

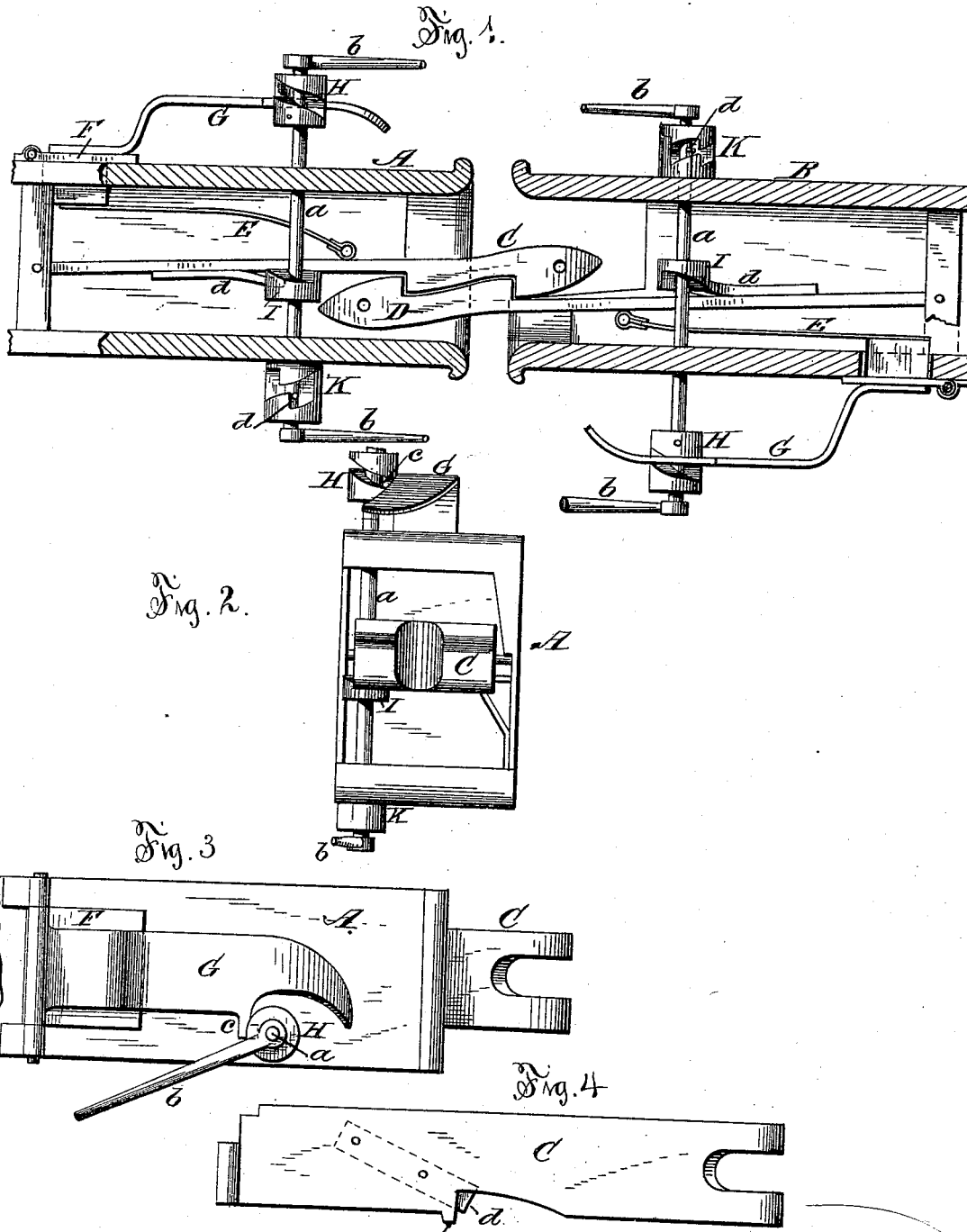
(No Model.)

P. BRINKERHOFF.

CAR COUPLING.

No. 343,294.

Patented June 8, 1886.



WITNESSES

J. L. Curand
L. L. Miller.

INVENTOR

Parcel Brinkerhoff.

per *Chas H Fowler*

Attorney

UNITED STATES PATENT OFFICE.

PARCEL BRINKERHOFF, OF BATTLE CREEK, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 343,294, dated June 8, 1886.

Application filed February 11, 1886. Serial No. 191,541. (No model.)

To all whom it may concern:

Be it known that I, PARCEL BRINKERHOFF, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a horizontal section through the draw-heads, showing the operating mechanism of the coupler; Fig. 2, an end view of one of the draw-heads; Fig. 3, a side elevation thereof, and Fig. 4 a detail view of one of the coupling-bars.

The present invention is designed as an improvement on my former patent bearing date October 27, 1885, No. 329,266, in which two hooked coupling-bars are employed pivoted at one end to the draw-heads and adapted to engage with each other when the opposing draw-heads come together; and the invention consists in the details of construction substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A B represent the opposing draw-heads of a railroad-car, having pivoted therein the notched coupling-bars C D. The notched ends of the coupling-bars are retained in engagement with each other by a suitable spring, E, the free ends thereof bearing against the back of the bars, the opposite end of the spring being connected to a hinged door, F, said door being hinged at the inner side or end of the draw-head or at any other preferred place. Rods *a* have their bearings in the sides of the draw-heads, and are operated by suitable levers, *b*, on the extremities of the rods, whereby they can be operated from either side of the car. Any suitable means, however, may be employed for operating the rods, as found most desirable.

To the door F is secured one end of a plate, G, extending out some distance from the side of the draw-head and having an upwardly-projecting arm, *c*, which engages with a grooved cam, H, on the outer end of the rod *a*. Thus by turning the rod in the proper direction the

door F will be pressed in to bring the spring with increased tension against the side of the draw-head.

Connected to the rod *a*, within the draw-head, is a cam, I, and bearing against the face of the cam is an arm, *d*, rigidly connected to the side of the coupling-bar, which, by the turning of the rod, will bring the notched end of one coupling-bar against that of the other, relieving the spring.

The action of the two cams above described are simultaneous in their action on the spring and draw-head, the object thereof being to reduce the power of the spring more than is given to it by the movement to the hooks; hence the bearing-face of the cam H may be steeper, to give a longer movement inward and outward to the plate G than the face of the cam I that gives movement to the notched coupling-bar.

A grooved cam, K, is connected to one side of the draw-head, through which loosely passes the end of the rod *a*, which has a pin or pins, *d*, for engaging with the inclined faces of the cam, thereby providing additional means for laterally moving the rod at the same time it is being turned.

The nearer the rods *a* are placed to the inner ends of the coupling-bars C D, the less movement of the levers *b* is required to act upon the bars and take the power off the springs, and the increased inclination of the face of the cam H over that of the cam I enables a greater extent of movement at the hinge-connection of the door than there is to the coupling-bars.

If preferred the plate G and cam H may be located inside the draw-head, at the side thereof, in place of on the outside, as shown; these changes coming within ordinary mechanical skill and not affecting the principle of the invention.

I do not desire to confine myself to any special form of hooked coupling-bars; and, if preferred, a single hook may be used in place of the double hooks shown, and a spiral or any other suitable spring may be used in place of the spring E, and many other minor changes may be made in the coupling that would come within the scope of ordinary mechanical skill.

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

1. In a car-coupler, the combination, with
5 the draw-head thereof and pivoted hooked coupling-bars, of a transverse rod having its bearing in the sides of the draw-head, a grooved cam connected to said rod, a hinged plate operated thereby, and a suitable spring
10 connected to the plate and bearing on the coupling-bar, substantially as and for the purpose set forth.
2. In a car-coupling, the combination, with
15 the draw-heads thereof and suitable coupling-bars pivoted thereto, a rotary transverse rod, two independent cams connected to the rod, a suitable spring bearing on the coupling-bar, and an arm engaging with one of the
20 cams, the cams simultaneously controlling or acting on the bar and spring, substantially as and for the purpose set forth.

3. In a car-coupler, a pivoted hooked coupling-bar located within the draw-head thereof, a hinged plate, and a spring connected thereto and adapted to bear on the coupling-bar, 25 in combination with a rotary transverse rod and three independent cams, two of which are connected to the rod to operate the coupling-bar and spring and the other cam connected to the draw-head and assisting the lateral 30 movement of the rod, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

PARCEL BRINKERHOFF.

Witnesses:

JEREMIAH RALL,
N. E. HUBBARD.