

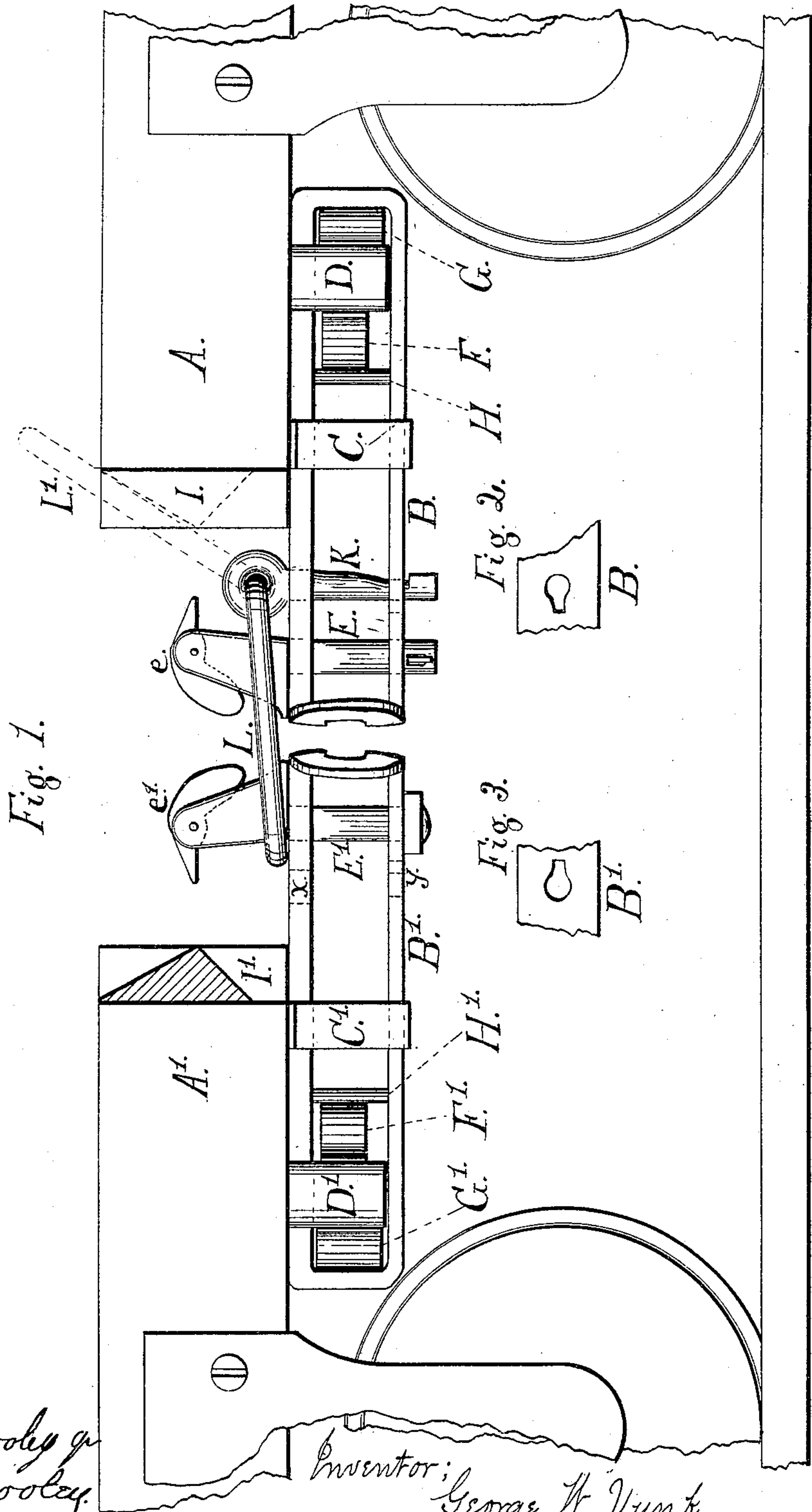
(No Model.)

2 Sheets—Sheet 1.

G. W. VUNK.
CAR COUPLING.

No. 246,250.

Patented Aug. 23, 1881.



Witnesses:
L. F. Cooley
B. F. Cooley.

Inventor:
George W. Vunk.
by his atty. W. H. Cooley.

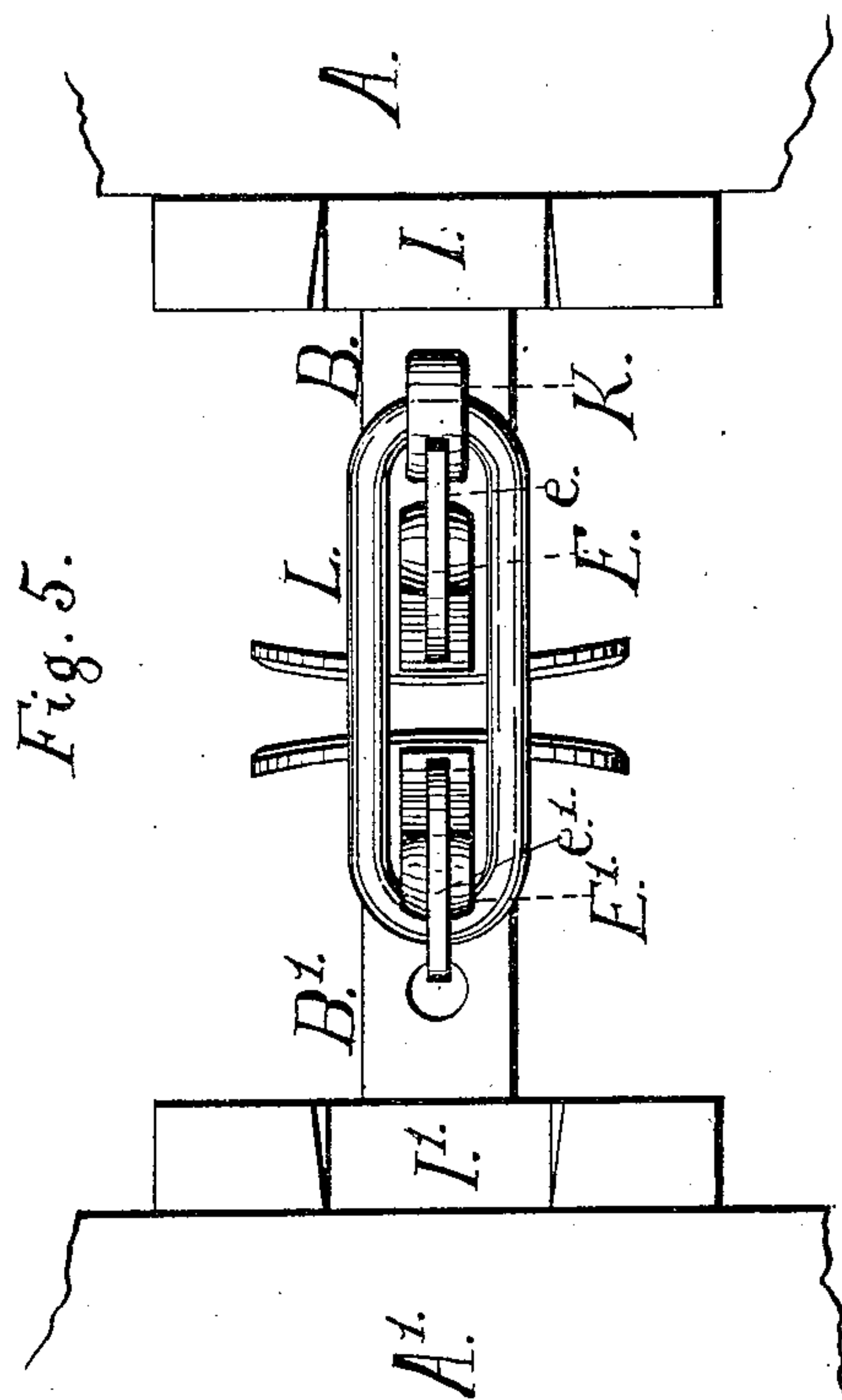
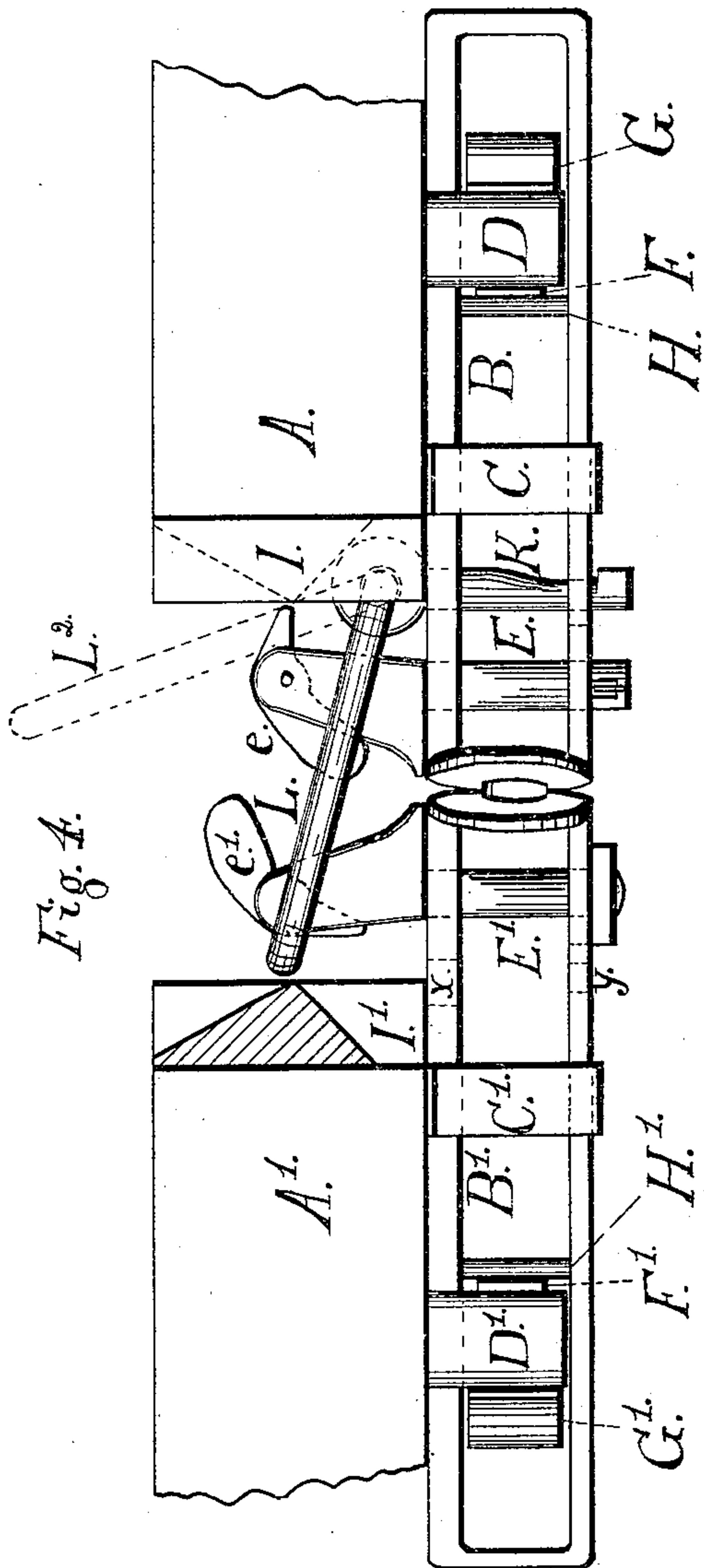
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UNITED STATES PATENT OFFICE.

GEORGE W. VUNK, OF BROCKPORT, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 246,250, dated August 23, 1881.

Application filed May 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. VUNK, a citizen of the United States, residing at Brockport, in the county of Monroe and State of New York, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention relates to that class of couplings operated by the motion of the draw-head, caused by the impact of one car against another, and has for its object increased efficiency, convenience, and safety in operating such couplings; and it consists in devices and combinations thereof illustrated in the accompanying drawings, in which—

Figure 1 represents a side view of my coupling connecting two cars together, showing the position of the parts when the cars are coupled together, and also, in dotted line, the position of the link when the same is raised up and in readiness for coupling. It also shows the tilting block on the left-hand car, in a vertical section through the center thereof and parallel with the direction of the draw-head. Figs. 2 and 3 show, in top view, the form of the holes through the lower members of the draw-head, through which the lower end of the link-pin passes. Fig. 4 represents a side view of the coupling as the link is falling down in the act of coupling passes by and operates the latch in the hold-pin on the draw-head of the other car, and shows, in vertical section, through the center thereof the tilting block on the car to the left, and also shows, in dotted line, the exact point to which the link is carried by the motion of the draw-head, caused by the impact of one car against the other. Fig. 5 represents a top view of the coupling when in position for drawing, after the two cars are connected together.

Referring to Fig. 1, the draw-heads B and B', of substantially the usual construction, are secured to the under side of the body or frame of the cars A and A', respectively, by means of the wrought-iron straps C and C' and the timbers D and D', through the slot in the upper surfaces of which the upper members of the draw-heads pass, whereby it will be seen that the draw-heads are capable of moving backward and forward longitudinally, such motion of the draw-heads B and B' being reg-

ulated and cushioned, respectively, by the leaf-springs F and G and F' and G'. Springs G and G' being located between the inner faces of timbers D and D', to which they are respectively secured, and the inner ends of the draw-heads, they cushion and regulate any outward motion of the draw-heads, and the springs F and F' being located between the outer faces of timbers D and D', to which they are respectively secured, and the pins H and H' passing through the draw-heads, they regulate and cushion any inward motion of the draw-heads, whereby the cars are relieved of any heavy jar caused by suddenly starting or stopping, or by any two cars coming together in the act of coupling, and by them the draw-heads are always kept in proper position for coupling. These leaf-springs may be replaced by spiral or coil springs, or any other equivalent device for performing the same function.

Near the outer end of each draw-head will be noticed the hold-pins E and E', having respectively the latches e and e', pivoted in the mortises in their upper ends, as shown, and being so formed, proportioned, and hung, as shown, that they are always retained by force of gravity in such a position as to hold the link L in proper position after the cars have been coupled, thereby preventing accidental uncoupling of the cars from any cause. The hold-pins E and E' pass through both members of the draw-heads, the holes or openings therefor in the upper members being square, and the pins themselves being square where they pass therethrough, so as to prevent any turning of the hold-pins, the lower ends of which are round and pass through round holes therefor in the lower members of the draw-heads, and are secured in position in the draw-heads by means either of a key passing through a mortise in the lower end of the hold-pin or a nut threaded onto lower end of hold-pin, as shown. These hold-pins, it will be noticed, where they rest upon the upper members of the draw-heads are shouldered upon three sides, the shoulders upon the outer side projecting much the most, in this manner acting as a brace and increasing the strength of the hold-pins.

The link L, as shown, passes through and articulates in the eye in the upper end of link-

pin K. This link-pin K, it will be noticed, passes through a round hole in the upper member of the draw-head B, a short distance inside of the inner face of the hold-pin E, and passing
 5 thence downward it is reduced in size in such a manner, as shown, as to present a straight line upon its side farther from the car, and leaving a key projecting inwardly toward the car from its inner face at the lower end, the object of
 10 which, it will be noticed, is to prevent the pin K from raising up out of position at any time, for which purpose the hole in the lower member of the draw-head B, through which the lower end of pin K passes, is formed as shown in
 15 Fig. 2, whereby it will be seen that to insert pin K in its place or to withdraw it therefrom it is necessary first to turn it just one-half way around from the position it is shown as occupying in the drawings, when the key on the lower end of the pin K will pass through the elongation shown in the opening through the lower member of the draw-head B.

Referring to the drawings, in Figs. 1 and 4 openings through the upper and lower member of the draw-head B' for the insertion of the link-pin K with link L, or a similar link-pin and link, are indicated by dotted lines at *x* and *y*, and in Fig. 3 is shown, in top view, the form of the hole through the lower member of the draw-head therefor, and in Fig. 5 is
 30 seen the top view of the draw-head, showing the opening as seen from above.

Attached to the end of the body or frame of either car are the tilting blocks I and I', which,
 35 as will be seen from the drawings, are cut away in the central portions thereof, so as to form a sharp edge against which to rest the link L, and to tilt or throw the same by the action of such sharp edge, being indicated by dotted
 40 lines in block I in Figs. 1 and 4, and being much more smooth than would be the case were a flat surface employed.

Both draw-heads, as will be seen from the drawings, are equipped alike, with the excep-
 45 tion of the link-pin K and link L, which may be placed upon either draw-head and will engage the hold-pin and operate the latch therein only in the draw-head on the other car.

The operation is as follows: For coupling,
 50 the free end of link L is raised up and laid over

against the tilting block I, when it will occupy the position indicated in dotted line at L' in Fig. 1, then the inward motion of the draw-head B, caused by the impact of the cars in the act of coupling, will carry the link to the position indicated by dotted line at L² in Fig. 4,
 55 from whence it will fall by its own weight, and by its already acquired momentum in being thrown or carried to this point over the hold-pin E' operating the latch *e'* therein, as indicated in Fig. 4, passing downward thence until it rests on the draw-head B', and occupying the position shown in full lines, Fig. 1, when the latch *e'* will rise by force of gravity, acting on the heavy or outer end thereof, and prevent the link L from accidentally rising or
 65 being thrown upward so as to uncouple the cars. For uncoupling, the heavy or outer end of latch *e'* is raised by hand, so as to bring latch *e'* to the position shown in Fig. 4, when the free end of link L may be raised up and disengaged from the hold-pin E', thereby uncoupling the cars. The action will, of course, be the same, upon no matter which draw-head the pin K and link L happen to be placed.
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Having thus described my invention, what I claim is—

1. The combination, with the draw-heads B and B', of the hold-pins E and E', respectively, having the latches *e* and *e'* therein, substantially as and for the purpose indicated. 80

2. The combination, with the draw-heads B and B', of the link-pin K, having the link L articulating in the eye in the upper end thereof, substantially as and for the purpose indicated. 85

3. The combination, with the draw-heads B and B', of the tilting blocks I and I' attached to the end of the body or frame of the car, substantially as and for the purpose indicated.

4. The combination, with the draw-heads B and B', of hold-pins, tilting blocks, and a link-pin and link, all formed, positioned, and arranged substantially as shown and described, and operating in the manner and for the purpose indicated. 90

GEO. W. VUNK.

Witnesses:

LEVI COOLEY, Jr.,
 B. FRANK COOLEY.