

(No Model.)

W. E. STEFFEY.
CAR COUPLING.

No. 503,754.

Patented Aug. 22, 1893.

Fig. 1.

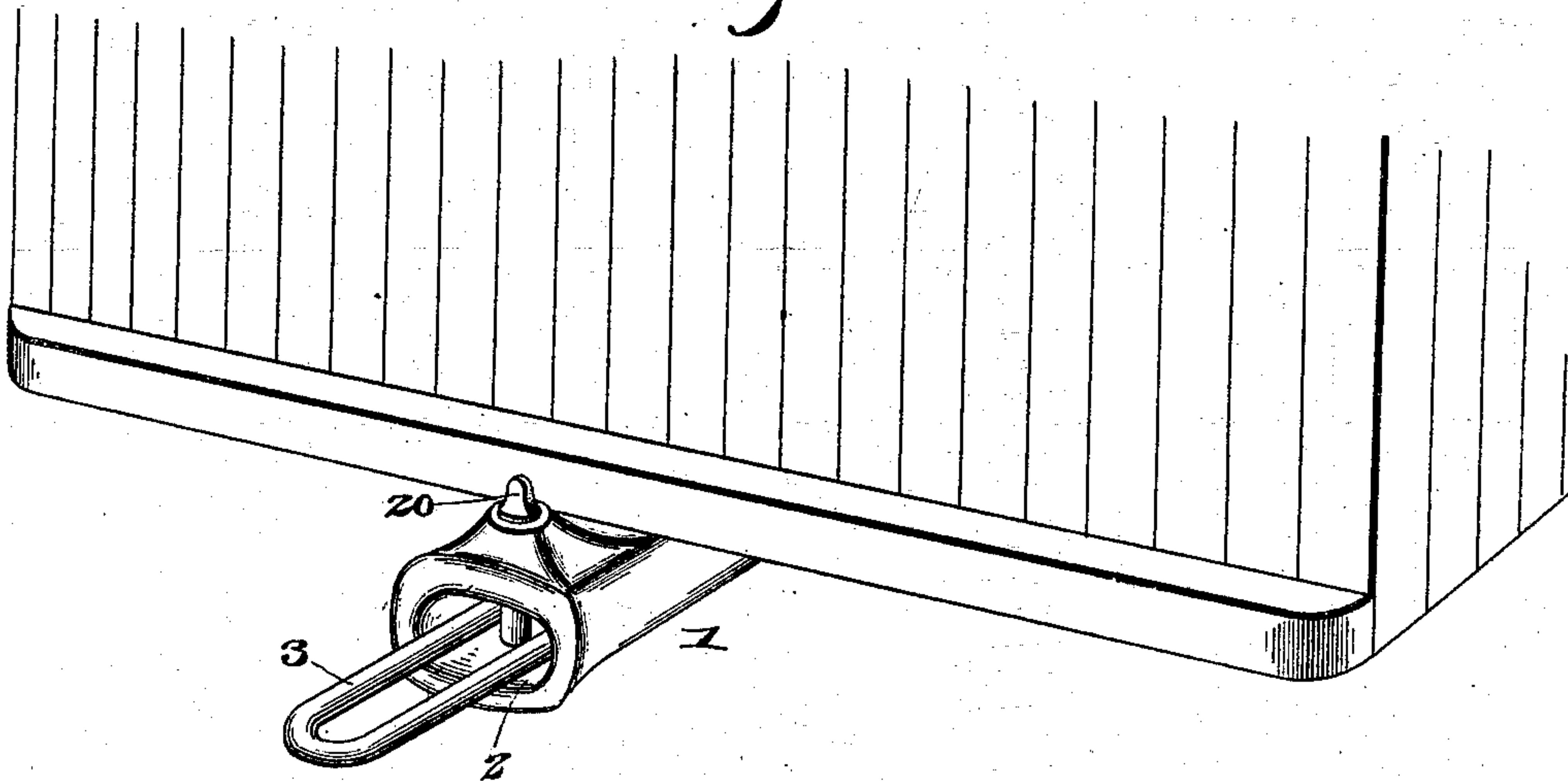


Fig. 2.

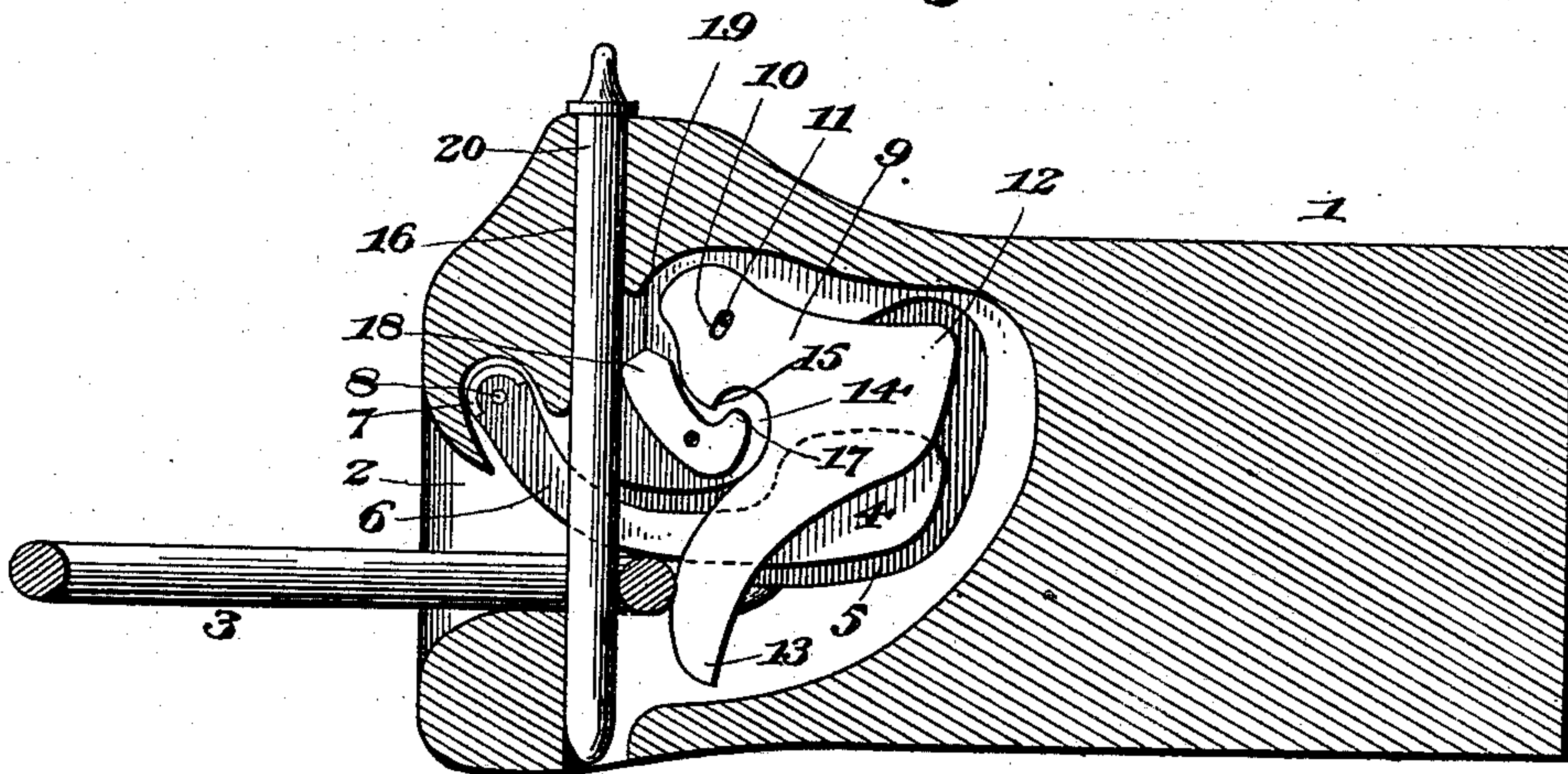
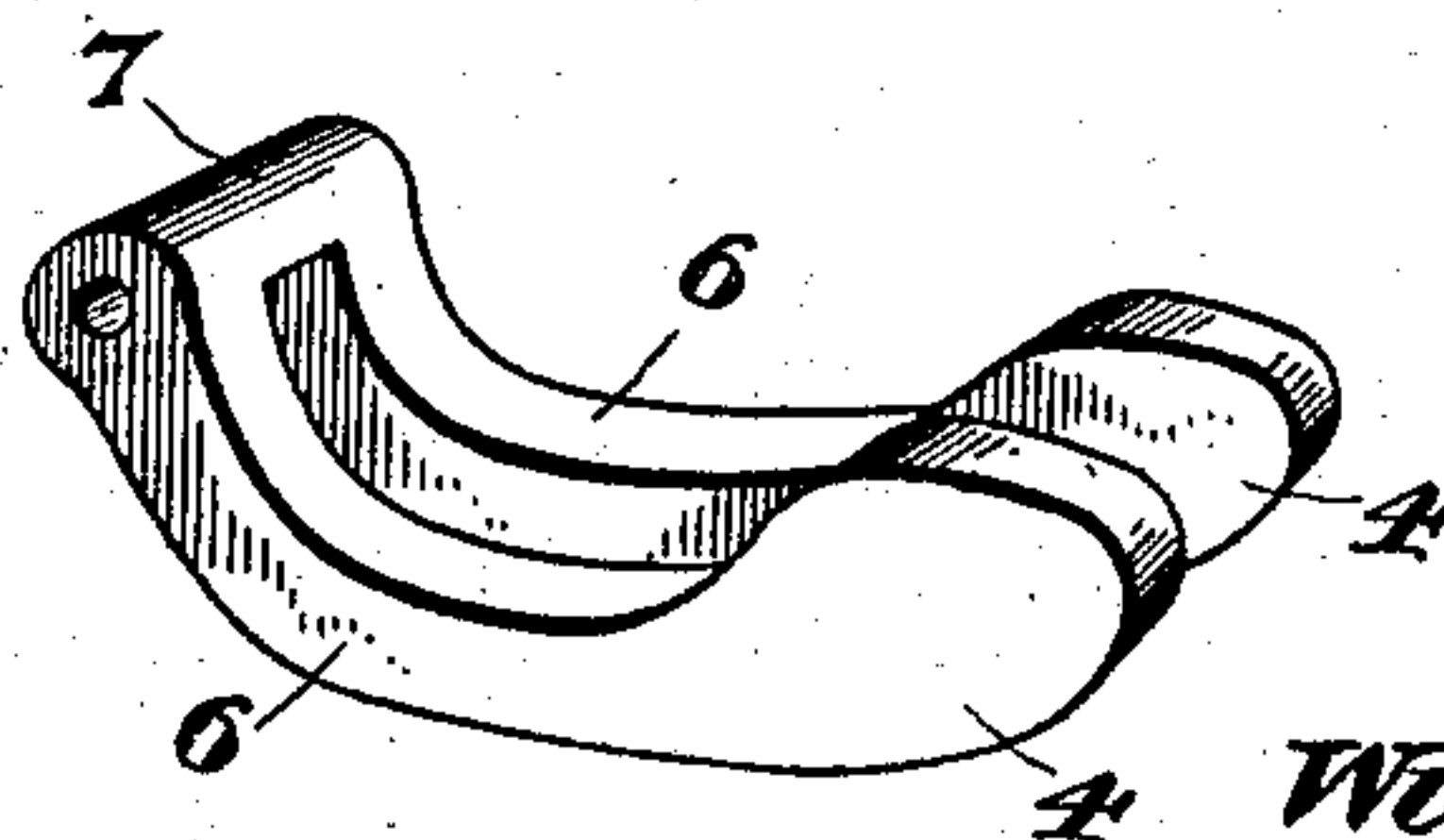


Fig. 3.



Inventor

William E. Steffey,

By *his* Attorneys.

Witnesses

B. S. Ober.
J. F. H. Ciley

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UNITED STATES PATENT OFFICE.

WILLIAM E. STEFFEY, OF SAN DIEGO, CALIFORNIA, ASSIGNOR OF ONE-HALF
TO G. H. HARDIMAN, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 503,754, dated August 22, 1893.

Application filed May 2, 1893. Serial No. 472,688. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. STEFFEY, a citizen of the United States, residing at San Diego, in the county of San Diego and State of California, have invented a new and useful Car-Coupling, of which the following is a specification.

This invention relates to car couplings, and has for its object to generally improve upon the construction and render the same more efficient, by providing a simple, durable and inexpensive arrangement of parts, which will be automatic in operation.

With this object in view the invention consists in the construction and arrangement of the parts as will be hereinafter more fully described and claimed.

In the drawings, Figure 1 is a perspective view of the part of an end of a car having the improved coupler applied thereto. Fig. 2 is a central vertical section of the improved coupling. Fig. 3 is a detail perspective view of the link-supporting weight disconnected.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

Referring to the drawings, the numeral 1 designates the draw-head which is held in the usual manner to the end of a car and is provided in its front end with an opening 2 for the reception of a coupling link 3, the entrance to the said opening being beveled as in the usual construction to facilitate the entrance of a link.

The entire mechanism in the present construction is inclosed within the draw-head 1 without exterior parts, and thereby is protected from the influence and evil effects of snow, rain, and the elements generally, and also from injury by blows or shocks delivered from the exterior.

The mechanism comprises three moving parts, which consist of a weight 4, that is freely movable in a recess 5 in the draw-head, and is designed to hold the coupling link 3 centrally in a horizontal position to adapt the same to properly enter an opposite draw-head. This weight 4 consists of two rearwardly extending arms 6, increased in dimension at their rear ends, and spaced apart from each other, the said arms being connected at their

front ends, by a semi-circular web 7, and through the front ends of the said arms extends a pivot bolt 8 that is mounted in the draw-head, and forms the only means for securing the said weight in position. It will be observed that the connected front ends of the arms of said weight are positioned in the front of the draw-head above the link opening, and extend downwardly and backwardly on either side of the link to thereby exert the influence of its weight on the link to hold the latter in a horizontal position. Within the draw-head is also mounted an operating dog 9, having a slot 10 in the upper front end thereof, through which passes a supporting pivot bolt 11, whereby the said operating dog has slight movement, and it is formed with a weighted rear part 12, a lower extending engaging end 13, and a front curved recess 14 to provide a locking nose or hook 15. The said operating dog moves between the arms of the weight 4, and of course is located in rear of the pin opening 16, but the engaging end thereof is arranged to extend forward toward the mouth or entrance opening 2, and to be engaged by the entering link. The nose or hook 15 is normally engaged by a hook 17 formed on the rear upper part of a catch 18, pivotally mounted in the draw-head in advance of the dog, and having an outer engaging end 19 against which the coupling pin 20 is adapted to rest during the operation of coupling and before the link has entered the opening 2. It will be understood that the parts are all so weighted as to properly gravitate into a normal position after they have been released and permitted to assume such position, and that normally the said catch will always be held across the pin slot in such manner as to be in position to support the lower end of the pin. When the link enters the draw-head and strikes the lower end of the operating dog, it causes the hook or nose 15 thereof to pull backwardly on the hook 17 and raise the outer end of the catch out of the path of the coupling pin, and allow the latter to drop downwardly through the link and thereby perform the coupling operation. It is apparent that the coupling can be set without drawing out the link, thus permitting cars to be uncoupled without being immediately drawn apart.

The main advantages of the coupling herein set forth, reside in the total absence of springs and relying solely upon the gravitation and weight of the operating parts to produce the desired operation. The simplicity of the mechanism is also a feature of advantage in that a complex structure is avoided and breakage is not nearly so liable to result. To hold the catch 18 against downward depression when the pin 20 is resting thereon, a stop 21 is located in proper relative position and serves this function.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a car coupling, the combination with the pin and link, of a weight adapted to bear upon the said link and hold the same in horizontal position and comprising arms that are spaced apart, an operating dog movably mounted between the arms of said weight, and having a lower engaging end that extends forwardly, and an upper hook, and a catch in advance of the said dog also having a hook to engage the hook of the dog, said parts being inclosed within a draw-head, substantially as described.

2. In a car coupling, the combination of a draw-head having suitable openings therein,

a pin and link, a weight mounted in the draw-head and having arms spaced apart and connected only at their front ends where they are pivoted to the said draw-head, a weighted operating dog loosely mounted on its pivot and moving between the arms of the said weight, the said operating dog having a lower forwardly projecting engaging end, and an upper nose or hook, and a catch pivotally mounted in advance of the said operating dog and having a hook to engage the hook of the dog, said catch being adapted to extend across the pin opening and support the said pin in raised position, substantially as described.

3. In a car-coupling, the combination with a draw-head and a link and pin, of a link-supporting weight inclosed within the draw-head and comprising a pair of rearwardly-extending arms connected at their front ends only and spaced apart to engage opposite sides of the link, the rear ends of said arms being increased in dimension and the connected front ends pivotally attached to the front upper part of the draw-head, substantially as described.

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

WILLIAM E. STEFFEY.

Witnesses:

A. I. MEIKLE,
A. C. MOUSER.