

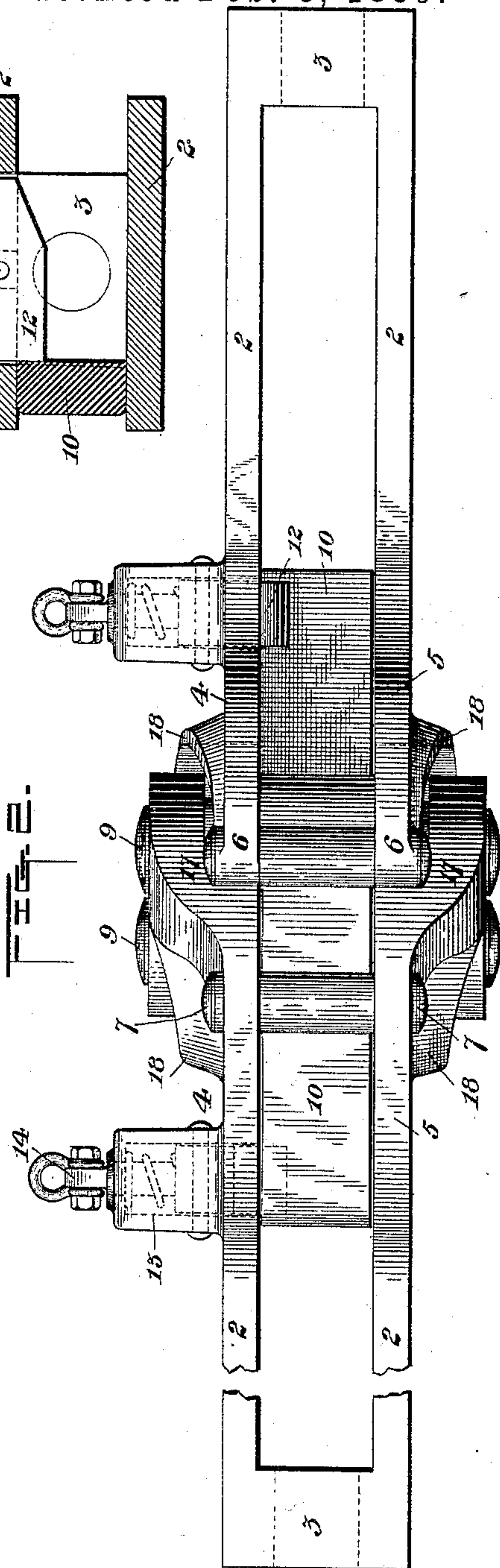
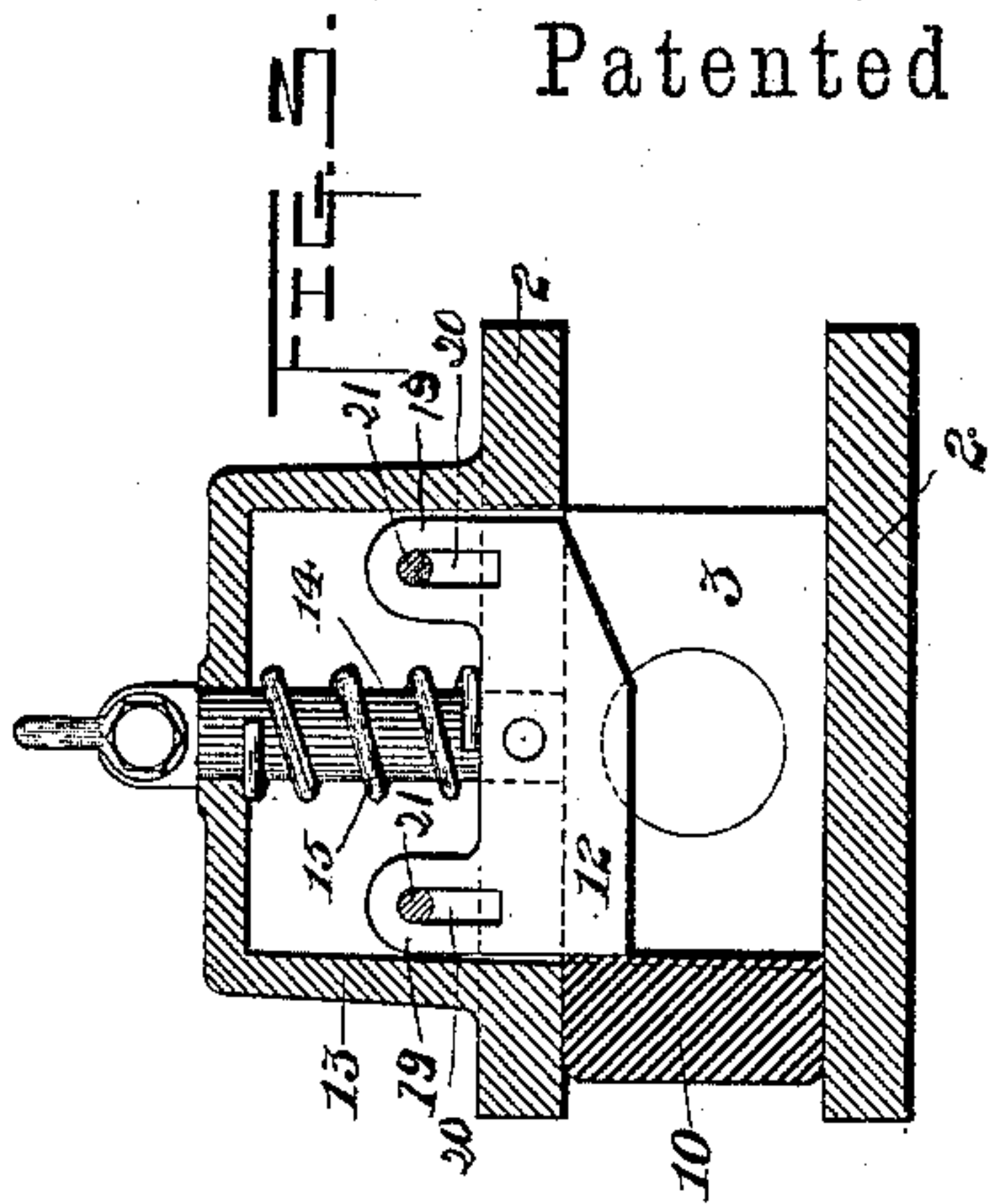
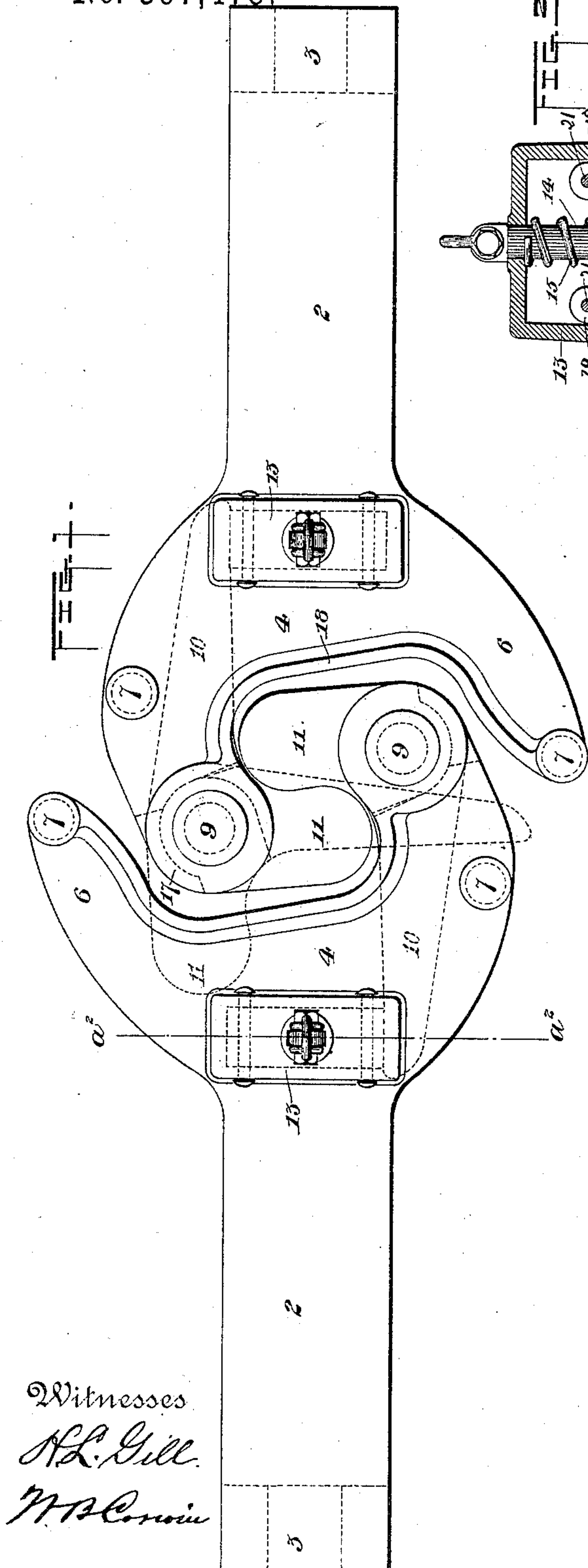
(No Model.)

J. H. SIMPSON.

CAR COUPLING.

No. 397,473.

Patented Feb. 5, 1889.



Inventor

James H. Simpson
by W. B. Baxwell & Sons

Attorneys

Witnesses
H. L. Gill
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UNITED STATES PATENT OFFICE.

JAMES H. SIMPSON, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO CARNEGIE, PHIPPS & CO., (LIMITED,) OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 397,473, dated February 5, 1889.

Application filed April 26, 1888. Serial No. 271,975. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. SIMPSON, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Couplers; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—
10 Figure 1 is a plan view of my improved automatic coupler. Fig. 2 is a side view thereof. Fig. 3 is a vertical cross-section on the line a^2 of Fig. 1.

Like symbols of reference indicate like parts
15 in each.

The two couplers which are shown in Figs. 1 and 2 are identical in construction. Each has a shank composed of two side bars, 2, united at the end by a solid or integral heel-piece, 3, through which is made a hole for the draft-bolt, whereby the coupler is fastened to the car. The side bars, 2, are parallel, and are somewhat separated, as shown in Fig. 2, and at their ends they are provided with enlarged heads 4 5, of the shape shown in Fig. 1, the heads being forked or provided with projections 6. The heads of the two side bars are united by welding or by rivets 7. Each coupler has a tongue pivoted on a pin, 9, between the separated heads of the coupler and constructed in angular shape—that is, with a long locking-arm, 10, and a shorter arm, 11.

When the opposite couplers of two cars come together, they are coupled by engagement of the short parts 11 of the tongues, as shown in Fig. 1, and when they are thus coupled the longer arms, 10, of the tongue extend back in line with the shanks of the couplers. They are held automatically in this position by means of latches 12, which are arranged to slide vertically in boxes 13, made on the upper parts of the coupler-heads. The latch 12 is provided with upwardly-projecting ears 19, having vertical slots 20 therein for sliding upon pins 21, arranged crosswise of the box 13, whereby the latch is movably suspended, so as to be actuated by a spring bearing thereon. These latches are provided with stems 14, which project upwardly through the boxes, and are provided with springs 15, which tend to force them downward. The under side of the forward end of each latch is beveled, as shown in Fig. 3, and when the long arm of the coupler-tongue is swung back

by the act of coupling the car it engages and automatically forces up the latch 12 until it has passed this latch and come into the position shown in Fig. 3, when the latch springs down, and by preventing the return of the tongue keeps the cars coupled. The cars are uncoupled by raising the stem 14 in either coupler-head, and thus allowing the coupling-tongues to swing back, as shown by dotted lines in Fig. 1. The couplers are strengthened by re-enforced ribs 18 and enlargements 17.

The form of coupler which I have just described is one of great utility. Hitherto couplers of this class have been made of cast-iron, no adequate means or method having been known for making them of wrought-iron. They have therefore been objectionable on many accounts, and have not possessed the compactness of structure and the strength which appertain to the coupler as made by me of wrought-iron or steel.

In making these couplers I form the heads 4 and 5 of wrought-iron or steel by suitable dies, and having welded them to the ends of straps I secure the heads together by riveting or welding, and finally adjust the pivoted locking-tongue and the spring-latch.

I claim—

1. The combination, with the draw-head consisting of two parallel separated wrought-iron side bars having heads at the ends thereof, said heads being rigidly connected together at a suitable interval, of a locking-tongue pivoted between said heads, a box or case on the head, and a movable spring-actuated latch-block arranged within said box or case and adapted to engage said tongue, substantially as and for the purposes specified.

2. The combination, with the draw-head consisting of two parallel separated wrought-iron plates connected together at a suitable distance apart, of a locking-tongue pivoted between said plates, a box or case on the head, and a vertically-movable spring-actuated latch-block sliding upon pins in said case and adapted to engage the pivoted tongue, substantially as and for the purposes specified.

In testimony whereof I have hereunto set my hand this 31st day of March, A. D. 1888.

JAMES H. SIMPSON.

Witnesses:

W. B. CORWIN,

THOMAS W. BAKEWELL.