

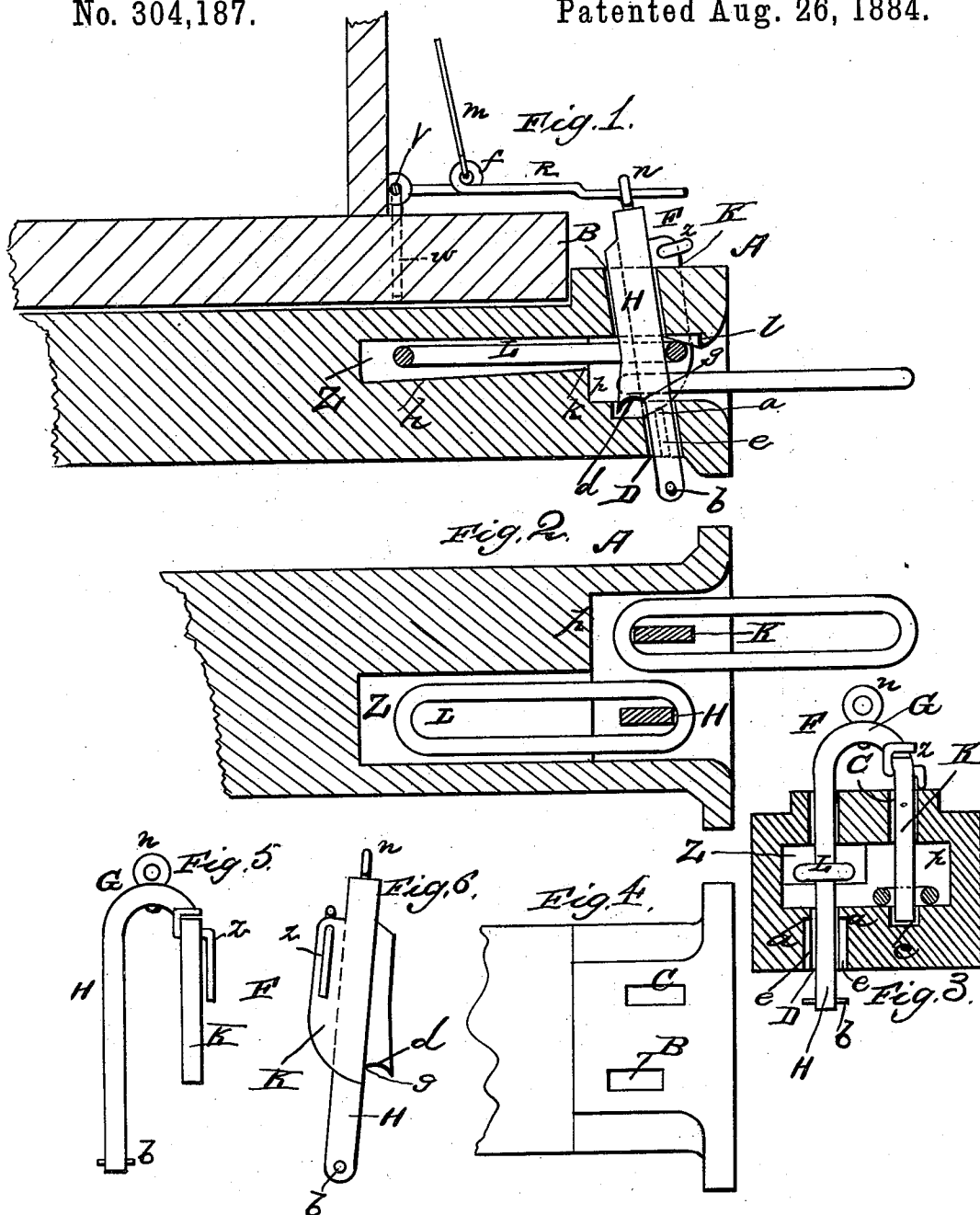
(No Model.)

R. H. DOWLING.

CAR COUPLING.

No. 304,187.

Patented Aug. 26, 1884.



WITNESSES
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UNITED STATES PATENT OFFICE.

ROBERT H. DOWLING, OF NEWARK, OHIO.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 304,187, dated August 26, 1884.

Application filed January 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. DOWLING, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Car-Couplings; and I do 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a vertical longitudinal section of this invention. Fig. 2 is a horizontal section. Fig. 3 is a cross-section. Figs. 4, 5, and 6 are detail views.

This invention has relation to means for coupling and uncoupling railway-cars; and it consists in the construction and novel arrangement of devices, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, the letter A designates the draw-head, which is of the usual bell-mouth form, except that the mouth is made wider than is common, in order to provide for a double coupling. The top of the draw-head is provided with two slots, B and C, and below the former, in the bottom of the draw-head, is made an opening or way, D, which extends entirely through the bottom. In each side of the passage-way D is formed a groove, *e*, which extends from below upward, but not entirely through the bottom, terminating in stop-shoulders *a*.

F indicates the combined pin and slide, the upper portion of which extends transversely and usually in arched form, as shown at G.

H represents the slide-arm, which extends downward and usually slightly forward through the passage-way D, and is provided at its lower end with a key, *b*, which extends transversely, its ends moving in the grooves *e* when the slide is drawn up. The engagement of this pin with the shoulder-stops of the grooves *e* serves to prevent the slide from being raised clear of the bottom.

K indicates the pin branch, which is shorter than the slide, and extends downward through

the slot C, parallel to the slide-arm, to the bottom of the draw-head, in which is formed a recess, *c*, to receive the point of the pin branch and support it when in operation. The lower front edge of the pin branch is made beveled, to facilitate the automatic action of the entering link in raising the pin. The rear edge of the slide-arm is notched at *d* to provide a bearing-shoulder, *g*, which serves to engage the end of the link L, which is permanently connected to the slide, and to hold it in horizontal position when projected from the mouth of the draw-head. This shoulder also enables the brakeman to move the link in such a manner as to cause its projecting portion to rise or fall, if necessary, in coupling with draw-heads which may be higher or lower than usual. Back of the slide the wall of the cavity of the draw-head inclines slightly forward, as shown at *h*, to prevent the link from being thrown upward by the motion of the cars.

Z represents an elongated cavity or retracting-recess extending rearwardly from that portion of the draw-head in which the slide is placed, and having its mouth *k* in an elevated position, and directed toward a small shoulder, *l*, in the roof of the draw-head in front of the slide. This cavity is designed to receive the link L when not in use, or when it is required that a coupling shall not be effected. The link rests in this cavity loosely, but its inclined position and the abutment *l* serve to prevent it from being thrown out casually into projected position. At the same time it is easily reached when required for use. The link of the opposite draw-bar is connected in the same manner to its slide-arm. Either link may be used in coupling, according to convenience or the exigencies of the case; or both links may be employed when trains are of great length or when traveling on heavy grades. In rear of the pin is formed a solid abutment, P, to prevent the link from being pushed back too far. In uncoupling, the slide is raised, its pin-stop serving to prevent its further rise when the point of the pin branch has reached the roof of the draw-head.

To the transverse portion of the combined slide and pin is connected an eye, *n*, which is engaged to an angle-arm, R, which is attached to a transverse rod, V, having crank ends *w*,

whereby said rod can be turned in its bearings to raise the pin and slide in uncoupling. To a bend or coil, *f*, in this arm may be connected a rod or chain, *m*, which, extending to the roof of the car, serves to enable the brakeman to operate the coupling from the roof.

Connected to the top portion of the combined pin and slide is a pivoted gravitating prop, *z*, having an outward handle-arm, *t*, whereby it may be turned. When the slide is fully raised, the prop swings automatically downward, its front engaging the top of the draw-head, and serving to prevent the coupling operation when not required.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a draw-head, the inclined link-receiving recess *Z*, back of the main cavity, and the abutment *l* in the roof of the draw-head in front of the mouth of said recess, adapted to hold the link in retracted position, substantially as specified.

2. The combined pin and slide, consisting of the transverse portion, the pin branch *K*, hav-

ing a beveled lower end, and the slide-arm *H*, longer than the pin branch parallel thereto, and having a transverse key in its lower end, substantially as specified.

3. The combination, with the combined slide and pin, affording a double-link connection, of the wide-mouth draw-bar having on one side a retracting-recess for one link back of the main cavity, the swinging prop pivoted to the slide and pin, the crank-rod, and the angle-arm connected to an eye of the pin and slide, substantially as specified.

4. A wide-mouth draw-head having a combined slide and pin, consisting of parallel portions *H K*, connected by a transverse portion, a link permanently connected to the slide portion, and a recess back of said slide portion to receive and hold said link out of the way when not in use, substantially as specified.

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

ROBERT H. DOWLING.

Witnesses:

JAMES E. LAWHEAD,
CHAS. M. WING.