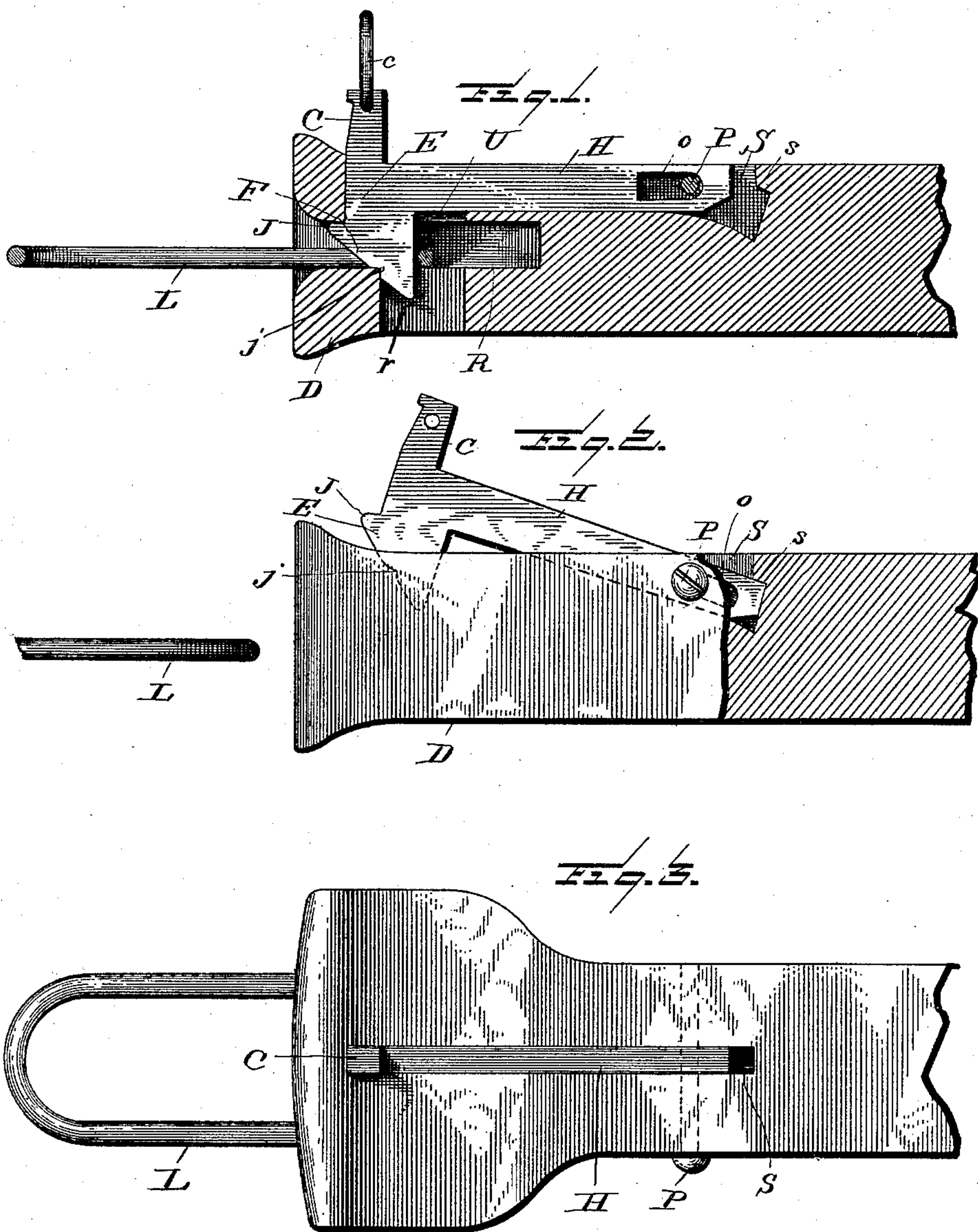


(No Model.)

A. J. GUNN.
CAR COUPLING.

No. 408,345.

Patented Aug. 6, 1889.



Witnesses

Inventor

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UNITED STATES PATENT OFFICE.

ANDREW J. GUNN, OF VALLEY FALLS, KANSAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 408,345, dated August 6, 1889.

Application filed June 8, 1889. Serial No. 315,547. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. GUNN, a citizen of the United States, residing at Valley Falls, in the county of Jefferson and State of Kansas, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to car-couplings, more particularly of that class known as "link and hook," so called; and the invention consists of certain details of construction whereby the strain of the link pulling on the draw-bar is more evenly distributed than heretofore, and whereby the hook may be sustained automatically in an elevated position, all as will be described in the following specification.

In the drawings hereto annexed, and in which the same letters of reference are applied to corresponding parts, Figure 1 is a central vertical longitudinal section. Fig. 2 is a side elevation showing the hook in its elevated position, and broken away to show its rear end in engagement with the notch; and Fig. 3 is a plan view.

Referring by letter to the accompanying drawings, D designates the draw-head usually employed upon railway-cars, and this draw-head is of the ordinary construction, form, and size, except as to the details hereinafter mentioned. In the upper face of said draw-head is a longitudinal slot S, having a notch s in its rear wall, and in the front end of the draw-head, on a plane below the lower edge of said slot S, is a link-recess R, having a slot r in its lower face near its front end. The slot S and the recess R are connected, as shown, by a communicating slot U.

The letter H designates the coupling-hook, whose body at its rear end is provided with a longitudinal slot o, and a transverse pin P through the slot S in the draw-head engages said slot o. At its forward end the hook H is provided with a head E, having a beveled front face F. At the upper end of the bevel-face F is a shoulder J, and near its lower end a notch j, adapted to engage the slot r in the transverse recess R. The hook H near its front end is also provided with an upward projection C, and a handle, hook, or other operating device c is connected to said projection C.

The letter L represents the link, which is of ordinary size and construction commonly employed in coupling cars on most railways.

The operation of this device is as follows: The parts being assembled and in position with the link L locked behind the head of the hook H, as shown in Fig. 1, if now it is desired to uncouple or disengage the link from the hook, the latter is grasped by the projection C or by the ring or handle attached thereto, slid backwardly a trifle within the draw-head until its shoulder J is disengaged from beneath the upper face of the recess R, and then raised, the hook being turned about its pivot-pin P in a manner which will be obvious. When it is desired to couple the cars, the link L, which is carried by the other car, is guided in the recess R, and, striking the front inclined face F of the hook, will first push the latter slightly to the rear, so that its shoulder J will disengage the upper face of the recess, after which the continued motion of the link will cause the hook to be lifted by the said bevel F and to drop into the same, all as will be clearly understood. The link L, by the force of the train, then continuing its rearward course, may be driven forcibly against the rear end of the recess R, or the draw-head D may be struck by the opposing draw-head; but the hook comprising the present coupling will be in no way affected by such motion, because the link L, after it has passed the head E of the hook, will be out of contact therewith until drawn upon in the act of starting the train. As the link L is drawn forward, it engages behind the head E and draws the same into the position shown in Fig. 1. This is the relative position of parts which they will occupy for the greater portion of the time and while the heavy strain of ascending steep grades or starting the train is being exerted, and it is desirable that the hook H in this position shall be as firmly and strongly connected with the draw-head as possible.

It will be observed that the front face of the upward projection C is engaged behind the front end of the draw-head D, that the notch j engages the slot r, and that the pin P lies at the rear end of the slot o in the body of the hook. The hook H is thus firmly and

securely held against the forward strain at three points.

My invention possesses the further advantage that the hook H may be locked in elevated position, as shown in Fig. 2, by engaging the upper rear corner of its body within the notch s. This is done by sliding the body of said hook rearwardly until the shoulder J is disengaged, at which time the pin P will stand in the front end of the slot o, and then raising the front end of the hook. This motion brings the said upper rear corner of the body into the notch s, and the hook will be sustained in that position. When the link on the adjoining car is carried into the recess R, the shock resulting from the meeting of the two draw-heads will cause the dislodgment of the hook from its elevated position, and it will fall and engage the link.

It would seem, in the use of a hook having a beveled front face F, and adapted to be lifted by the link and automatically dropped into engagement therewith, that means for supporting the hook in its elevated position would hardly be necessary; but I have found that where said beveled face is provided with a notch j a continued wear thereon by the link will sometimes enlarge said notch to such an extent that the link will finally lodge and be caught therein as it is forced into the recess R, and the hook will not be properly and completely raised, resulting in the breaking and ruination of the hook and coupling. I have therefore provided independent means for sustaining the hook in elevated position, whereby the bevel F of its head E need not be taken advantage of when there is time to set the hook properly, although if such hook should accidentally fall, or if the time be too short or the space between the approaching cars too limited, the link may be allowed to couple itself automatically.

Having thus described my invention, I claim as the salient points thereof—

1. The draw-head D, having a longitudinal slot S in its upper face, a transverse recess R in its front face, having a slot r in its bottom, and a vertical slot U, connecting said slot and recess, in combination with the hook H, having a transverse slot o near the rear end of its body, the pin P in said longitudinal slot S engaging said transverse slot o, and the integral head E of said hook, said head having a beveled front face F, provided with a notch j, and also having an upward projection C, for the purpose set forth, the rear end of said transverse slot o engaging said pin P, the front face of said upward projection C engaging the front end of said longitudinal slot S, and the notch j engaging the bottom slot r simultaneously when the hook is drawn forward by the link, as herein specified.

2. The draw-head D, having a longitudinal slot S in its upper face, said slot being provided with a lateral notch s in its rear vertical wall, said draw-head also having a transverse recess R in its front face, connected to said slot S, and having a slot r in its bottom, in combination with the hook H, having a transverse slot o near the rear end of its body, a pin P within said longitudinal slot S, engaging the slot o in the hook, whereby the latter is pivoted thereon and may be set in elevated position by engaging its rear end within the lateral notch s, and the integral head E of said hook, having a beveled front face F, provided with a notch j, adapted to engage said slot r in the bottom of the transverse recess R, the whole substantially as shown and specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ANDREW J. GUNN.

Witnesses:

W. J. CASSADAY,
I. B. SCHAEFFER.