

(No Model.)

C. A. GOULD.
CAR COUPLING.

No. 478,747.

Patented July 12, 1892.

Fig. 1.

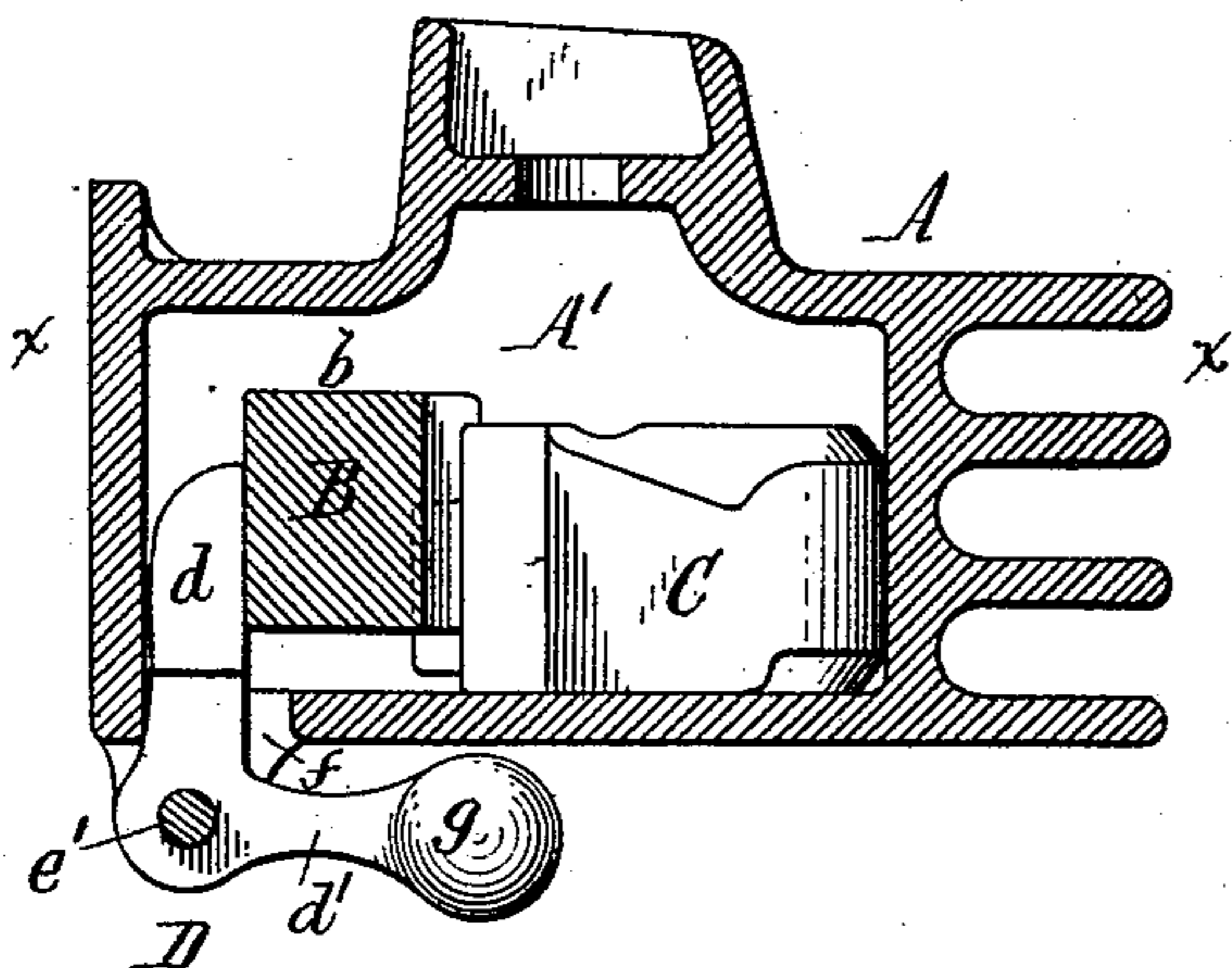


Fig. 2.

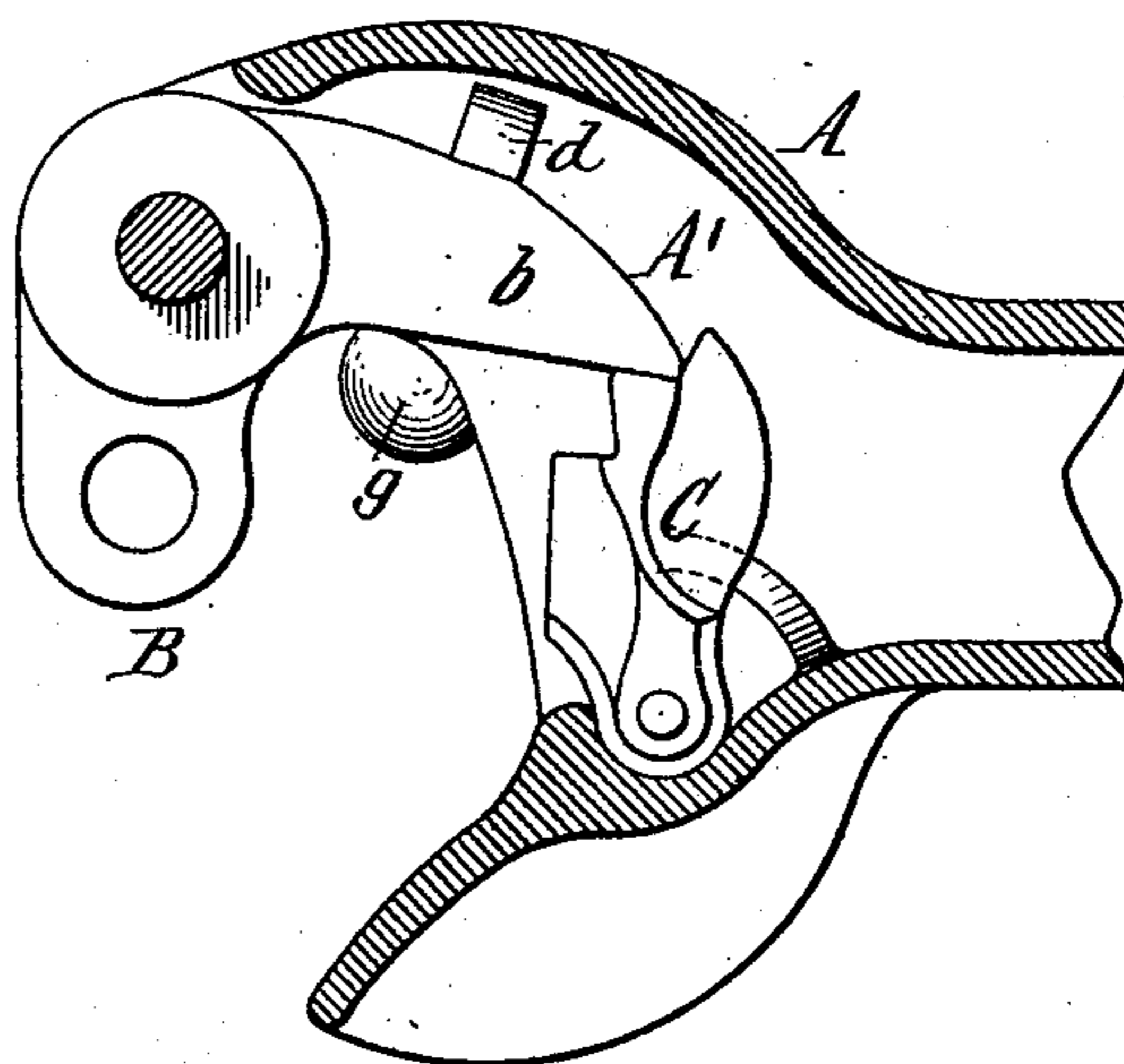
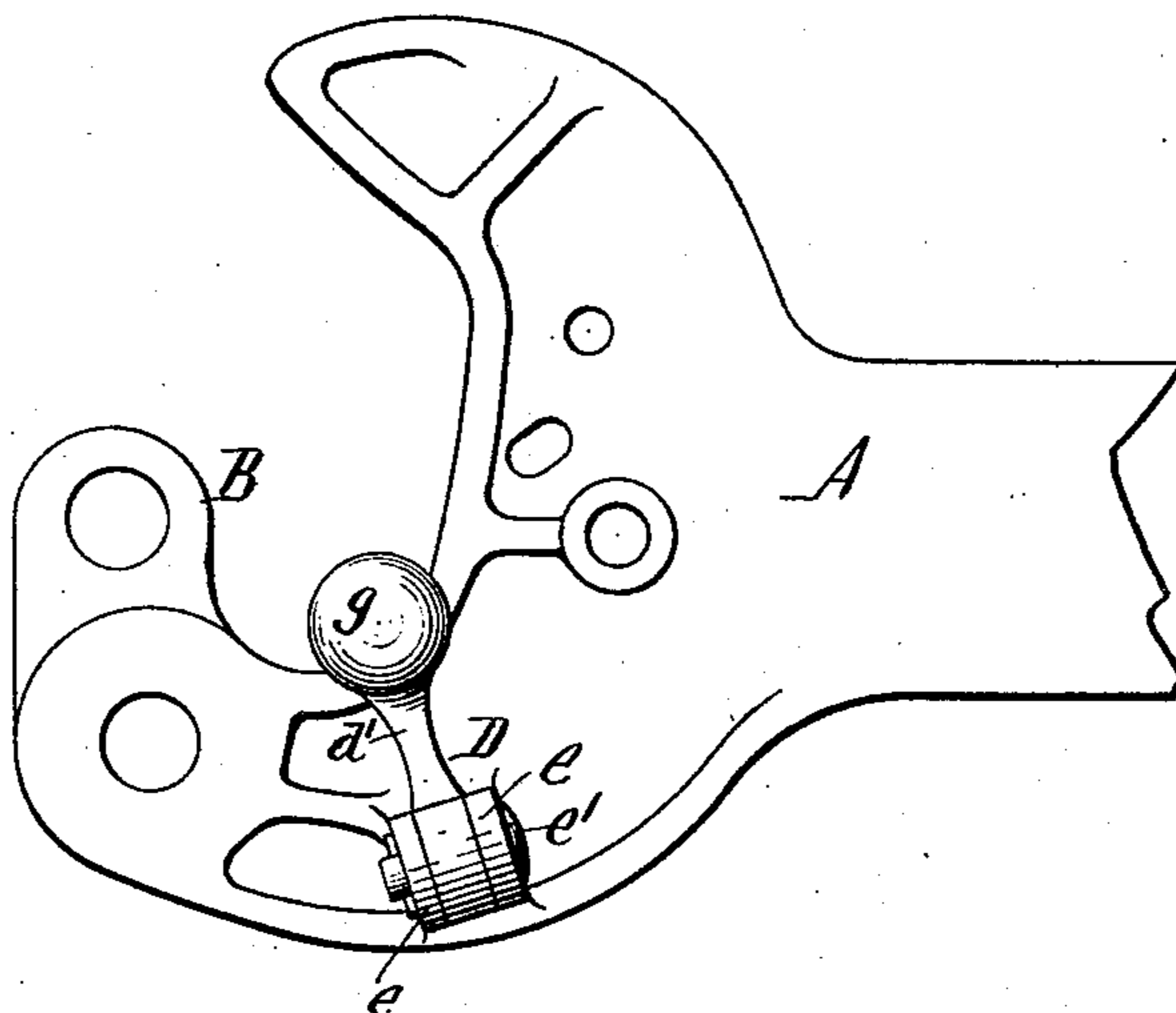


Fig. 3.



Witnesses:

Witnesses:
Emil Neuhart.
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Chas. A. Gould Inventor.
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UNITED STATES PATENT OFFICE.

CHARLES A. GOULD, OF BUFFALO, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 478,747, dated July 12, 1892.

Application filed December 23, 1891. Serial No. 415,963. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GOULD, a citizen of the United States, residing at the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Car-Couplings, of which the following is a specification.

This invention relates to that class of car-couplings which are provided with a horizontally-swinging coupling hook or jaw pivoted to the draw-head and a dog or pawl which engages with an arm on the coupling-hook, and whereby the hook is locked in its closed position.

Heretofore various devices have been employed for automatically moving the coupling-hook into its open position when released by the locking-pawl; but none of them are entirely satisfactory.

The object of my invention is the provision of simple means whereby the coupling-hook is swung into its open position with certainty when released from its locking-pawl, and which is not liable to get out of order.

In the accompanying drawings, Figure 1 is a vertical cross-section of a car-coupling provided with my improvement. Fig. 2 is a horizontal section thereof in line xx , Fig. 1. Fig. 3 is a bottom plan view thereof.

Like letters of reference refer to like parts in the several figures.

A represents the draw-head, having the usual recess or chamber A' .

B is the horizontally-swinging coupling hook or jaw, and C the locking-pawl, which engages with the inner arm b of the coupling-hook for holding the same in its open position. In the drawings the ordinary pivoted locking dog or pawl is shown; but any other lock may be employed, if desired. All of these parts are old and operate in a well-known manner.

D represents the gravity shifting device whereby the coupling-hook is swung into its open or uncoupled position when its locking-pawl is moved out of engagement with its locking-arm b by the usual releasing-chain of the pawl. This shifting device consists of a bell-crank lever pivoted on the under side of the draw-head near one side thereof to depending lugs e on the draw-head by a horizontal pin or bolt e' , so that the lever can rock

in a vertical transverse plane. The upright arm d of the bell-crank lever projects into the recess of the draw-head through a slot f , formed in the bottom of the head, and bears against the outer side of the locking-arm b of the coupling-hook, as represented in Figs. 1 and 2. The lower overhanging arm d' of the bell-crank lever projects inwardly under the draw-head and is weighted, as shown at g . As soon as the coupling-hook is released from its locking-pawl the weighted arm of the bell-crank descends by gravity, causing the upper arm of the bell-crank to move outwardly and shift the locking-arm of the coupling-hook outwardly, thereby automatically moving the hook to its open position. The lower arm of the bell-crank is sufficiently weighted to overcome the inertia of the coupling-hook when the latter is unlocked. When the coupling-hook is swung to its closed or locked position by striking the hook of an opposing car, the upper arm of the bell-crank, being in the path of the locking-arm of the hook, is moved inwardly to its former position, whereby the weighted arm of the bell-crank is again raised, ready to swing the coupling-hook to its open position upon being unlocked. The hook is thus automatically opened in a reliable manner without the use of springs, inclines, or similar provisions, which are liable to fail of action. The improvement is simple in construction, and can be adapted to draw-heads of the type herein shown and described without requiring any change or rearrangement of the old parts.

My improved gravity device for automatically opening the coupling-hook is susceptible of various modifications involving the principle of my invention, and I do not therefore wish to be confined to the particular embodiment of the improvement illustrated in the drawings.

I claim as my invention—

1. The combination, with the draw-head of the swinging coupling-hook and its locking device, of an independent gravity shifting device operating against the hook whereby the latter is automatically moved into its open position when unlocked, substantially as set forth.

2. The combination, with the head, the

swinging coupling-hook and its locking device, of an overhanging arm or lever operating against the coupling-hook and whereby the same is automatically moved into its open
5 position when unlocked, substantially as set forth.

3. The combination, with the head, the swinging coupling-hook and its locking device, of a bell-crank lever bearing with one
10 of its arms against the arm of the coupling-

hook and having its other arm weighted and arranged in an overhanging position, substantially as set forth.

Witness my hand this 11th day of December, 1891.

CHARLES A. GOULD.

Witnesses:

FELIX JELLENIK,
JAMES H. DUNN.