

(No Model.)

T. F. LAWSON & T. BAILEY.

CAR COUPLING.

No. 344,387.

Patented June 29, 1886.

Fig. 1.

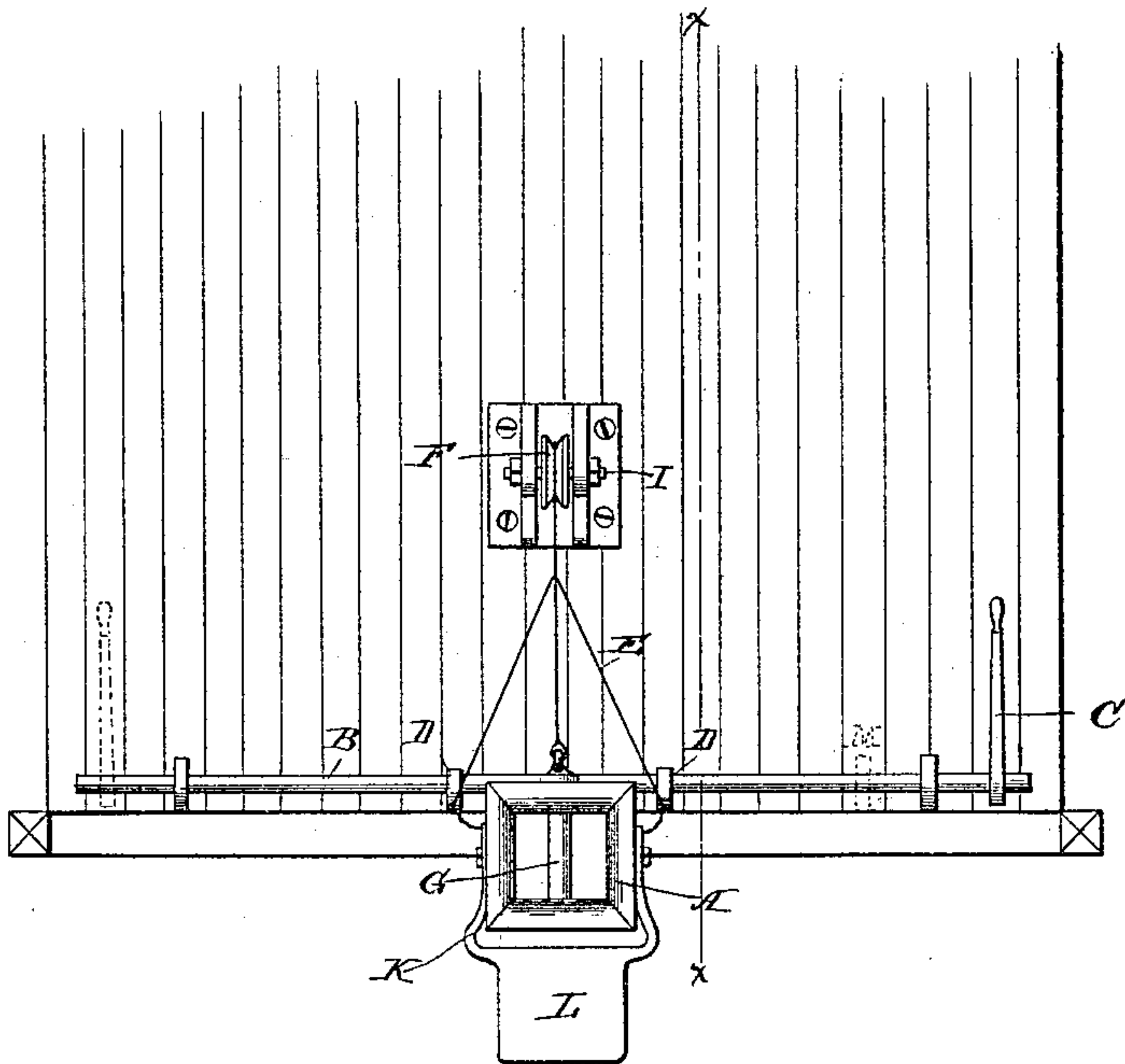


Fig. 2.

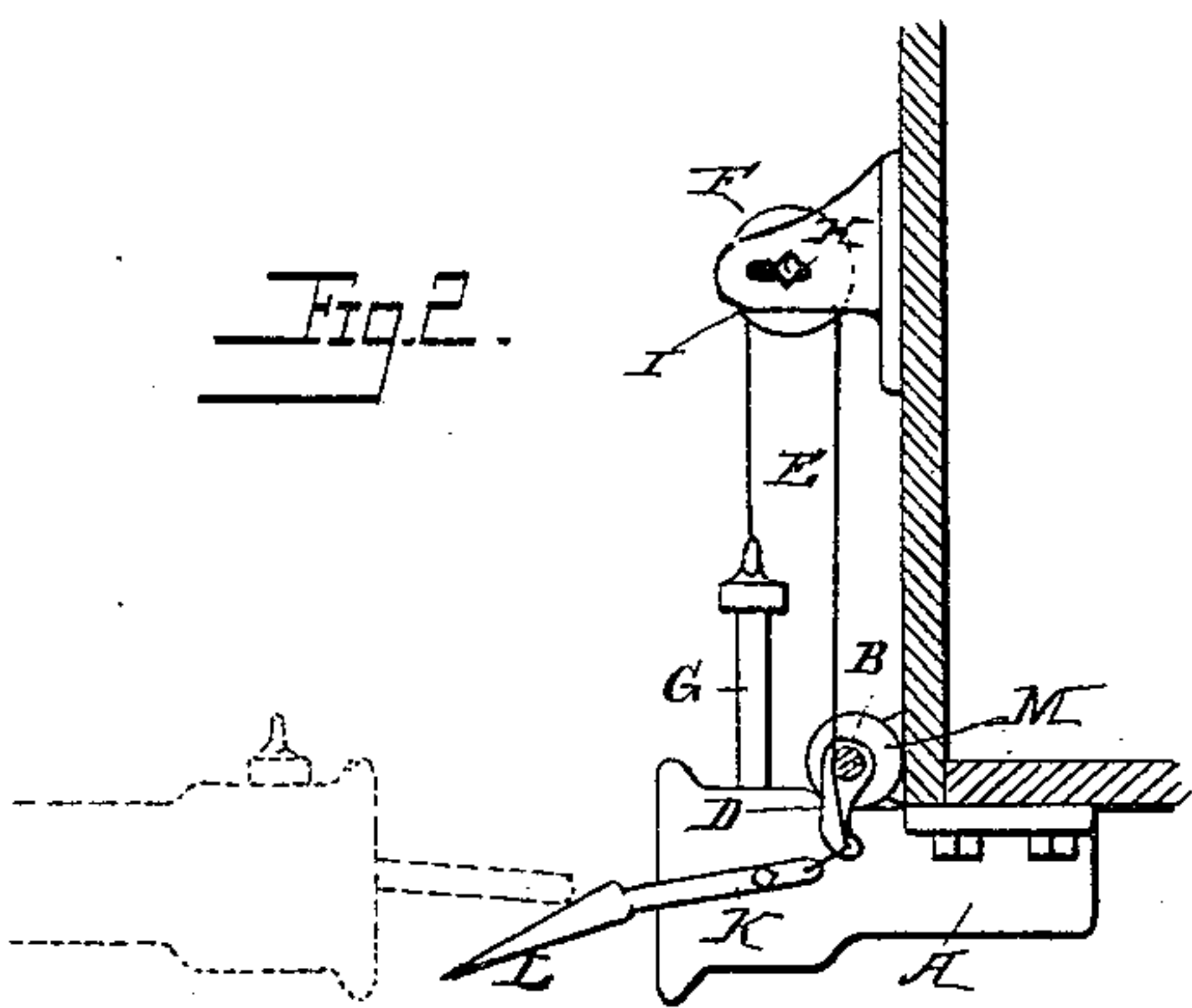
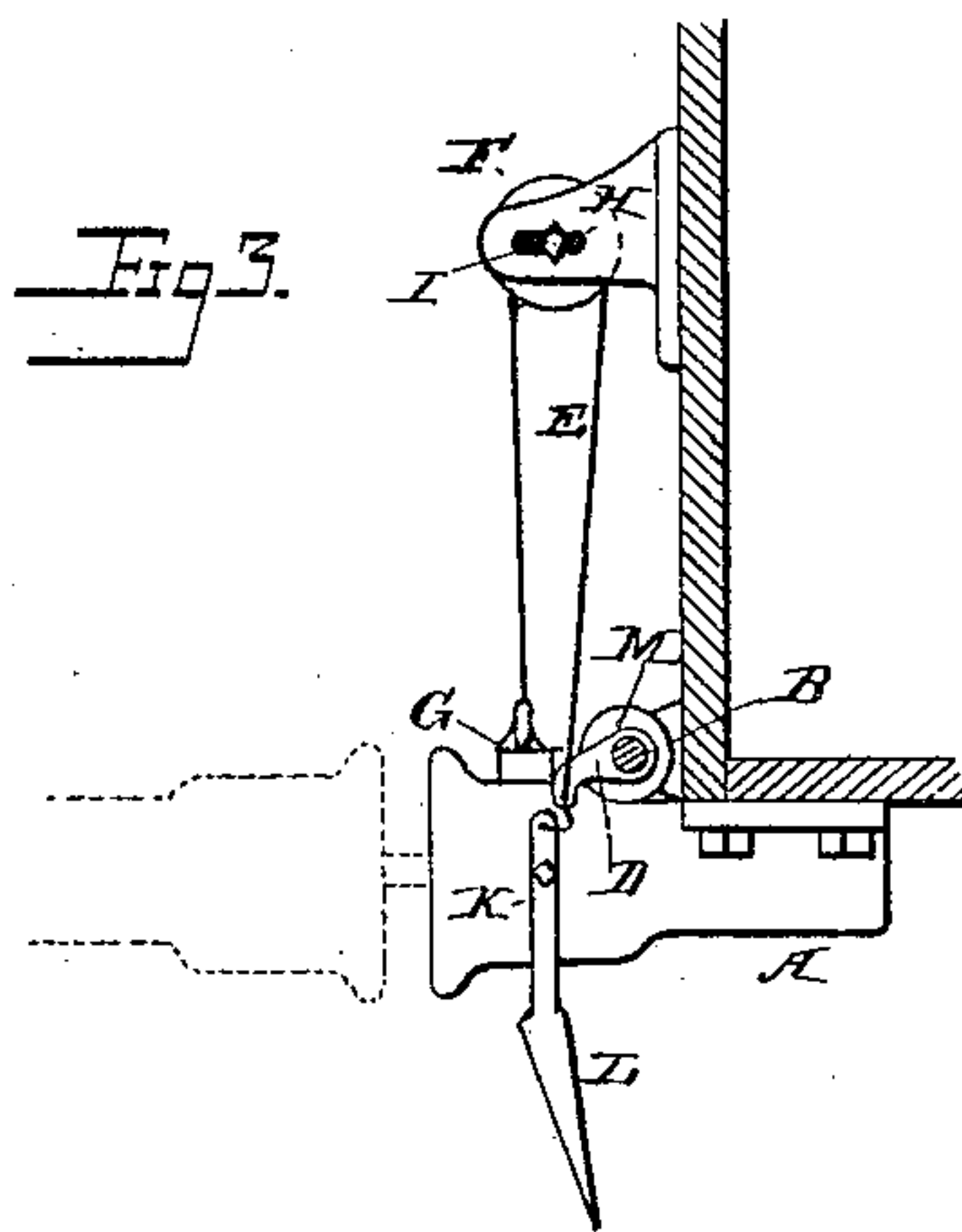


Fig. 3.



Attests:

John F. Hinkel
H. J. Chapman.

Inventor:

Thomas F. Lawson and
Thomas Bailey
By *Foster & Freeman,*
attys

UNITED STATES PATENT OFFICE.

THOMAS F. LAWSON AND THOMAS BAILEY, OF ATHENS, GEORGIA, ASSIGN-
ORS OF ONE-THIRD TO LEONARD SCHEVENELL, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 344,387, dated June 29, 1886.

Application filed April 8, 1886. Serial No. 198,315. (No model.)

To all whom it may concern:

Be it known that we, THOMAS F. LAWSON and THOMAS BAILEY, citizens of the United States, and residents of Athens, county of Clarke, and State of Georgia, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to that class of car-couplers in which the operation of coupling is automatically effected by the contacting of the cars to be coupled; and it consists of a suitable rock-shaft with bearings on the car and carrying projecting arms on each side of the draw-bar, an apron pivotally hung from the draw-bar head and connected to the said arms on the shaft, a roller or pulley adjustable in bearings secured to the car above the said draw-bar, and over which passes a chain from the arms on the shaft to the coupling-pin, and suitable means—such as a cam—on the said shaft for holding the same when the coupling pin or bolt is in an elevated position, all of which mechanism may be applied to and operate in connection with a draw-bar of ordinary construction.

In the drawings, Figure 1 represents a front elevation of the coupling mechanism as applied to a draw-bar of ordinary construction; Fig. 2, a section on *xx* of Fig. 1, showing the apron and link elevated preparatory to coupling; Fig. 3, a similar section to that in Fig. 2, showing the position of the mechanism after coupling.

The draw-bar A may be of any approved construction, and is attached to the car in the usual manner.

In order to manipulate the coupler from the side of the car, we provide a rock-shaft, B, secured by suitable bearings to the car, so as to extend across the same preferably a short distance above the draw-bar, and carrying at or near one or each end an operating-handle, C. The said rock-shaft also carries on each side of the draw-bar projecting arms D, to the outer or free ends of which are secured the ends of the chain E, the latter being double for a portion of its length. The chain passes over a pulley, F, supported above the said draw-bar, and carries the coupling-pin G.

Any suitable means may be employed for supporting the pulley F; but we prefer to pro-

vide a bracket that may be secured to the car above the draw-bar and that has adjustable bearings for the said pulley. Such bearings may consist of elongated openings or slots H in the wings of the bracket, and the pulley may turn freely on the pin I, that supports it, the said pin extending through the said slots and the ends provided with clamp-nuts. By moving the pin in the slot the pulley may be adjusted to or from the car, to adapt it to draw-bars of different lengths, and thereby insure a vertical lift of the coupling-pin. The outer part of the pulley being placed directly over said hole, as the said pin is held vertically when released, it will fall readily and directly to its seat in the draw-bar.

Hung from the draw-bar head by means of arms K, pivoted to the sides thereof, is an apron, L, which normally depends under said head. The arms K extend beyond the pivot-points, and said extended ends are connected by chains or ropes to the ends of the arms D on the shaft B.

When the shaft B is moved to turn the arms D downward, they carry with them the chain, which lifts the pin, and either releases the link in the operation of uncoupling or raises the said pin preparatory to coupling. As the arms D descend, they cause the arms K to move on their pivots and carry the apron L upward to a position in front of the mouth of the draw-bar.

That the parts may be maintained in the elevated positions, and be adapted to be automatically released and assume by gravity their normal positions, we attach a cam or eccentric, M, to the rock-shaft, preferably at or near the center, though it may be placed near one end of the said shaft, as shown in dotted lines, Fig. 1. As it is desirable that the said cam M should be adjustable on the shaft, so that the length of the arc through which the rock-shaft moves may be varied, we secure it to the same by a set-screw. When the shaft is moved, as stated, to carry the parts to their elevated position, the cam or eccentric bears with enough force on the car or other suitable bearing to hold the parts in the said position. The apron is suitably curved, and is placed at an angle to its supporting-arms, so that when elevated its outer end is lower than its inner end, and will thereby guide or direct the

link of an approaching car into the mouth of the draw-bar head, and the draw-bar of the said approaching car will then strike the said apron and depress the same sufficiently to release the cam on the rock-shaft from engagement with its bearing. The said apron and the link will fall and the shaft return to its normal position, thus completing the operation of coupling.

10 The coupler described is automatic in the operation of coupling, requires no springs or other parts that are liable to get out of order, and is adaptable to the ordinary constructions of draw-head and pin, and may be used on a
15 box or platform car.

Without limiting ourselves to the exact construction and arrangement of parts shown and described, we claim—

1. A coupling attachment for cars, consisting of a rock-shaft extending across the car and carrying projecting arms, a pulley secured to the car above the draw-bar, a guiding-apron pivotally hung from the said bar, and connecting-chains extending from the
25 arms on the rock-shaft over the pulley to the coupling-pin and to the apron-supports, whereby said apron and link are simultaneously operated by the entering link, substantially as described.

30 2. A coupling attachment for cars, consisting of a rock-shaft secured in suitable bearings on the car, a retaining cam or eccentric on the shaft, an apron pivoted to the draw-bar and connected to the said shaft, and connections between the said shaft and coupling-pin,
35 substantially as described.

3. Combined with means, substantially as described, for lifting the coupling-pin, a pulley having laterally-adjustable bearings in a bracket secured to the car, substantially as described. 40

4. Combined with means, substantially as described, for lifting the coupling-pin, a pulley, a pin carrying the same and provided with clamp-nuts at the ends, and a bracket
45 with wings having elongated slots, through which the said pin extends, substantially as described.

5. A coupling attachment for cars, consisting of a rock-shaft carrying projecting arms, a cam or eccentric on said shaft, an apron with arms pivoted to the draw-bar, a pulley in adjustable bearings above the draw-bar, and connections between the arms on the rock-shaft and the arms on the apron and the coupling-
55 pin, substantially as described.

6. The combination, with a draw-bar and pin, of a chain connected to the pin and passing over a pulley, a rock-shaft having arms attached to the chain, and an apron pivoted to
60 the draw-bar and connected to said arms, and arranged to be depressed by the entering link, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of
65 two subscribing witnesses.

THOMAS F. LAWSON.
THOMAS BAILEY.

Witnesses:

LEWIS BAILEY,
L. SCHEVENELL.