(No Model.)

E. S. THOMAS & J. E. LITTLEJOHN.

CAR COUPLING.

No. 450,537. Patented Apr. 14, 1891.

Fig. 1.

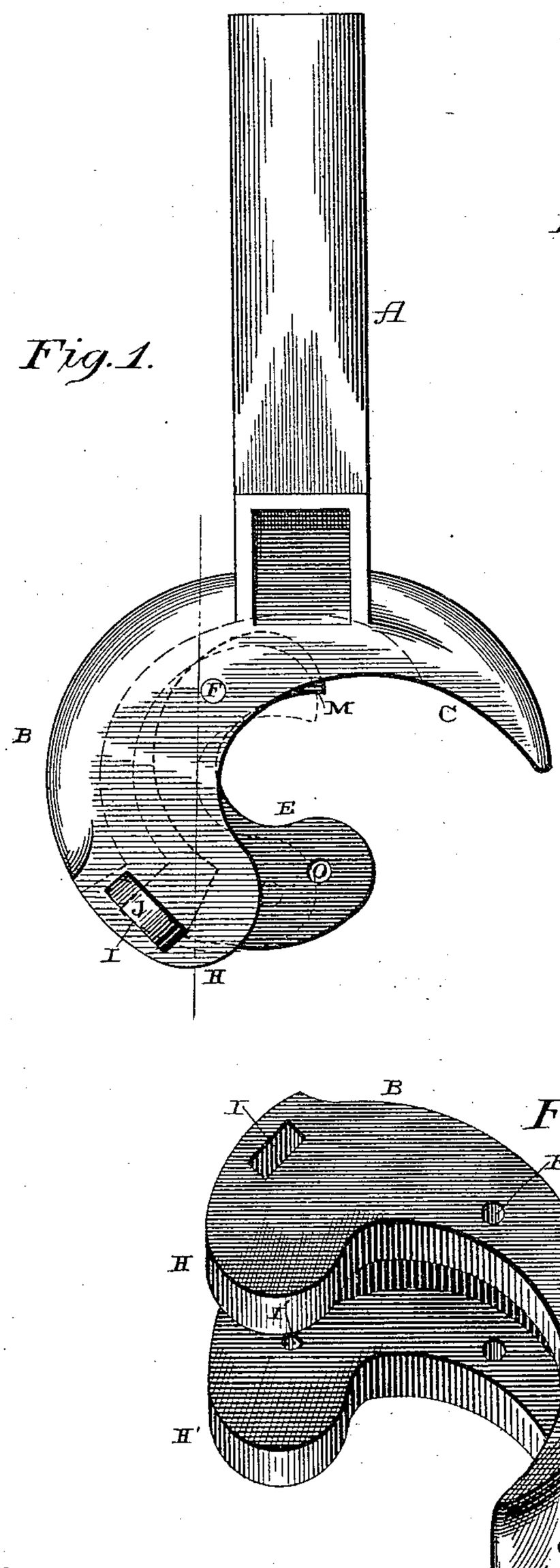


Fig. 2

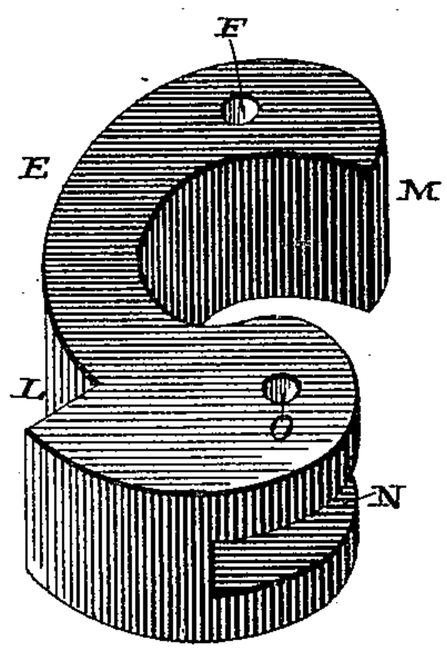


Fig. 3.

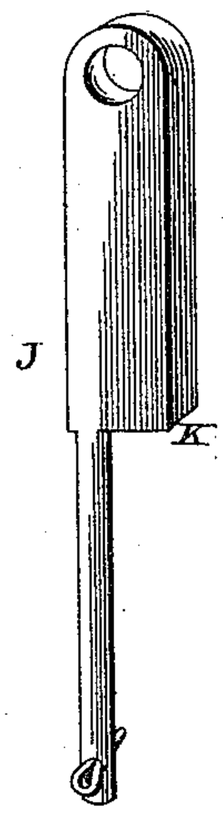
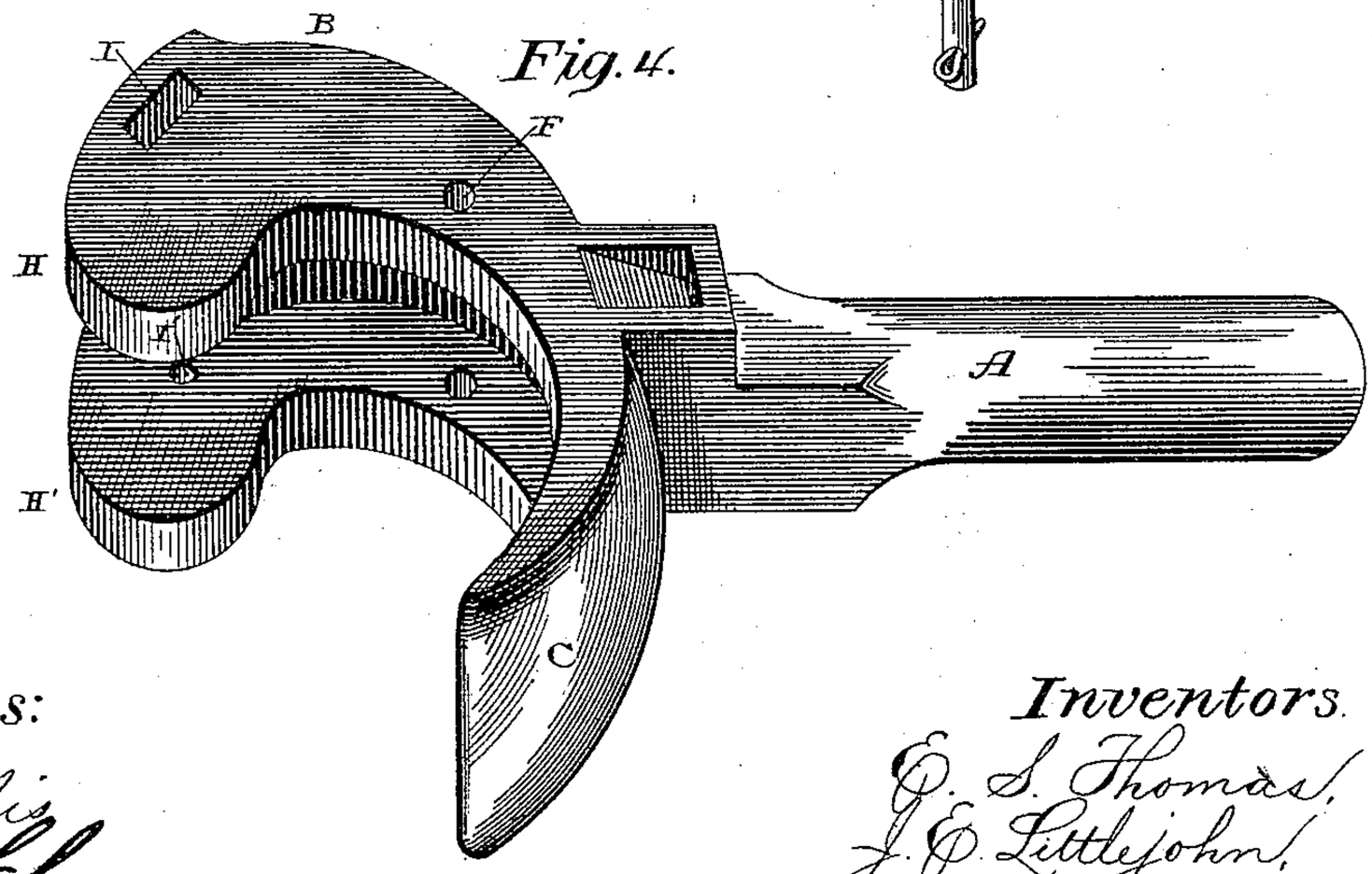


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD STEPHEN THOMAS AND JOSEPH EDWARD LITTLEJOHN, OF CEDAR RAPIDS, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 450,537, dated April 14, 1891.

Application filed January 6, 1891. Serial No. 376,885. (No model.)

To all whom it may concern:

Be it known that we, EDWARD STEPHEN THOMAS and JOSEPH EDWARD LITTLEJOHN, of Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Automatic Car-Couplings; and we do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in automatic car-couplings; and it consists in the combination and arrangement of parts, which will be fully described hereinafter.

The object of our invention is to construct a coupling of the kind known as "twin jaw," in which the jaw-locking mechanism is located in the forward end of the coupling instead of in its rear portion, as now usually constructed, and also to pivot the jaw near its rear end to the draw-head in such a manner as to bring the said pivotal point as near as possible in a line with the draft.

Heretofore the jaw has been pivoted to one side of the draw-head and locked at its rear end, thus constituting the forward end of the jaw a lever which must sustain all the strain of the draft. By our construction the strain is greatly reduced by having the stop or lock for the jaw at its front end, where the said lock will receive at once the draft from the jaw without the latter being subjected to so great a leverage.

Figure 1 is a top view showing the jaw locked in solid lines and unlocked in dotted lines. Fig. 2 is a detached perspective view of the jaw. Fig. 3 is a similar view of the locking-pin. Fig. 4 is a perspective view of the draw-head.

The draw-head A is secured to the car in the ordinary manner and has its forward end extended into the two curved projections B C on each side of its center. The projection C is constructed flaring, as shown, and serves as a guide for the connecting coupler. Formed in the face of the portion B is a horizontal circular depression, which extends its entire length and in which oscillates or swings the jaw E on the pivot F, the pivotal point being near the rear end of the jaw. At the forward end of the portion B the depression extends entirely across the said portion, forming the forwardly-extending flanges H H′, which are provided with the openings I I′, respectively, in which slides the pin J, constructed with the upper enlarged end and the lower smaller portion, forming at their junction their shoulder K.

The outer side of the jaw E is cut away or reduced from its rear to near its front end, thus forming the shoulder L. When the jaw is in a locked position or coupled, the shoulder L bears against the enlarged upper portion of the pin J, thus holding the outer end of the jaw F in an extended position, as when locked with the jaw of the adjacent coupler. When in an unlocked position, the locking-pin J is raised until the shoulder K on said pin rests upon the shoulder L of the jaw.

In operation the jaw of the adjacent coupler entering strikes the rear end M of the jaw E, which extends slightly forward from the rear face of the draw-head. When the said rear end M is pushed inward, the forward end of the jaw is forced outward and allows the enlarged portion of the pin J to drop down behind the shoulder L and lock the two jaws of the connecting-couplers in engagement. The forward end of the jaw E is provided with the recess N and the perforation O for attaching with the ordinary pin-and-link coupling. In order to locate the locking mechanism in the forward end of the draw-head, it becomes necessary to extend the said forward end into the flanges, as heretofore described. These flanges form the space in which the shoulder end of the jaw swings and in which the said jaw is locked by the sliding pin. As shown by the dotted line of draft in Fig. 1, it will be seen that the engaging side of the locking-pin and the pivotal pin are in a line with each other in the direction of the draft.

Having thus described our invention, we claim—

1. In an automatic car-coupling, the draw-head provided with a curved projection, a depression in the inner face of the projection, a jaw pivoted near the rear end of the

said depression and provided with a shoulder on its outer face near its forward end, and a locking-pin, substantially as shown and described.

2. An automatic car-coupling provided with a curved extension having a depression in the inner face of said extension, a jaw pivoted near its rear end in the depression and provided with a shoulder on its outer face near its front end, and a sliding locking-pin having an enlarged upper portion, forming a shoulder between its ends, whereby it is supported in a raised position on the shoulder L, substantially as shown and described.

3. In an automatic car-coupling, the draw-head, the curved projection provided with a depression, the perforated extensions on said projection, a locking-pin having a rectangular upper portion and a smaller lower portion and forming a shoulder between its ends, and the pivoted jaw provided with a shoulder, substantially as shown and described.

4. In a car-coupling of the character described, the combination, with the draw-head, of a jaw pivoted therein near its rear end, the draw-head having its front end extending over the front end of the jaw, and a lock in the said front end of the draw-head in the line traveled by the front end of the jaw, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD STEPHEN THOMAS.
JOSEPH EDWARD LITTLEJOHN.

Witnesses:
HERBERT POTTER,
JOSEPH MOORE.