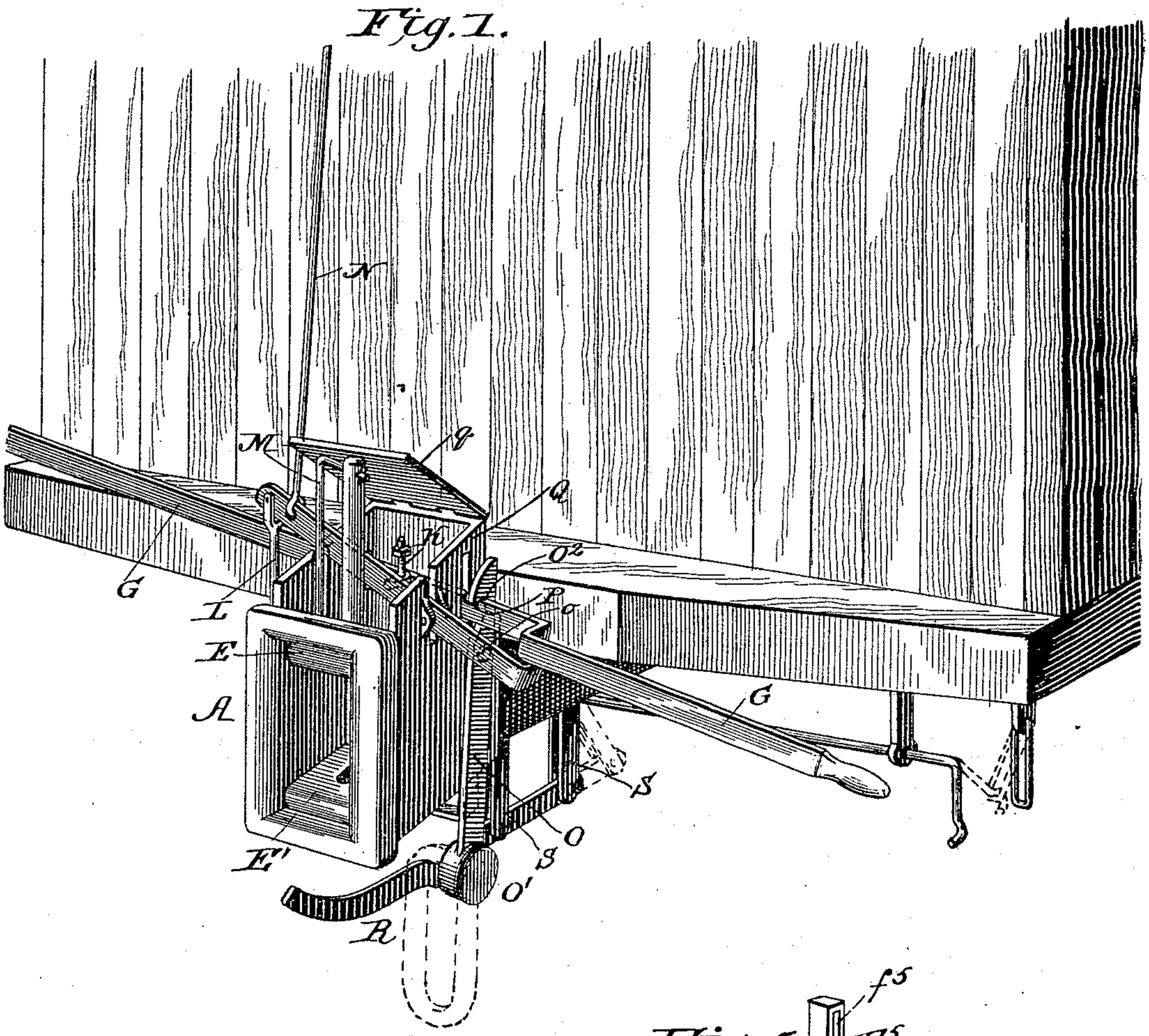


Fig. 4.

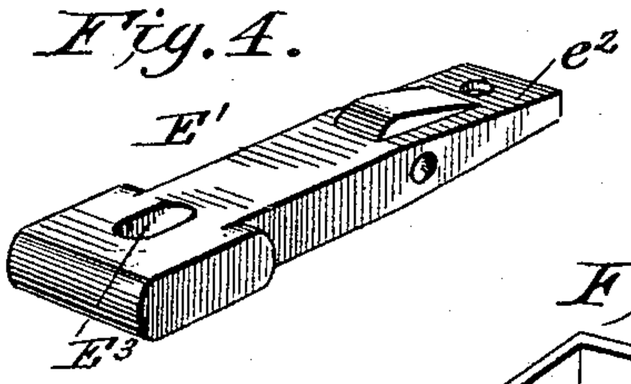


Fig. 5.

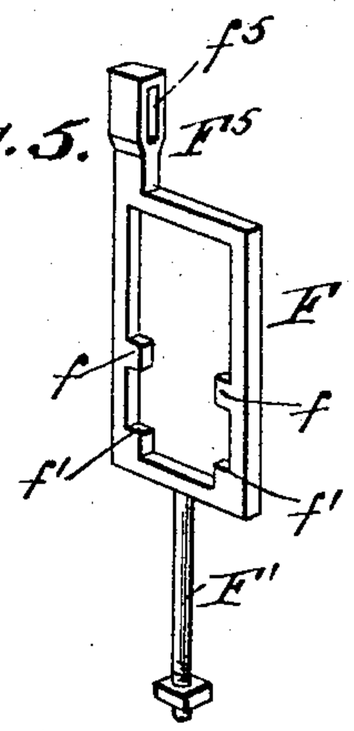
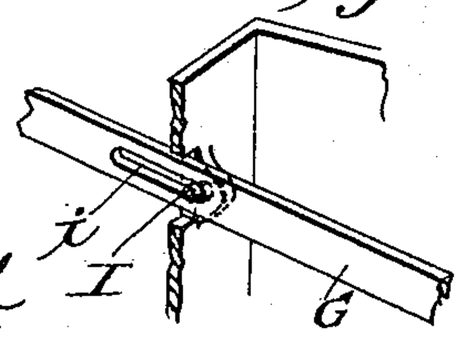


Fig. 6.



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BY Munn & Co

ATTORNEYS.

(No Model.) 2 Sheets—Sheet 2.

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CAR COUPLING.

No. 488,857. Patented Dec. 27, 1892.

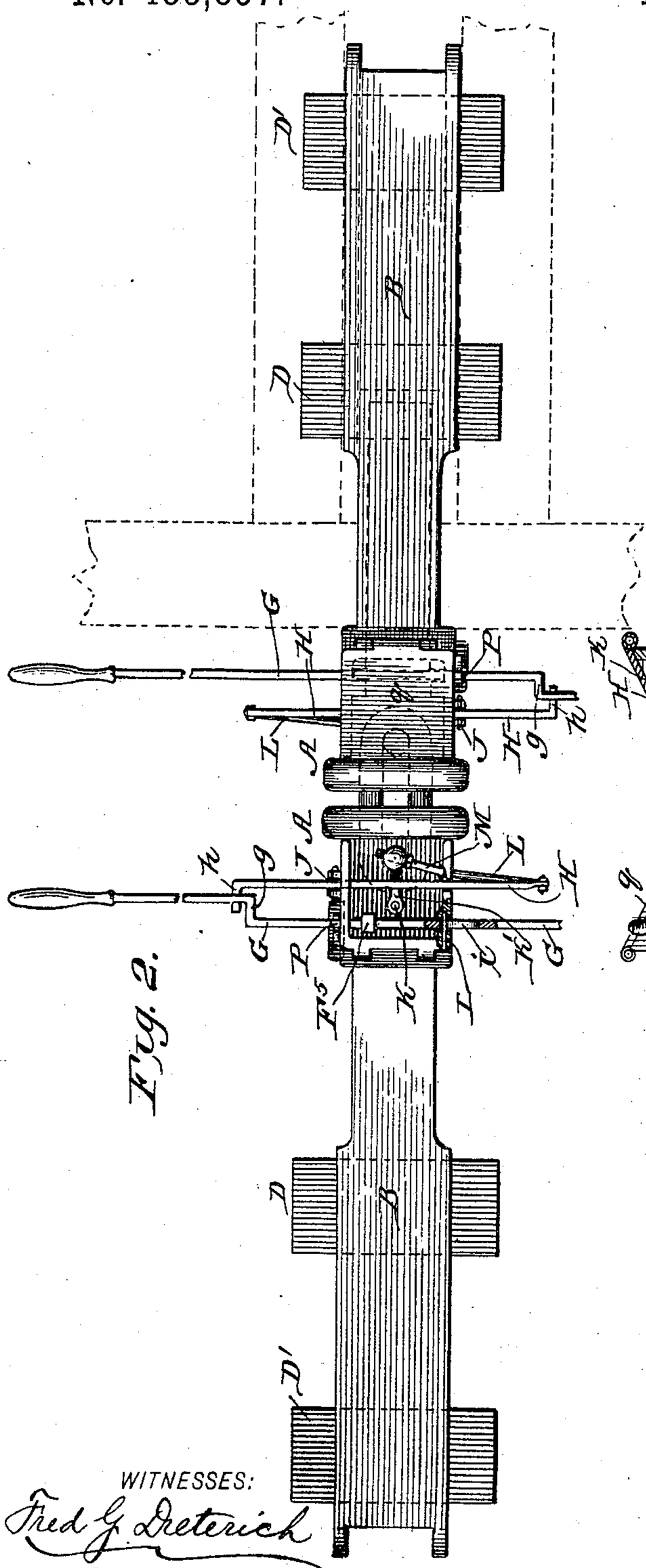

Fig. 2.

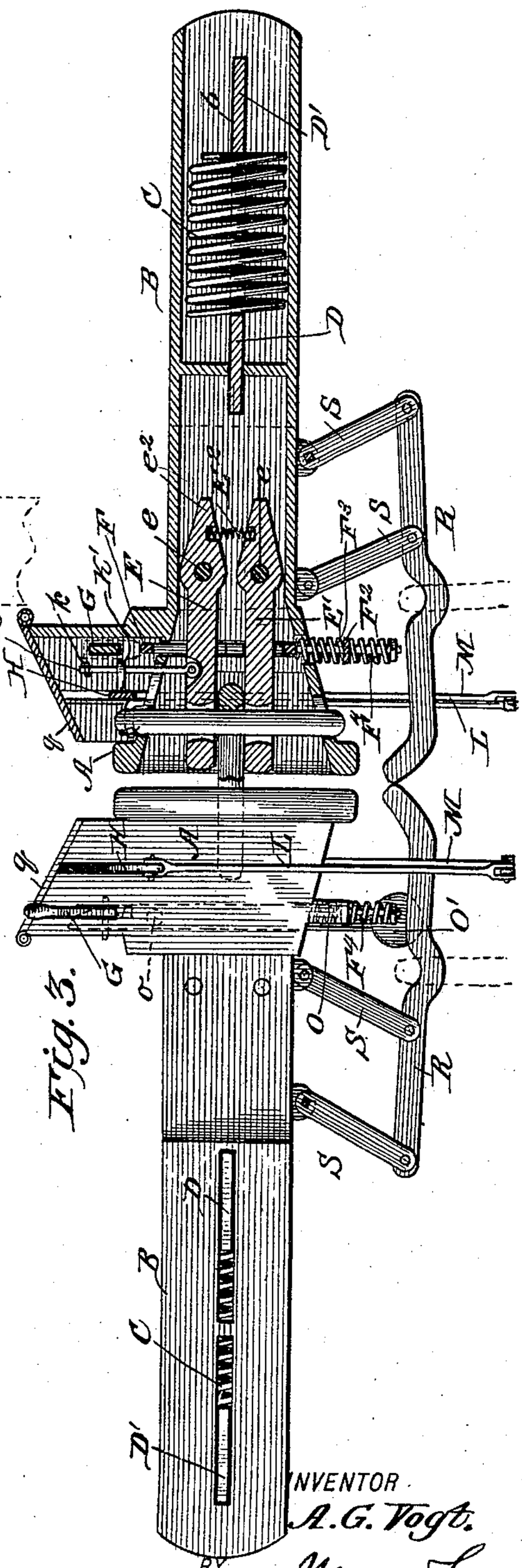

Fig. 3.

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UNITED STATES PATENT OFFICE.

AUGUST G. VOGT, OF BOERNE, ASSIGNOR OF ONE-THIRD TO L. W. MADARASZ AND WM. G. KINGSBURY, OF SAN ANTONIO, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 488,857, dated December 27, 1892.

Application filed October 8, 1892. Serial No. 448,256. (No model.)

To all whom it may concern:

Be it known that I, AUGUST G. VOGT, residing at Boerne, in the county of Kendall and State of Texas, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

This invention is an improved car coupling seeking among other improvements to provide simple, easily operated devices by which the cars may automatically couple, and be uncoupled, or the link be adjusted to properly enter a meeting drawhead without requiring the operator to go between the cars at any time and the invention consists in the novel constructions and combinations of parts hereinafter described and pointed out in the claims.

In the drawings—Figure 1 is a perspective view, Fig. 2 a top plan view, parts being broken away, and Fig. 3 is a side view part in section of my improvements, and Figs. 4, 5 and 6 are detail views.

The drawhead A has its drawbar B made hollow and open at its rear end so the buffer spring C employed on the ordinary drawbars may be inserted in said rear end and held between the keys D D′ passed through slots *b* in the drawhead and into receiving slots in the draft beams of the car frame. This construction it will be seen is simple, permits the use of the springs C and keys D D′ now used and allows the drawhead to yield both forward and back. If at any time the spring should be broken the rear key can be removed a new spring inserted and the key be replaced in a few minutes.

The drawhead has the flaring link mortise in which the link holder operates. This link holder is formed of two sections E E′ arranged one below the other and slightly separated. Near their rear ends the said sections are pivoted at *e* to the drawhead and a spring E^2 bearing between the rear extension e^2 of said sections operates to adjust said sections normally toward each other at their front ends. Near their forward ends the sections E E′ have vertical coincident openings E^3 for the coupling pin.

An adjusting frame F is fitted over the sections E E′ and is arranged to slide vertically in the drawhead. This frame F operates to depress the lower and upper sections E E′, the frame having two such end shoulders or surfaces *f f′* to rest above and below the lower section E′, the former *f* also resting under the upper section so that the raising of the frame will lift both sections positively while the lowering of the frame will only depress the lower section positively the upper section ordinarily following by gravity and the section of the spring. It will be seen that the sections have a certain independence of movement this being desirable because when adjusted to hold the link they may be set up and down together while when set to receive an entering link it is desirable that they should be flared apart at their front ends. In securing this last adjustment the lower section E′ may be depressed by the frame F, while the upper section E may be raised by the means presently described. At its lower end the frame F has a rod F′ extending below the drawhead and through a bracket F^2 and receiving actuating springs F^3 F^4 above and below said bracket. At its upper end the frame has an extension F^5 slotted at f^5 for the passage of the operating lever G, which for convenience of reference I shall term the main lever to distinguish it from the lever H which may be termed the pin lifting lever. The main lever thus operates to adjust the link lifting jaws. This lever G is supported so it can rock and also move longitudinally being to such end pivoted on a bolt or stud I passed through a longitudinal slot *i* in the lever. I also form the main lever at *g* with a lateral offset by which it may when moved longitudinally be set into and out of position to engage the lateral offset *h* on the pin lifting lever. The lever H is pivoted at J and is connected with the upper link adjusting section E by a rod K pivoted to said section and passed upward through an opening in a joint block K′ connected with the lever H and having above such joint piece a nut or other head *k* for engagement by the lever H when the latter is moved upward to its full extent while such construction permits a limited independent movement of both the rod K and the lever H. The lever H is connected with the coupling pin by rods L and M, the former being

pivoted at its upper end to the lever and pivotally connected at its opposite end with the lower end of the rod M which has at its upper end a transverse arm connected with the coupling pin so that the movement of the lever may operate to raise and lower the pin. The arrangement of rods L and M is desirable because it enables the pin to be moved to the full extent of the swing of the lever and at the same time permits the pivoting of the lever to the drawhead. A rod N may connect with the lever H and extend to the top of the car to enable the uncoupling of the cars from such point.

A latch O is pivoted at *o* to the drawhead to swing in the direction of length thereof. This latch has a weight O′ at its lower end and a hook or shoulder O^2 at its upper end and such hook or shoulder is arranged to engage the main lever G when the latter is adjusted longitudinally and moved to swing the pin to uncoupled position so that the hook may hold the main lever in position to secure the pin in uncoupled position. When the drawheads meet the jar of the impact swings the latch and releases the lever G which permits the pin to fall and automatically couple the cars. To permit the said hook to catch, a part of the lever is cut out or notched at P forming a seat for the hook but the said lever is made so wide at other points that the hook cannot engage it thus avoiding the latching of the lever when it is used simply for adjusting the link.

A casing Q is provided upon the drawhead for inclosing some of the operating parts, such casing having a hinged lid *q* which may be raised and lowered with the movements of the pin &c.

In operation if the link be in place the main lever may be adjusted clear of engagement with the lever H and then be operated to raise or lower the link to enter a meeting drawhead. If the approaching drawhead also has a link in it, the link in the first can be readily ejected by setting the main lever to engage the lever G and then operating the same to raise the coupling pin and spread the link lifter sections when the link will drop out and the parts be left in position to receive the approaching link. When so adjusted the main lever will be held by the swinging latch until the drawheads meet when the jar will release the latch and the levers and pin will adjust to coupled position. When the link is ejected as before described it does not drop to the ground but is caught by a link receiving hook R supported to swing below the drawhead and projecting at its point beyond the same. This hook R is carried by swinging links S dropped from the drawhead. It will be seen that the pin is braced against both the drawhead and the sections of the holder so that there is no danger of bending even a lighter pin than is commonly used.

In order that the link catcher may not be in the way when the cars are coupled I provide a shaft having a squared portion engaging one of the hangers and provided at its outer end with a handle by which it may be turned, which handle is also arranged and adapted for engagement by a latch suspended from the car frame. This latch may serve to hold the shaft in position to retain the point of the hook back from the end of the drawhead or the latter may be released to permit the hook to adjust forward into position to catch the link.

Having thus described my invention, what I claim is

1. In a car coupling, the combination of the drawhead and the sectional link holder therein, both the drawhead and the link holder having openings for the coupling pin, and the openings in the link holder being closed at the front, substantially as set forth.

2. In a car coupling, the combination of the drawhead having coupling pin openings, the link holder arranged in said drawhead and formed with upper and lower sections pivoted together near their rear ends to the drawhead and provided near their front ends with pin openings closed at their front sides and the spring arranged between the rear extended ends of said sections, substantially as set forth.

3. In a car coupling, the combination with the drawhead and the link holder formed of pivoted sections of the operating devices whereby the said sections may be flared apart at their front ends, substantially as set forth.

4. In a car coupling the combination with the link holder composed of upper and lower pivoted sections a vertically movable frame embracing and having portions engaging said sections, and devices by which the said frame may be operated, substantially as set forth.

5. In a car coupling, the combination with the pivoted link holding sections of independently movable devices whereby the lower section may be depressed and the upper section elevated, substantially as set forth.

6. In a car coupling, the combination with the link holder formed of upper and lower pivoted sections of the adjusting frame by which to positively raise both such sections and depress the lower one and a rod connected with the upper section whereby to lift the same and devices for operating said frame and rod, substantially as and for the purposes set forth.

7. In a car coupling, the combination of the pivoted link holding sections the adjusting frame engaging said sections and the actuating spring or springs by which to retain said frame and link holding sections normally in the desired position, substantially as set forth.

8. In a car coupling, the combination of the link holder, the vertically movable frame embracing said holder and provided with a slot and the operating lever passed through said slot, substantially as set forth.

9. In a car coupling, the combination of the link holding devices and independently movable levers for operating the same and the coupling pin, one of the said levers being movable independently of its pivotal movement into and out of position to engage the other lever, substantially as set forth.

10. In a car coupling, the combination of the link holder, the lever for operating the coupling pin, and the lever for operating the link holder, the latter being movable longitudinally whereby it may be set into and out of position to engage the pin operating lever, all substantially as set forth.

11. In a car coupling, the combination of the pin operating lever and the lever for operating the link holder both such levers being provided with lateral offsets and one of the levers being movable longitudinally whereby it may be set into and out of engagement with the other, substantially as set forth.

12. In a car coupling, the combination with a transverse main operating lever of a swinging weighted latch arranged to lock said lever in position, substantially as set forth.

13. In a car coupling, the combination of a latch and a main operating lever having a seat for engagement by said latch and movable longitudinally whereby it may be set into and out of position for engagement by the latch, substantially as set forth.

14. In a car coupling, the combination with the pin and its operating lever of the rods L and M, pivotally united at their lower ends and connected at their upper ends respectively with the lever and with the pin, all substantially as and for the purposes set forth.

15. In a car coupling, the combination of the drawhead, the link holder having an upper pivoted section, the pin operating lever and connections between said lever and the upper link holder section, substantially as and for the purposes set forth.

16. In a car coupling, the combination of the pivoted link holder sections, the main lever and connections whereby said lever may positively operate the lower link holding section, the pin operating lever and connections between the same and the upper link holding section, substantially as described, whereby the main lever may operate to depress the lower link holder section and the other lever may operate to elevate the upper link holder section, substantially as set forth.

17. In a car coupling, the combination of a link holder having upper and lower sections, a pair of levers and connections between said levers and sections whereby the joint operation of the levers may serve to flare the sections, substantially as set forth.

18. The combination substantially as described of the drawhead, the link holder sections, the adjusting frame embracing said sections the pin operating lever arranged to operate the upper section, and the main lever arranged to operate the adjusting frame and movable longitudinally into and out of position to engage the pin operating lever substantially as set forth.

19. In a car coupler a drawhead provided with a link catcher comprising a rod or bar arranged to project at its front end normally in advance of the end of the drawhead and supported to swing below the drawhead, substantially as set forth.

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Witnesses:
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