

(No Model.)

2 Sheets—Sheet 1.

M. BURT.  
CAR COUPLING.

No. 360,414.

Patented Apr. 5, 1887.

Fig. 1.

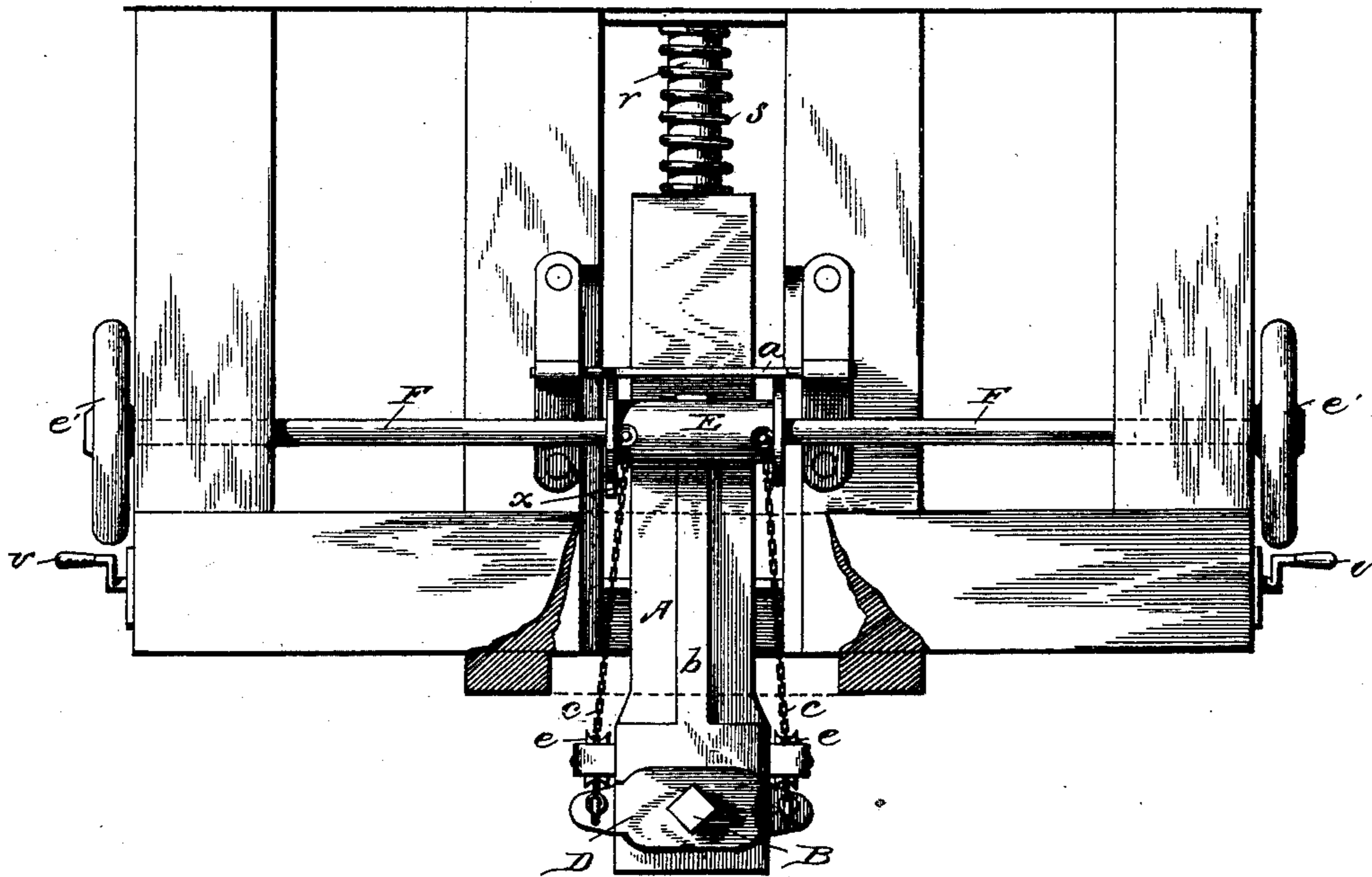
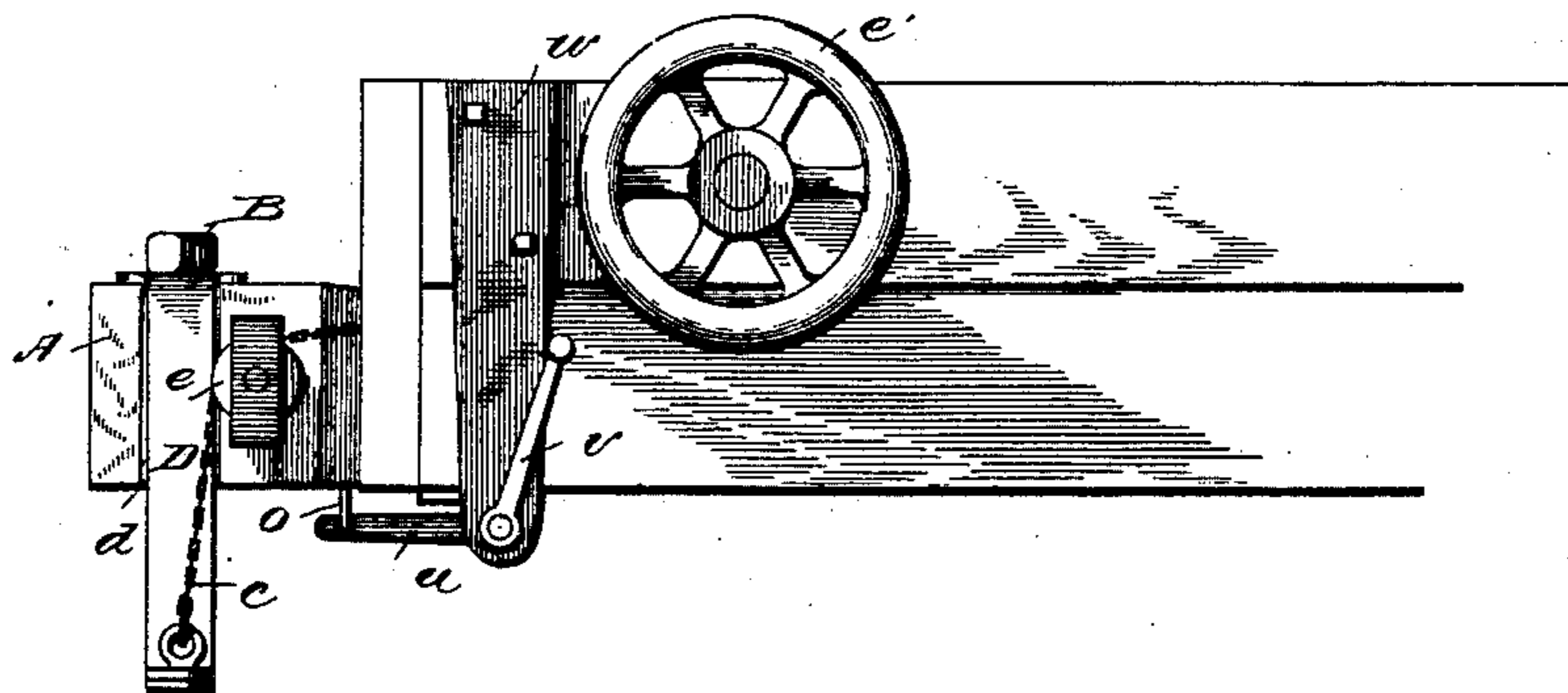


Fig. 2.



Witnesses

*W. V. Quisenberry*

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Inventor

*Marcena Burt*

By his Attorneys

*Gilbertson & Benjamin*

(No Model.)

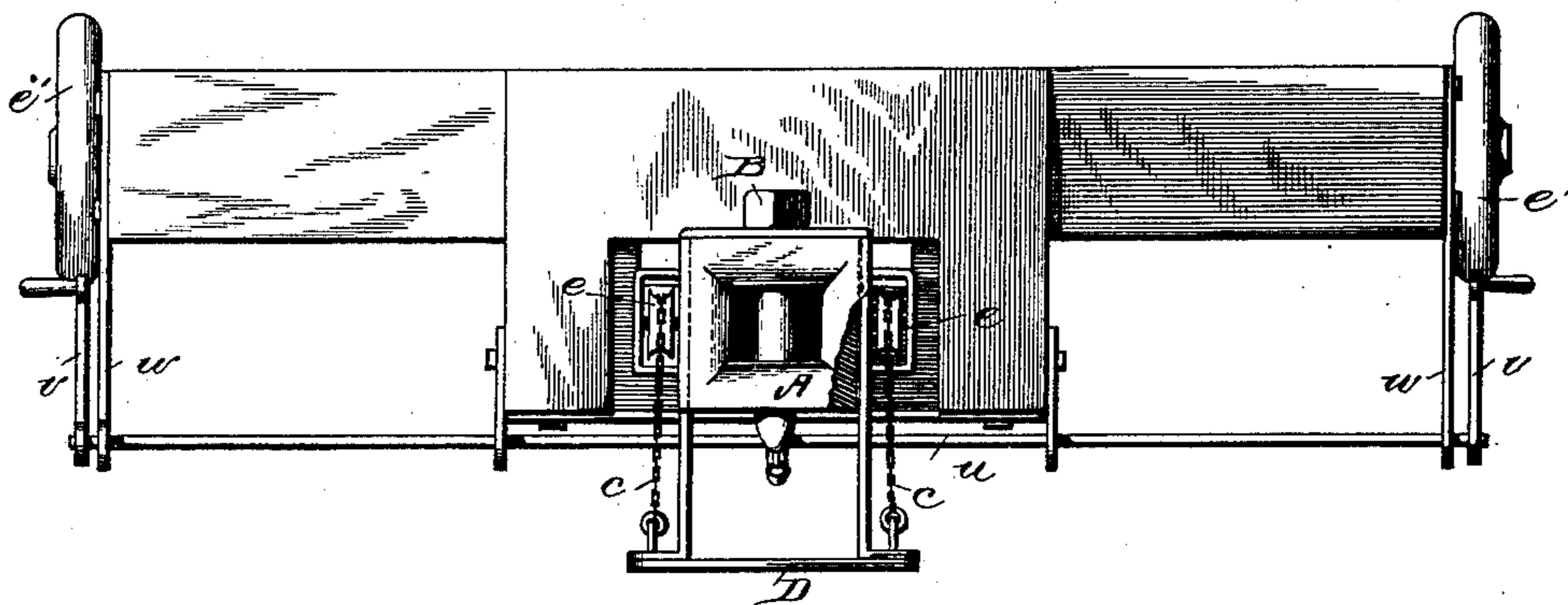
2 Sheets—Sheet 2.

M. BURT.  
CAR COUPLING.

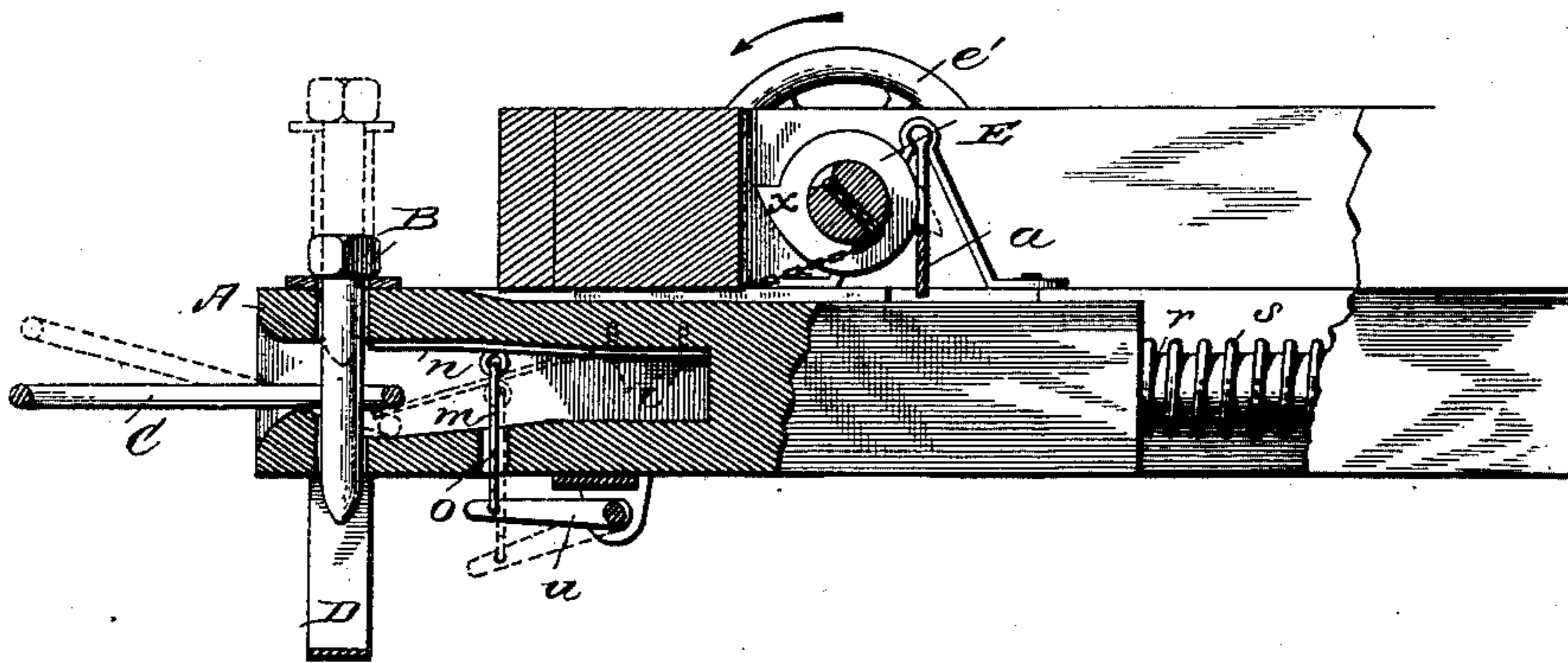
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*Fig. 3.*



*Fig. 4.*



Witnesses  
*Wm. H. Dwyer.*  
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Inventor  
*Mancera Burt*  
By his Attorneys  
*Gilson & Benjamin*

# UNITED STATES PATENT OFFICE.

MARCENA BURT, OF BEDFORD, MICHIGAN, ASSIGNOR OF ONE-HALF TO  
EDWARD WHITE, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 360,414, dated April 5, 1887.

Application filed August 6, 1886. Serial No. 210,230. (No model.)

*To all whom it may concern:*

Be it known that I, MARCENA BURT, a citizen of the United States, residing at Bedford, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of car-couplings in which the coupling is effected automatically and the uncoupling is accomplished by manipulation from the sides of the car, and without requiring the brakemen or operators to get into dangerous positions.

By my invention I am enabled to utilize the present form of link and pin, and couple cars of different heights with facility.

I will now describe my invention, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of my coupling applied to a car, the platform of the latter not being shown. Fig. 2 is a side view of the same; Fig. 3, a front view, and Fig. 4 a longitudinal sectional view, of the coupling.

A is the draw-head, slotted in the usual manner for the reception of the coupling-pin B, having its vertical sides grooved near the front, and being provided just back of the grooves *d* with small pulleys *e*, which may be secured to the draw-head in any suitable manner. On the top of the draw-head is a projection, *b*, and at the back to receive the thrust is a coil-spring, *s*, guided by a rod, *r*. A cavity is formed within the draw-head on the lower side to accommodate the link when it is pushed down, as will hereinafter appear.

A flat yoke or collar, D, slotted at the top for the reception of the coupling-pin B, fits about the draw-head and slides vertically in the grooves *d* of the latter. Chains *c*, attached to the bottom of the yoke, pass over the pulleys *e*, and are secured at their inner ends to a spool or reel, E, which is supported and turned by an axle, F, having wheels *e'* at its ends. The reel E is provided with a ratchet, *x*, made to engage and bear against the swinging dog *a* when the chains *c* are wound up, and so retain the parts in position.

Within the draw-head, and secured by set-screws *i* to its upper side, is a flat spring, *n*, which is fastened near its inner end by the set-screws. Near the front end of said spring is attached a rod or chain, *m*, which passes downward through a slot, *o*, in the under side of the draw-head, and connects with a T-shaped rod, *u*, which extends the width of the car and terminates in handles or cranks *v*, formed by bending the rod. The latter is supported near the handles by brackets *w*, hanging from the sides of the car or platform.

C is the coupling-link, of the usual shape and construction.

In the coupling of two cars the operator revolves the wheels *e* in the direction of the approaching car. The chains are thereby wound upon the reel and the yoke is caused to slide upward, carrying with it the pin B, the flanged head of which rests upon the top of the yoke. When the coupling-pin is elevated sufficiently to permit the entrance of the link C, the ratchet on the reel bears against the dog and prevents the unwinding of the chains, thus holding up the yoke and coupling-pin. When the cars come together the force pushes back the draw-head against the spring S, and the projection *b* strikes against the dog *a*, throwing it outward and releasing the ratchet on the reel. The weight of the yoke and pin will cause the chain to unwind when the reel-ratchet is released, and the pin in descending will pass through the link, (which entered the draw-head when the cars came together,) and thus effect the desired coupling. Should the cars be of different heights the brakeman at the draw-head holding the link, by pushing forward on one of the cranks *v*, will cause the T-shaped rod to pull down the outer end of the flat spring *n* just back of the coupling-pin, so that said spring will bear on the end of the link within the draw-head and raise its outer end to the height required for its entering the other draw-head, the cavity within the draw-head allowing the link to sink as the spring is pressed upon it.

In my drawings the reel and dog are shown beneath the platform of the car, the dog placed on the supporting-timbers; but I do not confine myself to this arrangement alone. In some cases it may be advisable to place the

dog and reel on the same line, but in front of the platform, or to suspend the dog from the floor or sills of the car. While the reel shown is provided with but one ratchet, where pins 5 of different lengths are used I may form a series of ratchets on the reel in order to raise a pin of any length sufficiently to permit the entrance and exit of the coupling-link. It will also be apparent that a crank may be substituted for the wheels  $e'$ , and the same ob- 10 ject (the turning of the reel) effected.

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

1. The combination, with a car, of a draw- 15 head provided on its inner surface with a flat spring secured at its back end to the upper side of the draw-head and having its front end resting back of the coupling-pin, and the spring-operating mechanism, as shown, and 20 for the purpose specified.

2. The combination, with a draw-head, of a link and coupling-pin, a yoke surrounding the draw-head and supporting the pin, with the chain, pulleys, reel, and rod for manipulating the yoke, as described. 25

3. The combination, with a car, of the draw-head provided with a flat spring within its throat, the link and pin, the rod and connecting-link for operating the flat spring, the yoke and its elevating devices, and the reel and dog 30 for holding the reel, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARCENA BURT.

Witnesses:

MAURICE E. NEALE,

CHRIS. PFANDER.