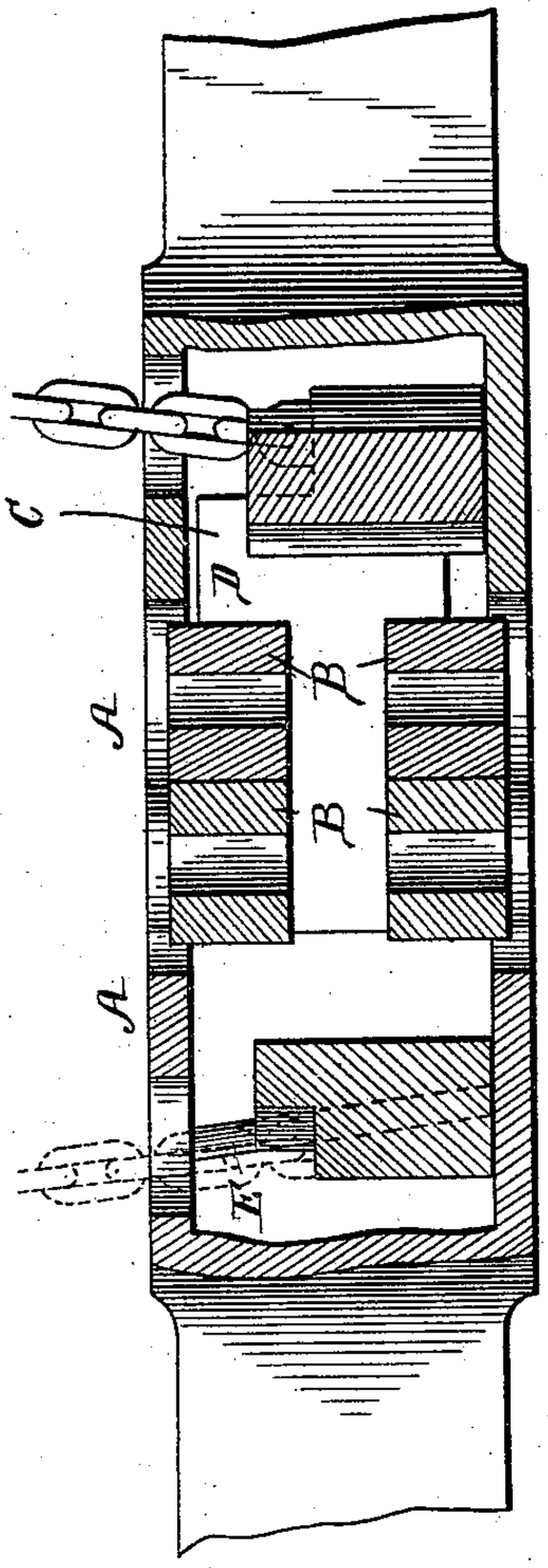
(No Model.)

C. A. GOULD.

CAR COUPLING.

No. 466,342. Patented Jan. 5, 1892.



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UNITED STATES PATENT OFFICE.

CHARLES A. GOULD, OF BUFFALO, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 466,342, dated January 5, 1892.

Application filed April 16, 1891. Serial No. 389,167. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GOULD, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have made certain new and useful Improvements in Car-Couplers, of which the following is a description.

My invention relates to certain new and useful improvements in car-couplers, and particularly to that class known as "automatic couplers," in which the swinging interlocking hooks are employed as the coupling mechanism, which hooks are to be held in their interlocked relation through the medium of a swinging locking block or pawl.

My invention has for its object to simplify the arrangement and construction of parts by which the locking-pawl is thrown into and out of engagement with the inner end or arm of the interlocking hook.

Prior to my invention some have effected the necessary rotatory motion of the locking-pawl by pivoting the same within the coupler-head upon a loose vertical pin and providing within the housing of this pawl inclined bearings at the top and bottom, having such relation to the axial movement of the pawl that when the latter is lifted by a suitable chain or other operating device the contact of the upper face of said pawl with an inclined bearing will cause it to rotate out of contact with the inner end of the coupling device, and when released and dropping by gravity it will be caused to rotate into locking position with the coupling device through the medium of a reverse incline at the bottom of the pawl-housing.

My present invention consists in avoiding the necessity of providing the pawl-housing with the reverse incline at the top and bottom thereof, and in lieu thereof pivoting the said pawl within its housing through the medium of a loose pivot so inclined or obliqued that when said pawl is lifted through the medium of the operating-chain it shall ride up on said pivot and out of contact with the coupler-bar and when released shall fall by gravity and be moved by the inclination of said pivot into locking relation, as will be hereinafter more fully described.

In order that those skilled in the art to which my invention pertains may know how to construct and use the same, I will proceed to describe in detail the peculiarities of construction and operation of my improved locking-pawl and connection, referring by letters to the accompanying drawing, in which the figure represents a central longitudinal section of a pair of couplers representing the employment of my improved locking-pawl.

A represents an ordinary draw-head provided with a swinging hook B, commonly employed in automatic swinging-hook couplers—such, for instance, as couplers manufactured under Letters Patent No. 254,106, dated February 28, 1882, and No. 337,650, dated March 9, 1886, and known in the trade as the "Gould automatic coupler." In this class of couplers the inner arm C of the swinging hook B is automatically locked in coupling position through the medium of the locking-pawl D, pivoted upon a loose pin arranged in an absolutely vertical line in the draw-head A, as hereinbefore indicated, which pawl, as before stated, is caused to rotate upon its axis through the medium of inclined bearings in the housing of said pawl. In my present invention and in lieu of these inclined bearings and vertical loose pin or axis I employ a loose pin or axis E, which is arranged or located within bearings in the draw-head at an angle of obliquity to the vertical front face of the draw-head, as clearly indicated in the drawing; or, in other words, the pin or axis upon which the pawl moves has its lower end in advance of the upper end, so that when said pawl is lifted by the operating-chain or other suitable device it necessarily travels away from the forward end of the draw-head and when released and falling by gravity it is directed forwardly by the inclination of said axis or pin.

The extent of the obliquity or inclination of the loose pin E between the upper and lower walls of the pawl-housing within the draw-head is so related to the proportion and action of the coupling-hook that the upward movement of the pawl under the draft of the operating-chain will cause it to move out of its interlocked relation with the inner end of the coupling-hook to release the latter, and with the limit of downward movement of said pawl it will be certain to secure the proper interlocking relation between the parts.

I am of course aware that it is not new to provide a car-coupler having pivoted or swinging coupler-hooks with rotatory locking-pawls, and I do not wish to be understood as in any sense claiming any such broad construction; but

What I claim as new, and desire to secure by Letters Patent, is—

In an automatic car-coupler provided with a swinging or rotatory coupling-hook, a vertically-movable locking-pawl secured within suitable housings in the draw-head by means of an obliquely arranged or inclined pin E, substantially as and for the purpose set forth.

In witness whereof I have hereunto set my hand this 20th day of March, A. D. 1891.

CHARLES A. GOULD.

Witnesses:

F. P. HUNTLEY,

P. COTTER.