I. R. TITUS & H. C. BOSSINGER.

CAR-COUPLING.

No. 185,269. Patented Dec. 12, 1876.

Fig 1

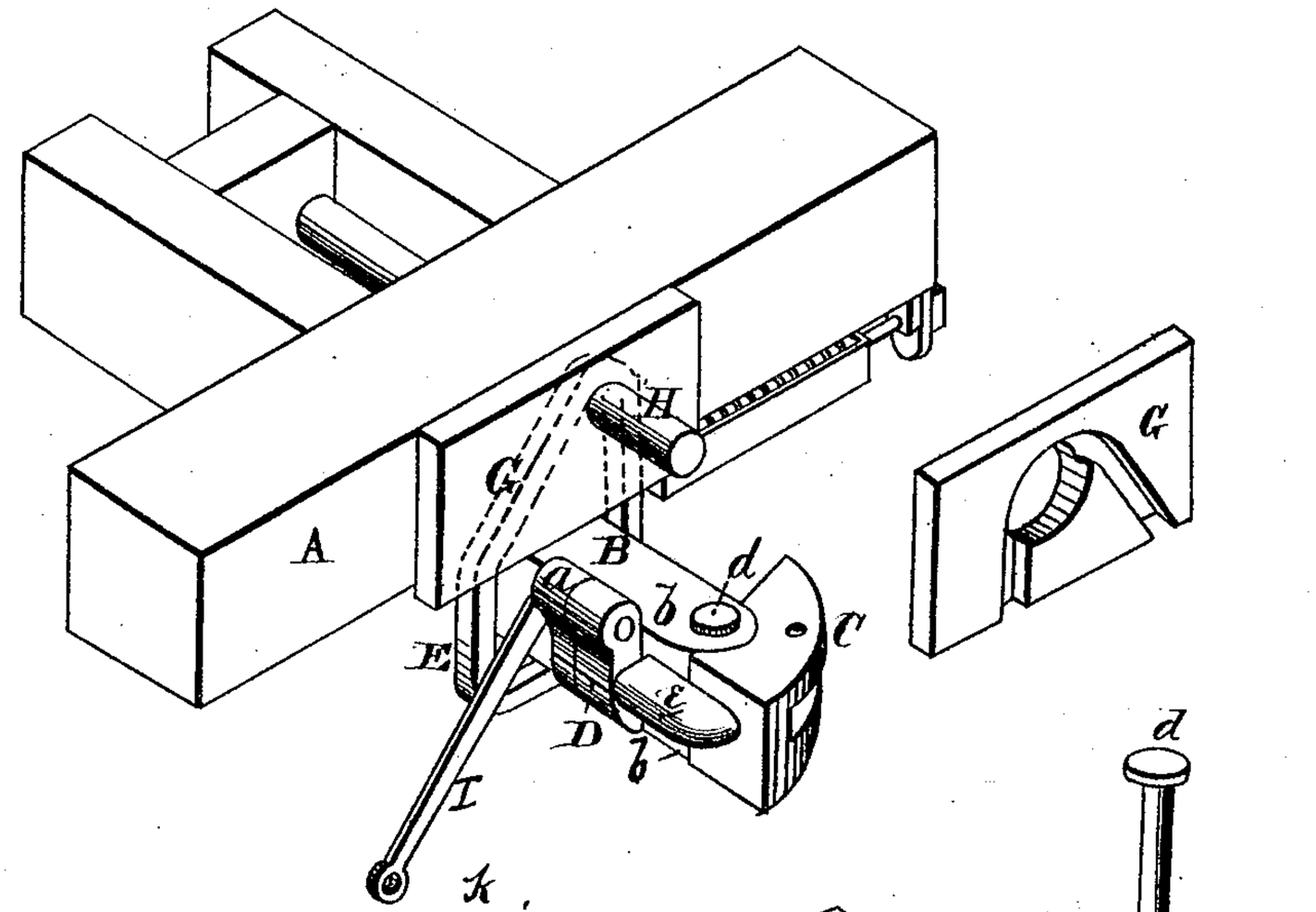

Fig 2

WITNESSES
Franck L Durand
Henry N. Miller

INVENTOR
I. R. Titus
H. C. Bossinger.
By T. H. Alexander
Attorney

UNITED STATES PATENT OFFICE.

IVOR R. TITUS AND HENRY C. BOSSINGER, OF HUNTINGTON, W. VA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **185,269**, dated December 12, 1876; application filed May 18, 1876.

To all whom it may concern:

Be it known that we, IVOR R. TITUS and HENRY C. BOSSINGER, of Huntington, in the county of Cabel and State of West Virginia, have invented certain new and useful Improvements in Car-Coupling; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

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

In the annexed drawing, Figure 1 is a perspective view of our improved car-coupling. Fig. 2 is a bottom view of the same.

A represents the end sill of the car, under which is the stem B, with swinging head C and uncoupling-latch D. The rear end of the stem B is fastened to the frame-work in such a manner as to have a slight lateral motion, and it is supported by a stirrup, E, which is located at the front of the end sill B, and under the buffer-plate G, and is supported by the buffer rod H, as shown. By placing this stirrup on the front side of the end sill there is room made for the coupling-spring under the end sill, and the stirrup also supports the coupling as near the point of contact and vertical strain as possible. On the back of the stem B, at a suitable distance from its front end, is a lug, *a*, which answers the purpose of a journal-box for the uncoupling-lever I, and a seat for the uncoupling-latch D to rest against when under strain. The front end of the coupler-stem B terminates in two prongs, *b b*, which are rounded on their ends. Between these the head C is hung by passing a pin, *d*, through the said prongs and the stem C′ of the swinging head, thus forming a powerful hinge, which allows the head to swing with perfect freedom. The pin *d* passes through a little in front of the face or point of the hook, so as to insure the closing of the hook by the pressure of the opposing head upon the stem behind the center of the pin. On the back of the swinging head C is a strong rib, *e*, behind the rear extremity of which the uncoupling-latch D drops as the head closes, securely locking it in position. The uncoupling-latch D is securely fastened to the lever I, so that by raising the lever the latch is lifted out of its seat, allowing the rib *e* on the back of the head to pass under it, and the head to swing around and uncouple as the receding head passes out. In this position it will remain until again closed by an approaching head or otherwise, when the latch will again fall into its seat.

The coupling-spring *f* is located directly under the end sill at right angles with the stem of the coupler, and is inclosed in a wrought-iron case, J, open at two sides, so as to admit the spring, and at both ends there are round holes, through one of which the spring-bar *h h′* passes, and through the other the bolt *k*, by which it is fastened to the spring-bracket L. This bracket is bolted to the end sill A, and the other point or arm thereof is slotted to allow the connecting-bolt *k* to be raised or lowered to suit the coupler. This bolt is securely fastened to the bracket by two nuts, *i i*, one on each side of the bracket. These nuts may be used to adjust the tension of the spring, if necessary.

The spring-bar consists of two ordinary eye-bolts, *h h′*, joined together, the eyes forming the joint. One of these bolts passes through the stem of the coupler, and is secured by a nut or key. The other bolt, *h*, passes through the end of the spring-case J and spring *f*. At the outer end of this spring is a follower, *m*, placed on the spring-bar and held in place by a nut, *n*, which also regulates the tension of the spring. This is done by revolving the spring-case, the nut being carried around with it, shortening or lengthening the spring, as the case may require.

This coupler may be attached to any of the ordinary draw-bar attachments now in use, but is more particularly designed to be used in connection with the spring-buffer and connections recently patented to us. It is perfectly automatic, and cannot be fixed but what it will couple. When one or both of the heads are swung back and are coming in contact they revolve until the latch falls. When the heads are forward and the latch is down, where the opposing heads come together they compress the spiral springs until they pass and are again coupled. It is adapted for both freight and passenger cars, as it is cheap,

strong, and reliable, having no loose parts that can be stolen. It can be uncoupled from the side or top of the car, and that under considerable strain. It can be coupled to most of the devices now in use, has no light parts to break or get out of order, and can be used with spring-buffers without any slack, and with dead woods with very little.

While shifting in yards, and it is desirable that it should not couple, the lever I may be held up or placed on a rest that will support it, so that the latch will not drop, and the head will swing back and forth without coupling.

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

1. In a car-coupling, a coupling-stem, B, forked at its front end, and provided with a swinging hook-shaped head, C, with stem C′, substantially as and for the purposes herein set forth.

2. A self-closing latch, D, in combination with the swinging head C and stem B, for the purposes herein set forth.

3. The combination of the stem B with lug *a*, the swinging head C with stem C′ and rib *e*, the latch D and lever I, all constructed substantially as and for the purposes herein set forth.

4. The stirrup E, arranged on the front of the sill A, in combination with the coupler-stem B, buffer-plate G, and buffer-rod H, substantially as and for the purposes herein set forth.

5. The combination, with the coupler-stem B, of the spring-bar *h h′*, case J, spring *f*, follower *m*, bolt *k*, with nuts *i i*, and slotted bracket L, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

IVOR R. TITUS.
HENRY C. BOSSINGER.

Witnesses:
JOHN H. OLEY,
E. ENSIGN.