

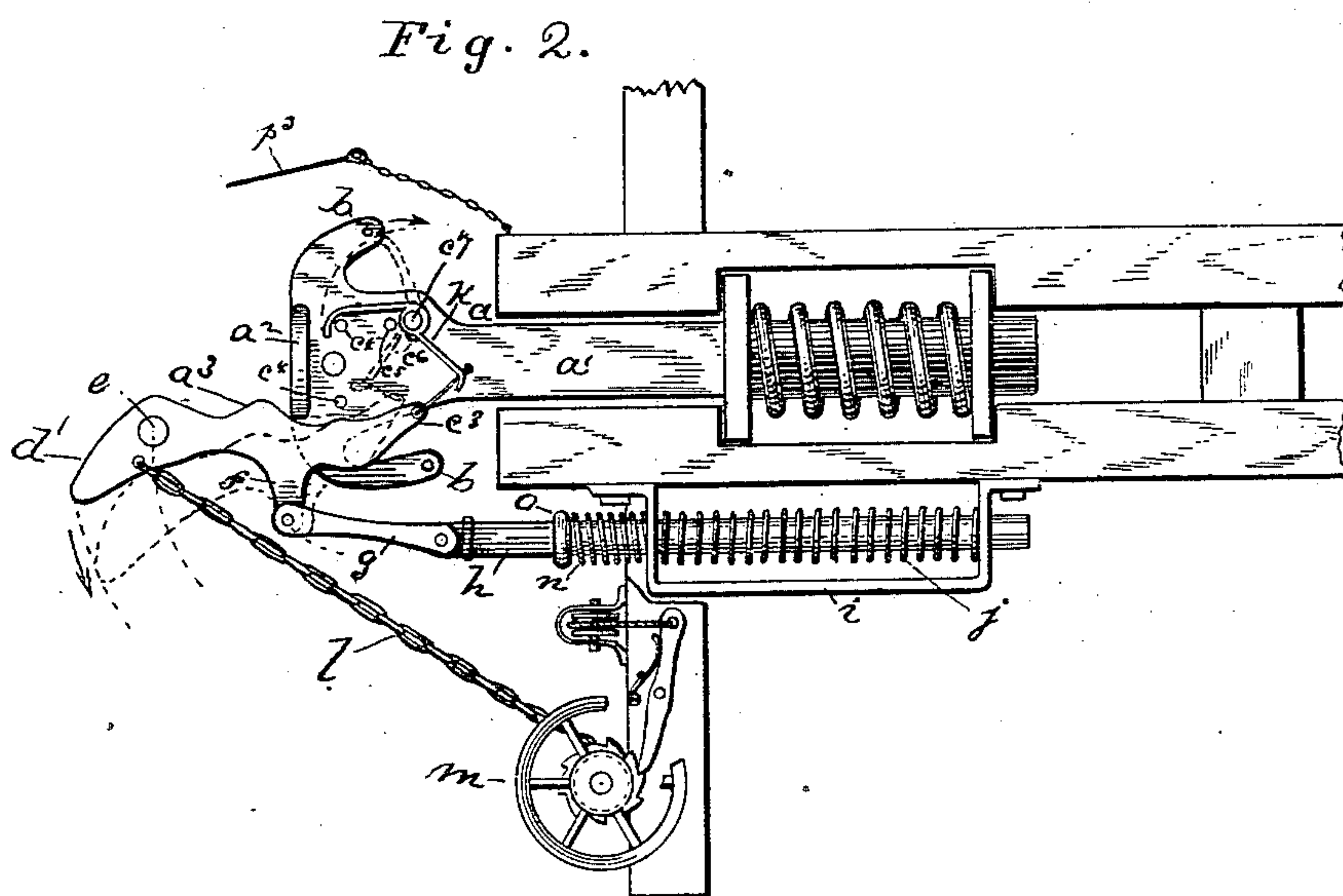
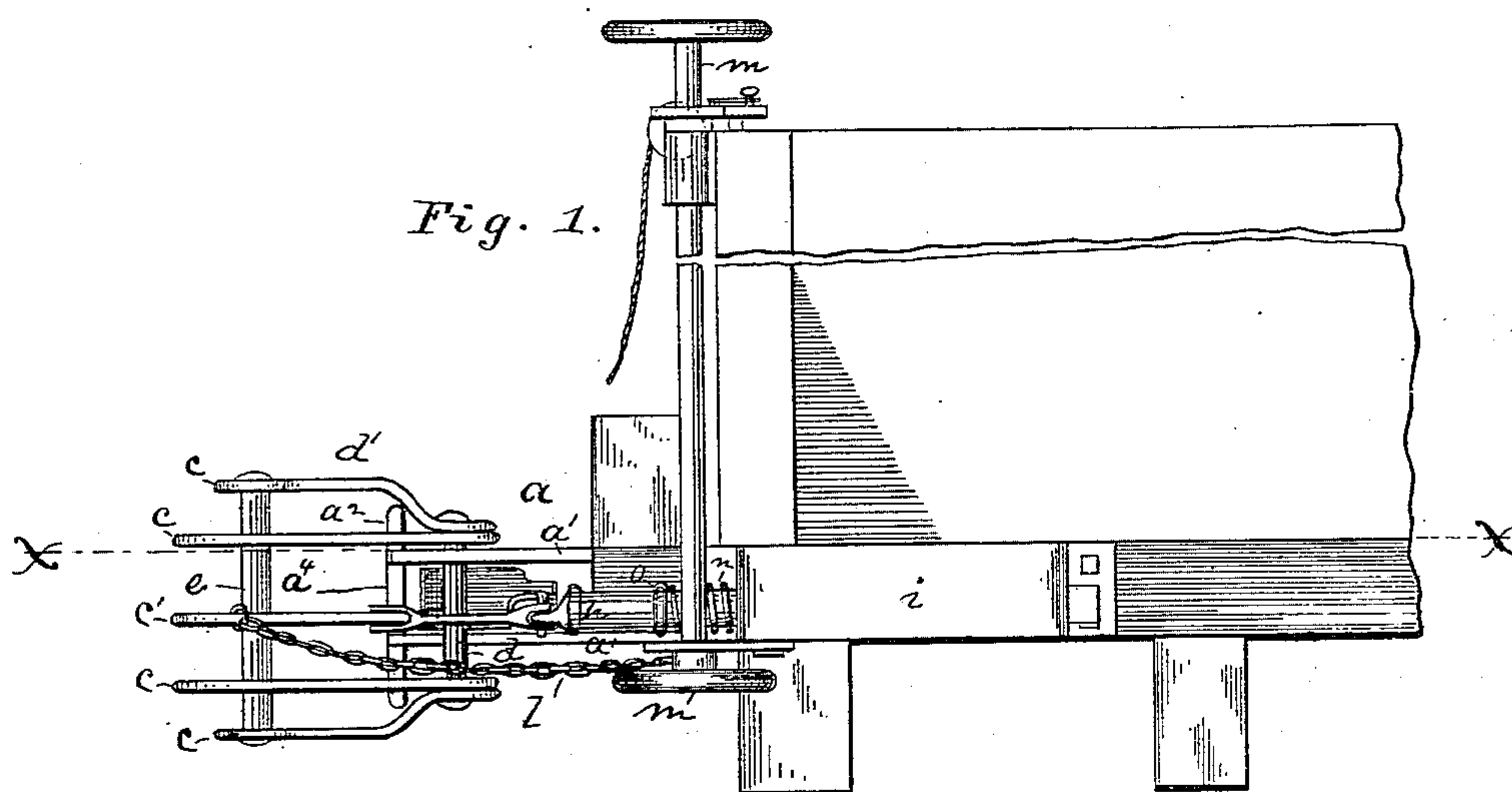
(No Model.)

2 Sheets—Sheet 1.

J. C. LOOK.
CAR COUPLING.

No. 277,300.

Patented May 8, 1883.



WITNESSES:

Thos. Houghton.

John Kemou

INVENTOR:

John C. Look

BY

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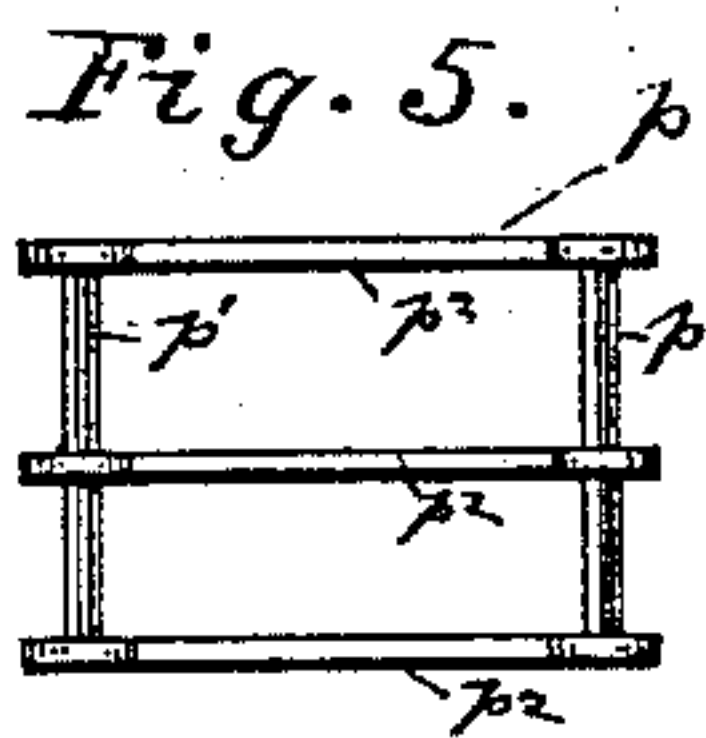
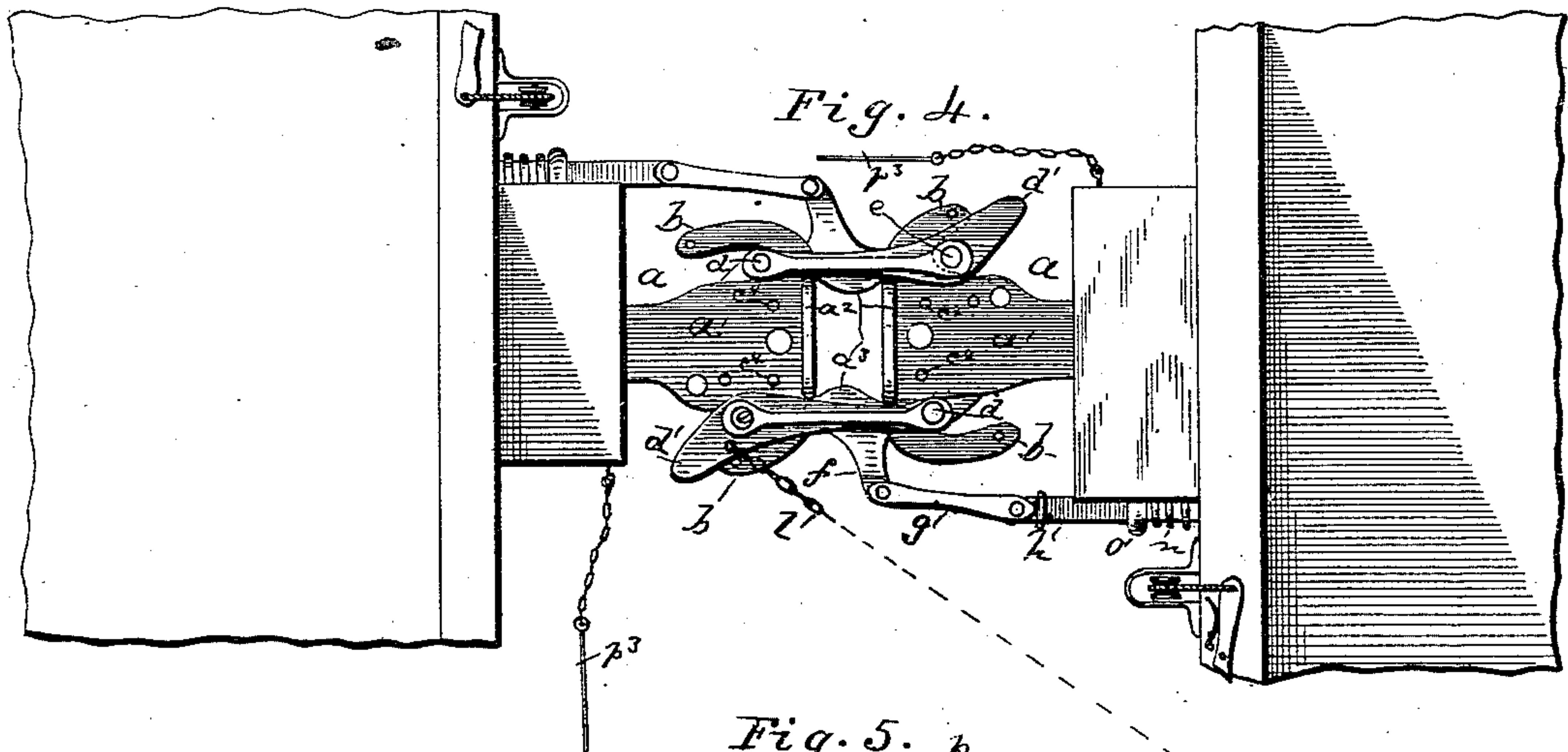
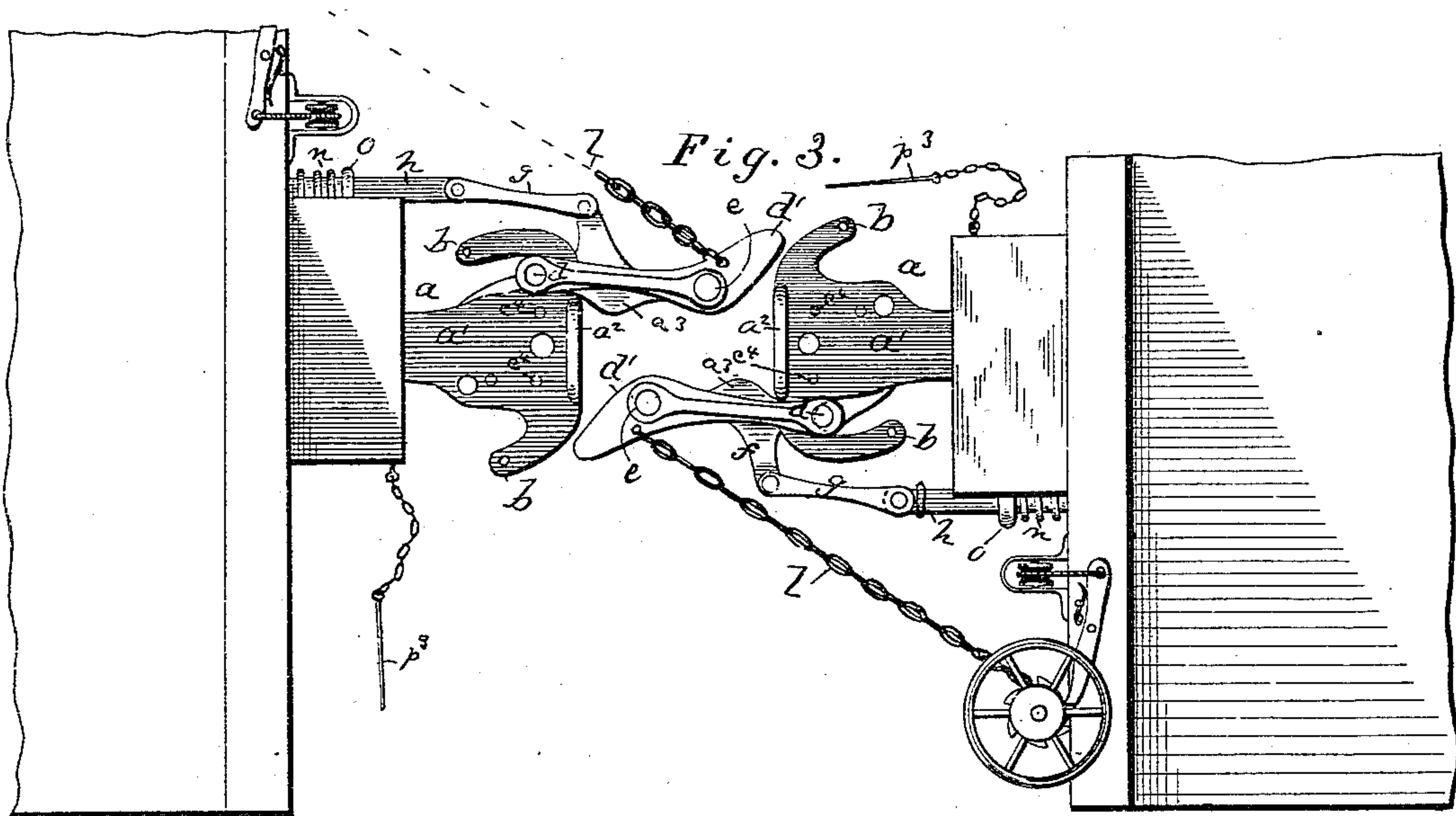
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WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN C. LOOK, OF YUBA CITY, CALIFORNIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 277,300, dated May 8, 1883.

Application filed March 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. LOOK, a citizen of the United States, residing at Yuba City, in the county of Sutter and State of California, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

My invention relates to improvements in car-couplings; and it consists in the peculiar construction and arrangement of the parts, as hereinafter more fully set forth, and pointed out in the claims.

Figure 1 is a side elevation of my improved car-coupling. Fig. 2 is a plan view of the same. Fig. 3 is a top view of parts of two cars in the act of coupling. Fig. 4 is a similar view of two cars coupled, and Fig. 5 is an elevation of one of the hand coupling links.

In the accompanying drawings, *a* represents the draw-head of a car-coupling composed of two parallel horizontal plates, *a'* *a'*, connected by studs *c'*, each plate being provided with a hook, *b*, on each side of it. The plates *a'* are connected in front at their middle by a plate, *a*², having a link-opening, *a*⁴. The draw-head on one car is similar to that on the car with which it is coupled, so that a description of one will answer for both.

d represents a vertical shaft adapted to engage loosely in the opening in the hooks *b* *b* on one side of the draw-head, and carrying a series of parallel horizontal bars, *c* *c*. The bars *c* *c* are enlarged and project outwardly at their front ends, and are connected together by the upright *e*, passing through the enlarged parts of the bars, forming a grid, *d'*. By this construction the grid or series of bars *c* *c* is pivoted to the draw-head in the aperture in the hooks *b* *b*, on one side of it.

To one of the bars *c'*, and on its outer sides, is a lug, *f*, to which the forward end of a strap, *g*, is pivoted, the rear end of the strap being pivoted to a rod, *h*, passing through holes in the opposite ends of a box, *i*, secured to the frame of the car. *j* represents a spiral spring secured to that part of the rod *h* lying within the box, the tension of which is always exerted to throw the rod forward and couple the cars.

The bar *c'* of the grid *d'* is provided on its inner face with a cam projection, *a*³, which in

uncoupling the cars will strike against the front edge of the plate *a*² of the draw-head and press the grid *d'* outward.

l represents a chain connecting the grid *d'* with a capstan, *m*, whereby the cars are uncoupled, the enlarged front portions of the bars *c* *c* engaging with the hooks *b* *b* of the opposite draw-head when the cars are coupled, and the bars *c* *c* or grids being arranged diagonally on opposite sides of the draw-heads on the cars to be coupled.

The rear end of the bar *c'* is provided with a tail end, *c*³, to which is connected by a link a wing, *k*, pivoted on a pin, *c*⁷, in the draw-head.

As the grid composed of the bars *c* *c'* is uncoupled by operating the capstan the tail end strikes one of the pins *c*⁴, which acts as a stop-pin, the wing *k* turning outwardly on its pivotal pin *c*⁷, and pushing the bars *c* or grid on the draw-head of the adjacent car from engagement with the hooks, thus uncoupling the cars.

n represents an auxiliary spring on the front end of the rod *h*, between the front end of the box *i* and a ring, *o*, sliding on the front end of the rod, the function of the auxiliary spring being to operate on the rod *h* after the bars *c* *c'* on one side have been uncoupled from the hooks.

A series of bars, *c* *c'*, forming a grid is employed to adapt the coupling of cars of different heights.

*c*⁵ represents a stop-pin, to prevent the wing *k* from being thrown too far outwardly by a lug, *c*⁶, on the wing striking against the stop-pin *c*⁵. It will be seen that in this construction an ordinary link and coupling-pins may also be employed, if desired.

p represents a grid composed of two uprights, *p'* *p'*, connected together by three parallel horizontal bars, *p*².

If it is desired to couple by hand, the grids *p*, as shown in Fig. 5, can be employed by passing them around the hooks of the adjacent draw-heads and securing them in place by means of the pins *p*³, passing through holes in the ends of the hooks.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the draw-heads *a*, composed of parallel plates *a'*, provided with hooks *b b* and studs *c⁴*, of grids composed of a series of parallel horizontal bars engaging in the opposite hooks of the draw-heads, substantially as described.
2. The combination, with draw-heads provided with side hooks, *b b*, of the grids *d'*, placed loosely in engagement with the hooks and adapted to have a limited longitudinal play therein, substantially as shown and described.
3. The grid *d'*, composed of the shafts or uprights *d e* and parallel bars having outwardly-projecting enlargements at one end, substantially as described.
4. The draw-head *a*, composed of the parallel plates *a'*, having hooks *b* formed in the sides of each, the plates being connected together by the parallel studs *c⁴*, and front plate, *a²*, having link-opening *a⁴*, substantially as described.
5. The combination, with the front plate, *a²*, of the draw-head, of the bar *c'* of the grid, provided with the cam projection *a³*, substantially as described.
6. In a car-coupling, the wing *k*, pivoted in the draw-head and connected with the tail end of the grid *d'*, substantially as described.
7. The combination, with the bar *c'*, provided with the tail end *c³*, of the wing *k*, pivoted in the draw-head, and rod *h*, provided with the auxiliary spring *n*, substantially as described.
8. The combination, with the wing *k*, pivoted in the draw-head and provided with the lug *c⁶*, of the stop-pin *c⁵*, substantially as described.
9. The combination, with the draw-head *a*, provided with hooks *b*, having holes near their ends, of the hand-grids *p* and pins *p³*, substantially as described.
10. The combination, with the draw-head *a*, constructed as set forth, of the grid *d'*, having the bar *c'*, provided with the cam projection *a³* and tail end *c³*, wing *k*, pivoted in the draw-head, strap *g*, rod *h*, provided with the springs *j n*, capstan *m*, and chain *l*, substantially as described, and for the purpose set forth.

JOHN C. LOOK.

Witnesses:

SOLON C. KEMON,
AMOS W. HART.