

J. E. HITT.  
Car-Couplings.

No. 135,552.

Patented Feb. 4, 1873.

Fig. 1.

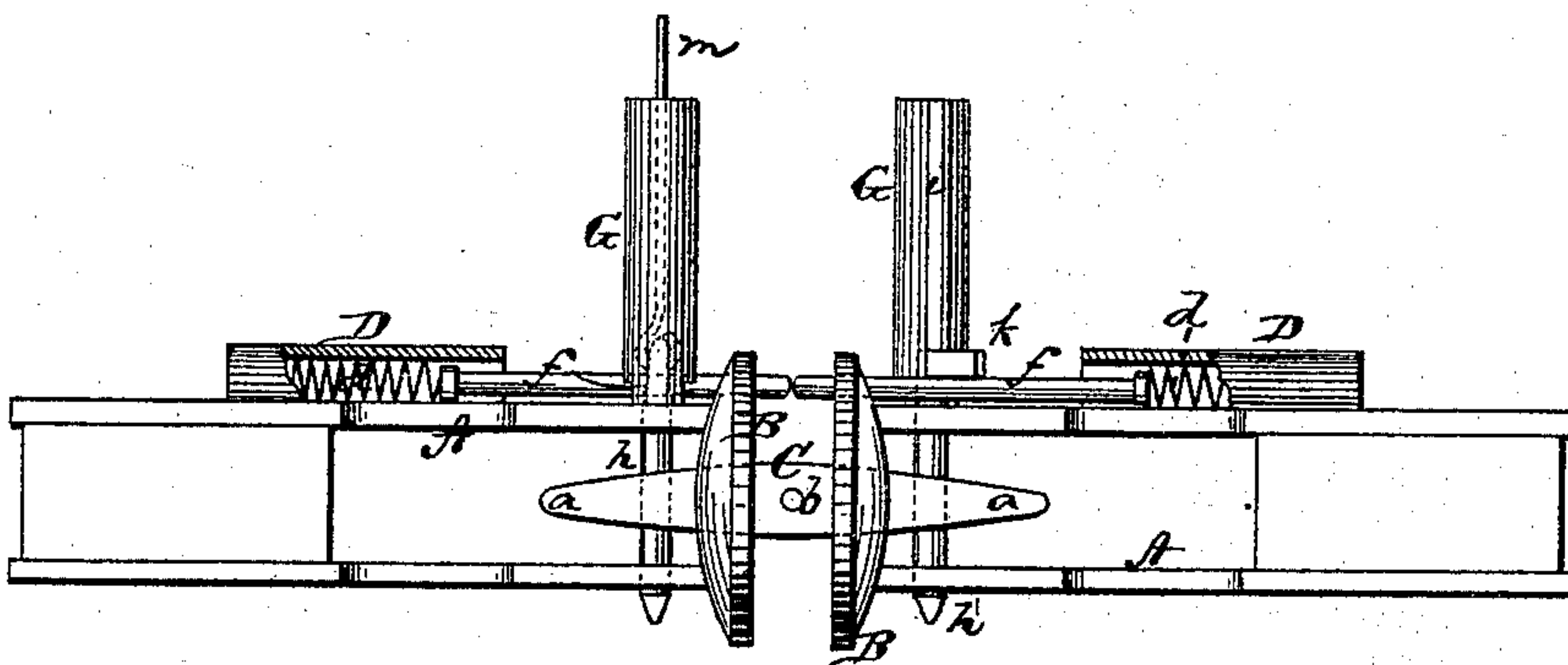


Fig. 2.

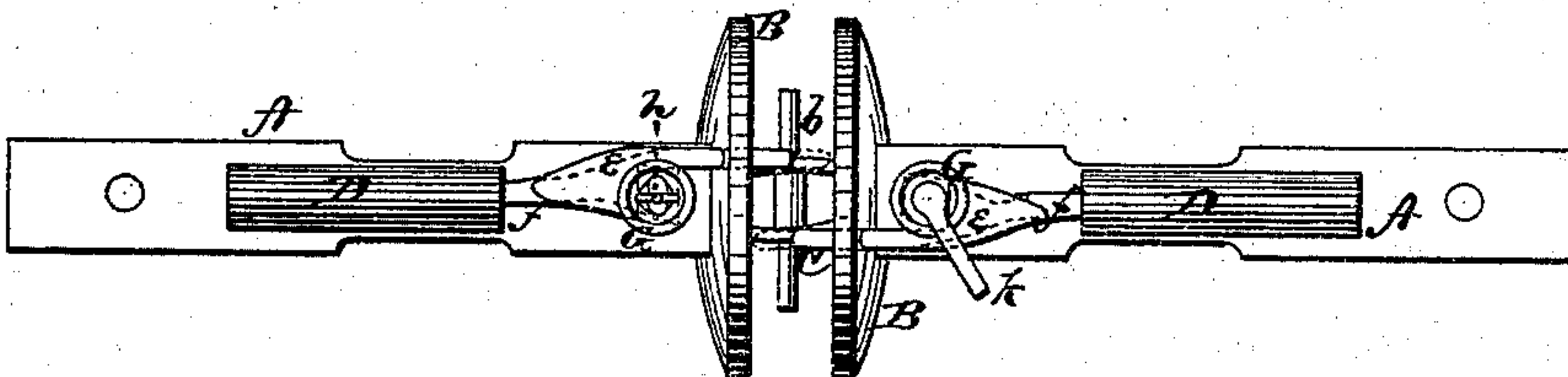


Fig. 3.

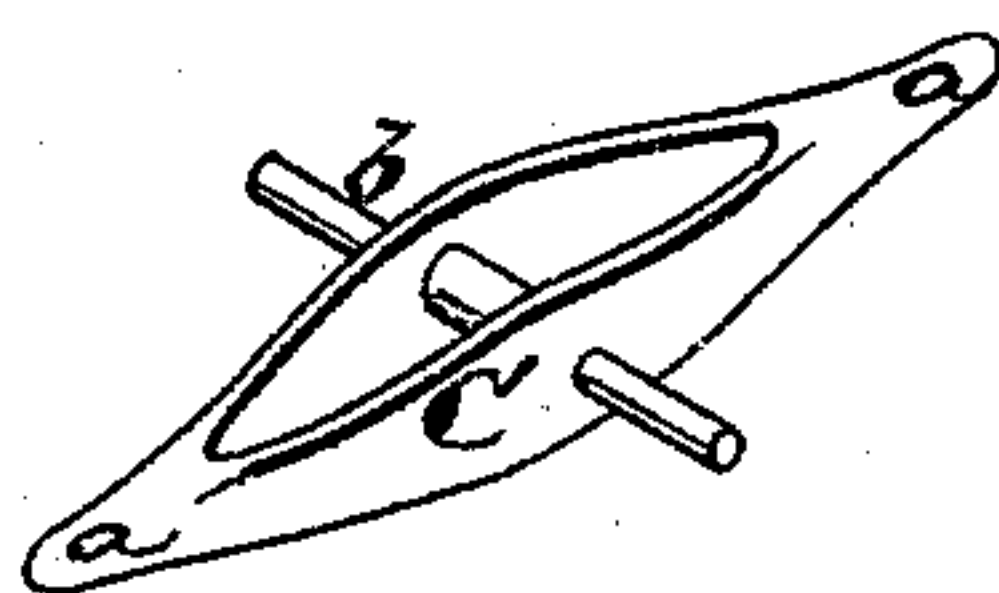
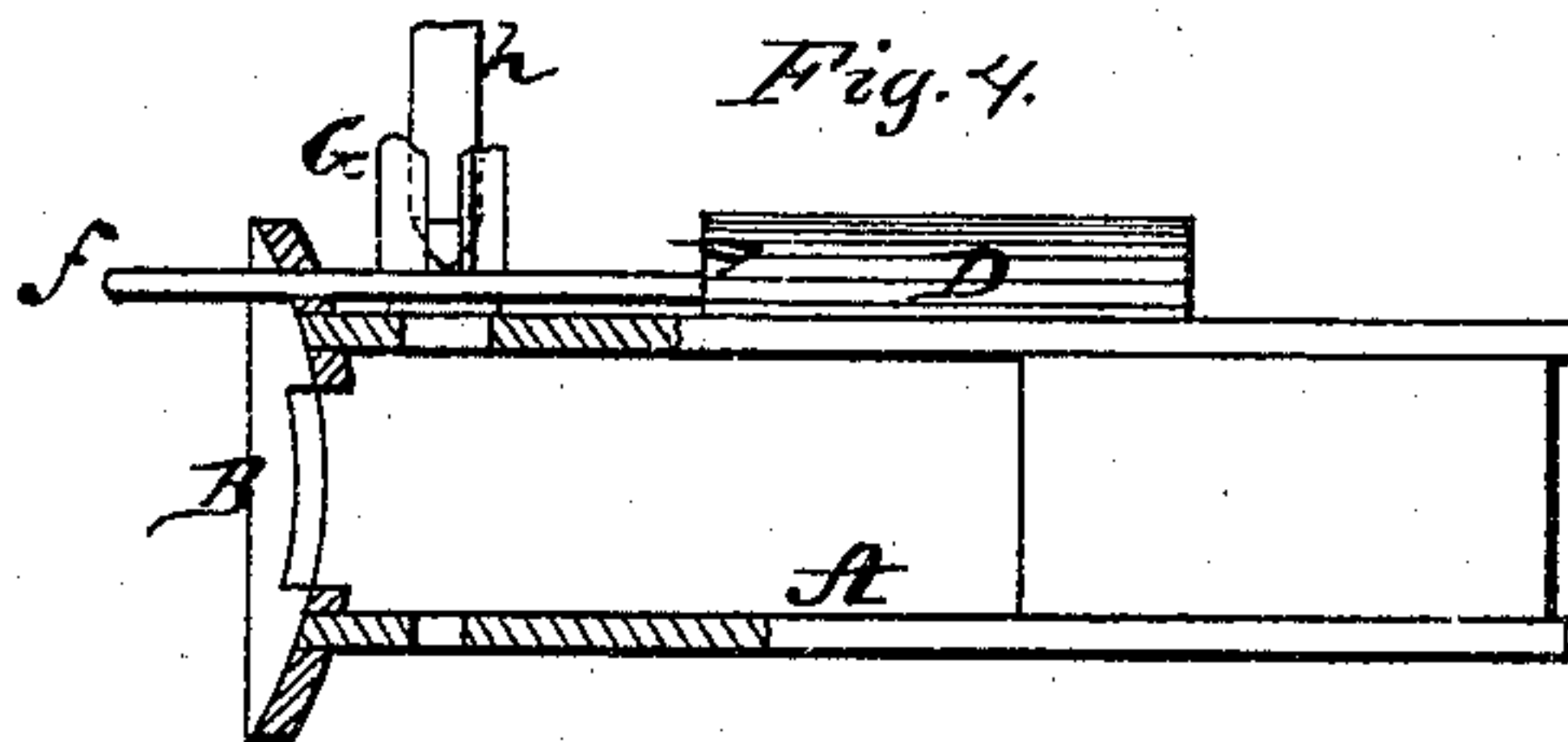


Fig. 4.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN E. HITT, OF BEMENT, ILLINOIS.

## IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 135,552, dated February 4, 1873.

*To all whom it may concern:*

Be it known that I, JOHN E. HITT, of Bement, in the county of Piatt and State of Illinois, have invented certain new and useful Improvements in Car-Couplings; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of the various parts composing a car-coupling, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which forms a part of this specification, and in which—

Figure 1 is a side elevation, and Fig. 2 a plan view of my car-coupling. Fig. 3 is a perspective view of the coupling-link, and Fig. 4 is a section of one of the draw-bars with its bumper.

A represents a draw-bar, constructed in any of the known and usual ways, and provided at its outer end with the bumper B, the outer face of which is made concave, as shown. C represents the coupling-link, which is made in the form of a shuttle, each end forming a blunt or rounded point, *a*, and through the center of the shuttle is a stay-rod, *b*, the ends of which extend a suitable distance beyond the sides of the link. This stay-rod prevents the link from passing back beyond the center. The concave face of the bumper, when the cars are run together, pushes the link back and raises the point of the link to the center, and allows the two to come together. On top of the draw-bar A is secured a horizontal tubular casing, D, which is open at its outer end and contains within it a spiral spring, *d*. This spring acts upon a sliding rod, *f*, placed in said casing, and the outer end of which passes through a hole in, and projects beyond, the bumper B. On the side of the rod *f* is a projection, *e*, which passes through a slot in the base of a vertical tube, G, placed on the draw-bar over the hole for the coupling-pin *h*. The

coupling-pin *h* being drawn up, the spring *d* pushes the rod *f* outward till the projection *e* enters the tube G, and there forms a support for the pin to stand on.

Now, when the cars are brought together to be coupled the bumper B on one car strikes the end of the rod *f* on the other, forcing the same inward, so that the projection *e* will recede from the tube G, and the pin *h* drop down of its own weight, coupling the cars together.

For flat cars or passenger-cars the tube G should have a vertical slot, *i*, its entire length, as shown in Fig. 1, and the pin *h* have a handle, *k*, extending through said slot. But for box-cars the tube G should be without said slot, and a rod, *m*, runs from the pin to the top of the car, by either of which means the pin may readily be raised to uncouple the cars.

I am aware that coupling-pins have been guided to their places in the links by means substantially like mine; and that they have been held ready for coupling by being supported on bars, &c., which are forced inward against a spring and from underneath the pin when the bumpers are brought in contact. My invention relates particularly to the peculiar construction of coupling-link C, having solid rounded ends in connection with the concave or bell-mouthed draw-head, and the attachments shown, whereby said link is more readily carried within the openings in said draw-heads, while the pin *b* prevents its being forced too far one way or another while the coupling is being made.

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

The shuttle-link C, having solid rounded ends *a* and a cross-bar, *b*, extending beyond the sides thereof, as shown, in combination with the concave draw-heads B, the coupling-pins G and supporting-rods *f*, the whole arranged and operating as described.

In testimony whereof we have hereunto signed our names.

JOHN E. HITT.

Witnesses:

MARION COOTER,  
JOHN R. NELSON.