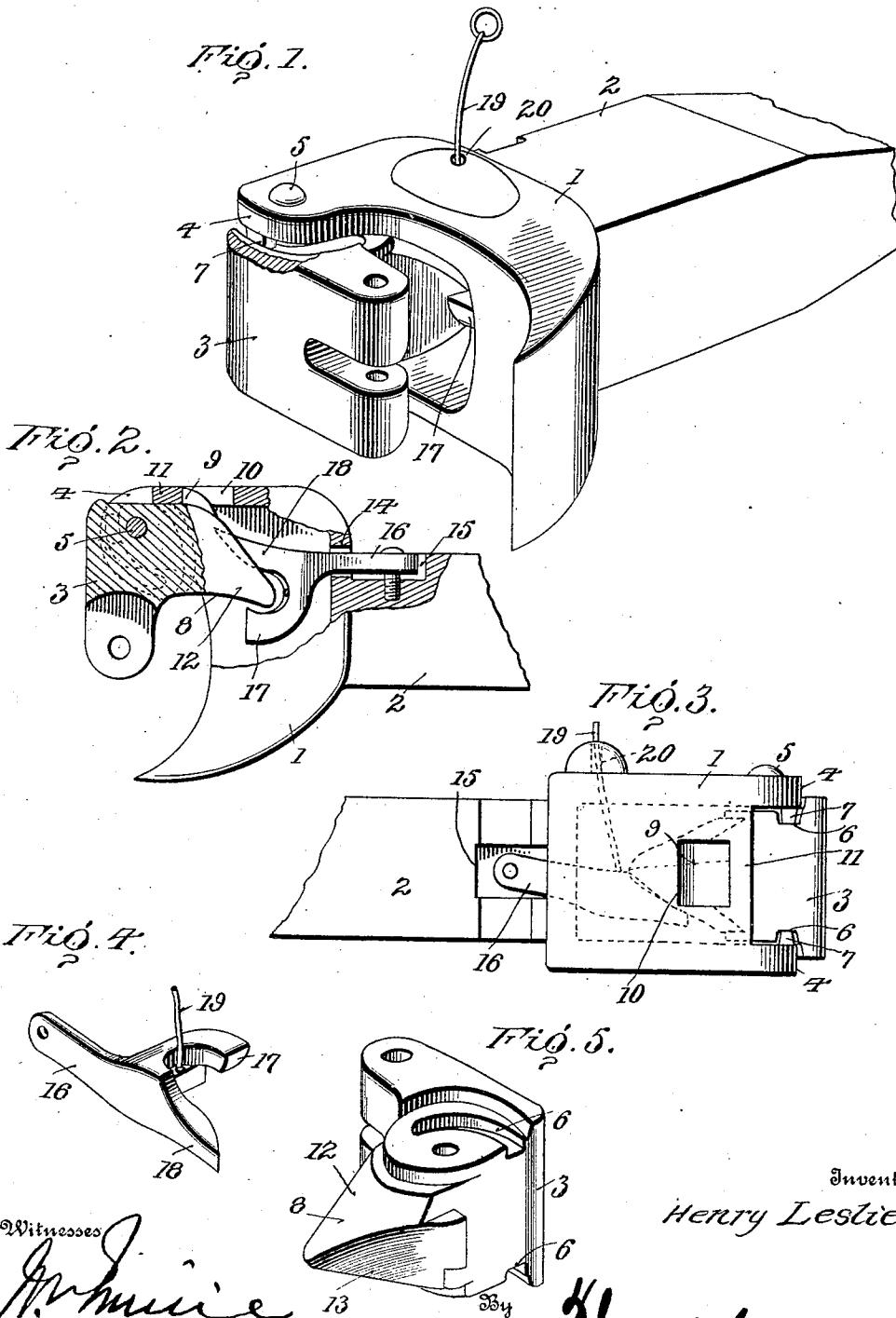


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 AUTOMATIC CAR COUPLING.
 APPLICATION FILED JUNE 26, 1908.

943,116.

Patented Dec. 14, 1909.



Witnesses
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AUTOMATIC CAR-COUPLING.

943,116.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY LESLIE, citizen of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Automatic Car-Couplers, of which the following is a specification.

This invention comprehends certain new and useful improvements in car couplers and one of the objects of the invention is an improved construction of device of this character which will effect the automatic locking of the knuckles when two cars come together and which, in the operation of unlocking the knuckles, will automatically move the knuckles to an open position in readiness for being again coupled. And a further object of the invention, is an improved construction of car coupler which will be durable and efficient in operation and which will be so constructed as to provide an element of safety in that provision is made for holding the knuckles securely in place should the knuckle pin be broken or accidentally detached.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements, and combinations of parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a perspective view of a car coupler member embodying the improvements of my invention. Fig. 2 is a top plan view thereof partly in section. Fig. 3 is an outer side view of the coupler. Fig. 4 is a detail perspective view of the knuckle locking and opening device and Fig. 5 is a detail perspective view of the knuckle.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to the drawings the numeral 1 designates the drawhead of my improved automatic coupler, 2 the drawbar thereof, and 3 the knuckle which is pivoted between the apertured ears 4 of the drawhead by means of a knuckle pin 5. The knuckle 3 is formed upon both upper and lower sides

and preferably in advance of the knuckle pin 5 with curved grooves 6 which extend inwardly from the outward sides of the knuckle, said grooves receiving downwardly and upwardly projecting lugs 7 formed on the ears 4 and designed to securely hold the knuckles in place even though the pin 5 should be broken.

The tail piece 8 of the knuckle is formed with an outwardly extending projection 9 designed to protrude through an opening 10 in one side of the drawhead into engagement with the rib 11 adapted to take some of the strain of the knuckle off of the pin 5 in the closed or locked position of the knuckle. The tail piece 8 is formed with an upper beveled portion 12 and a lower beveled portion 13 as clearly illustrated in the drawings. The drawhead is formed with a slot 14 communicating with a recess 15 formed on one side of the drawbars 2, and the knuckle locking and opening device is formed with a rearwardly extending arm 16 which passes through the slot 14 and into the recess 15 and which is pivoted at its rear end so as to have a vertical movement in said recess. The head portion of the knuckle locking and opening device is formed with a locking lug 17 and with a pivoted tongue 18 spaced laterally from but in a lower plane than the locking lug, said tongue being designed to engage the lower beveled portion 13 of the tail piece when the locking and opening device is raised, so as to positively move the knuckle into an open position in readiness to be again coupled. Any desired means may be employed for raising the locking and unlocking device. For instance, a rod may be employed or a cable 19 passed upwardly through an opening 20 formed in the top of the drawhead 1.

In the practical operation of my improved car coupler, as two cars coupled with the couplers of my invention come together it is manifest that the knuckles will be moved toward the closed position, the upper beveled surfaces riding underneath the locking lugs 17 until, in the fully closed position of the couplers said lugs will fall of their own weight down behind the tail piece or in between the inner sides thereof and the adjacent wall of the drawhead so as to securely hold the automatically locked knuckles with the cars coupled together. Obviously when the parts are in this position even though the

knuckle pin should become broken, the knuckle will be held in the drawhead by means of the lug 17 and the rib 11 engaging the projection 9 of the knuckle. When the
5 knuckle locking and opening device is raised to carry the locking lug 17 out of engagement with the tail piece it is obvious that the pivoted tongue 18 will engage the lower beveled portion 13 of the tail piece and there-
10 by move the knuckle to an open position in readiness for a subsequent coupling operation.

Having thus described the invention, what is claimed as new is:

15 A car coupler, comprising a drawhead, a draw-bar connected to said drawhead, the draw-bar being formed contiguous to the head with a side recess and the drawhead being formed in its rear side with a slot communicating with said recess, a knuckle pivot-
20

ed to swing laterally in the drawhead and formed with a beveled tail-piece, a knuckle locking and opening device designed to engage said tail-piece to lock the knuckle in closed position and swing the knuckle to
25 open position, said locking and opening device being formed with an arm extending rearwardly through said slot into said recess, the arm being pivotally connected to the draw-bar at the rear end of the arm whereby to
30 permit the knuckle locking and opening device to swing in a vertical plane and means for raising said device.

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

HENRY LESLIE. [L. S.]

Witnesses:

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