

(No Model.)

O. STONE.
CAR COUPLING.

No. 421,780.

Patented Feb. 18, 1890.

Fig. 1.

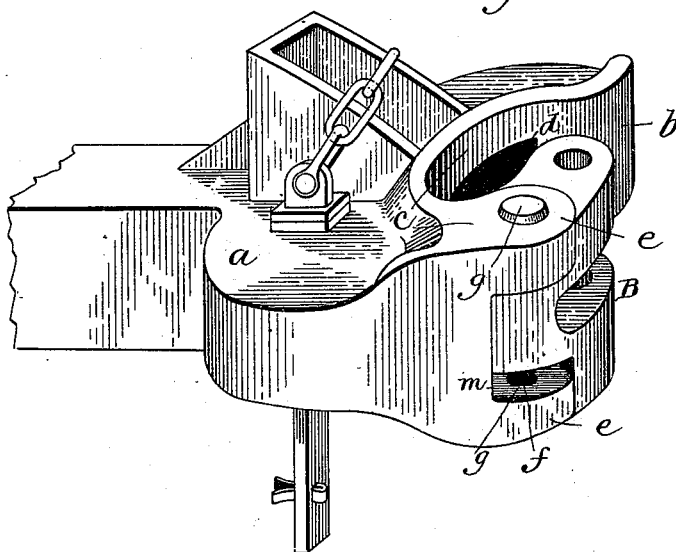


Fig. 2.

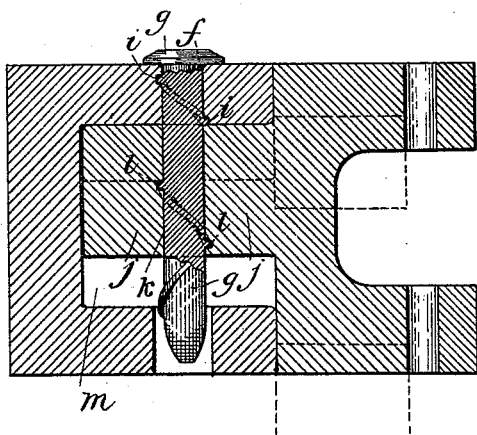
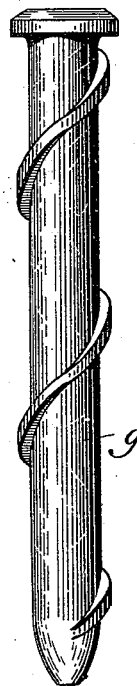


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

OREN STONE, OF FLINT, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 421,780, dated February 18, 1890.

Application filed December 14, 1889. Serial No. 333,724. (No model.)

To all whom it may concern:

Be it known that I, OREN STONE, a citizen of the United States, residing at Flint, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Car-Couplings; and I 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 appertains to make and use the same.

This invention relates to that class of car-couplings commonly known as "twin-jaw," but more particularly to a peculiar arrangement and construction of parts whereby the pivotal or coupling jaw is adapted to automatically swing out when it is uncoupled.

The object in view is to produce a device of the class above mentioned in which an exceedingly small number of parts is employed, which parts can be cheaply and conveniently cast, and whose operation will be very simple and also positive and automatic.

With these ends in view the invention consists in certain features of construction and combinations of parts more fully described hereinafter, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a perspective view of a twin-jaw coupler having my improved arrangement of parts for operating the coupling-jaw; Fig. 2, a sectional view taken on line *x x* of Fig. 1, and Fig. 3 a detail view of the pin.

The reference-letter *a* indicates the draw-bar of a twin-jaw coupler of the standard type, having a fixed projection *b*, head *c*, and internal cavity or chamber *d*. The head *c* is provided with the oppositely-located arms or lugs *e*, which are provided with apertures *f* through their centers to receive the pin *g*. This pin *g* has a spiral bead or thread formed on its surface, which extends from the head of the pin throughout its length, or only partially throughout its length, as desired, it being immaterial to the operation of the device whether this thread extends through the lower lug or not. The upper lug is provided with a corresponding bead or thread *i*, which is formed on the inner surface of the aperture *f*, so that the pin-thread will fit this latter thread, and the pin thereby be prevented from turning. The aperture in the lower lug

may or may not be threaded, as desired or required.

B is the coupling jaw or hook, which is of the usual form, having the rearward projection *j*, which fits between the lugs *e*, and is provided with a centrally-located aperture *k*, which registers with those in the lugs, and in which the pin fits. This aperture *k* has a bead or thread *l* formed on its inner surface, which fits the thread on the pin *g*. The lower edge of the portion *j* of the coupling-hook and also the upper edge of the lower lug *f* are cut away to leave a space *m*, which allows play of the hook.

The preferred manner of constructing the parts which go to make up this invention having been set forth, the operation of the device will be described. The parts are fitted together with the pin *g* engaging the apertures in the lugs and coupling-hook, the bead on the pin being beneath that of the apertures and bearing against it. Now, it will be obvious that when the pin has been forced down in the apertures until the head engages the upper surface of the draw-bar head further turning of the pin by the action of the coupling-jaw will be rendered impossible. When the coupling jaw or hook is in coupled or locked adjustment, as shown in Fig. 1, the rear projection *j* bears upon the upper lug *f*, and the space *m* is left between it and the lower lug. Now, when the jaw is uncoupled it will fall out and down by its own gravity, by reason of the spiral thread of the jaw bearing upon that of the pin, whereby the latter acts as a way or track for the bead of the jaw, which beads slope in such a way that the jaw falls out and down at the same time. The play of the jaw is allowed by the space *m* between it and the lower lug. When the jaw is again to be coupled, the approaching coupler strikes it and forces it up the bead of the pin into locked adjustment.

It is evident that, instead of the beads on the pin and jaw, a bead on the pin and a spiral recess in the jaw, or vice versa, might be employed; and it is also evident that other slight changes which might suggest themselves to a skilled mechanic could be resorted to without departing from the spirit and

scope of the invention. Hence I do not limit myself to the precise construction shown; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters
5 Patent, is—

1. In a car-coupling, the combination of a pin having a thread and a coupling-jaw having a corresponding thread, whereby the latter swings by its own gravity, substantially
10 as described.

2. In a car-coupling, the combination of a draw-bar having a lug provided with a threaded aperture, a coupling-jaw also pro-

vided with a threaded aperture, and a pin having a spiral thread which corresponds with
15 and engages the threads of the lug and jaw, whereby said pin remains stationary and the coupling-jaw swings upon it by its own gravity, in the manner and for the purpose substantially as described.

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

OREN STONE.

Witnesses:

JOHN J. CARTON,
JONAS B. HOUCK.