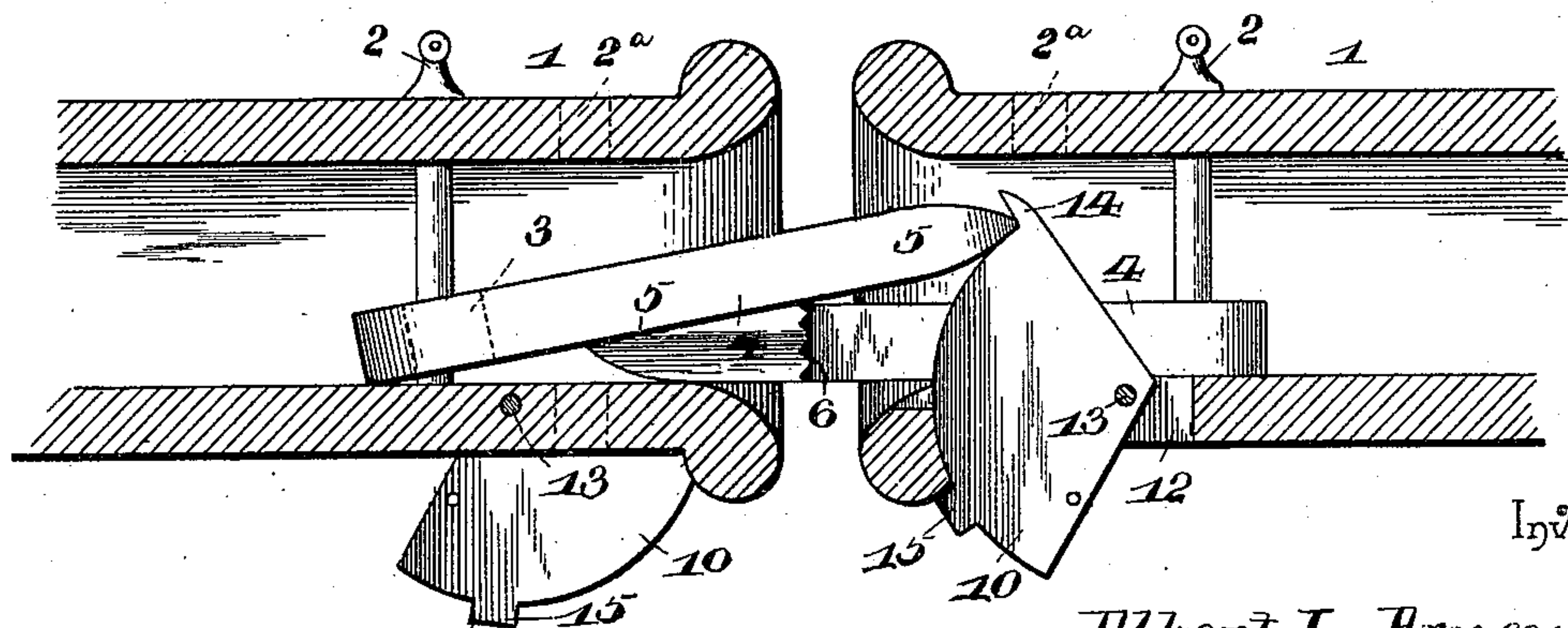
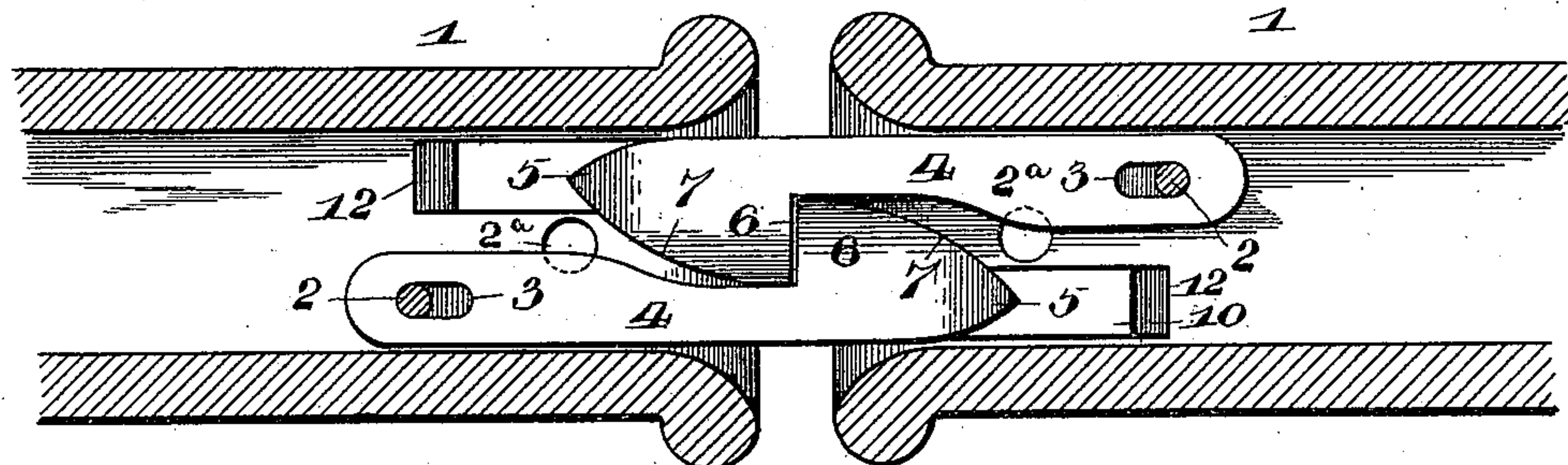
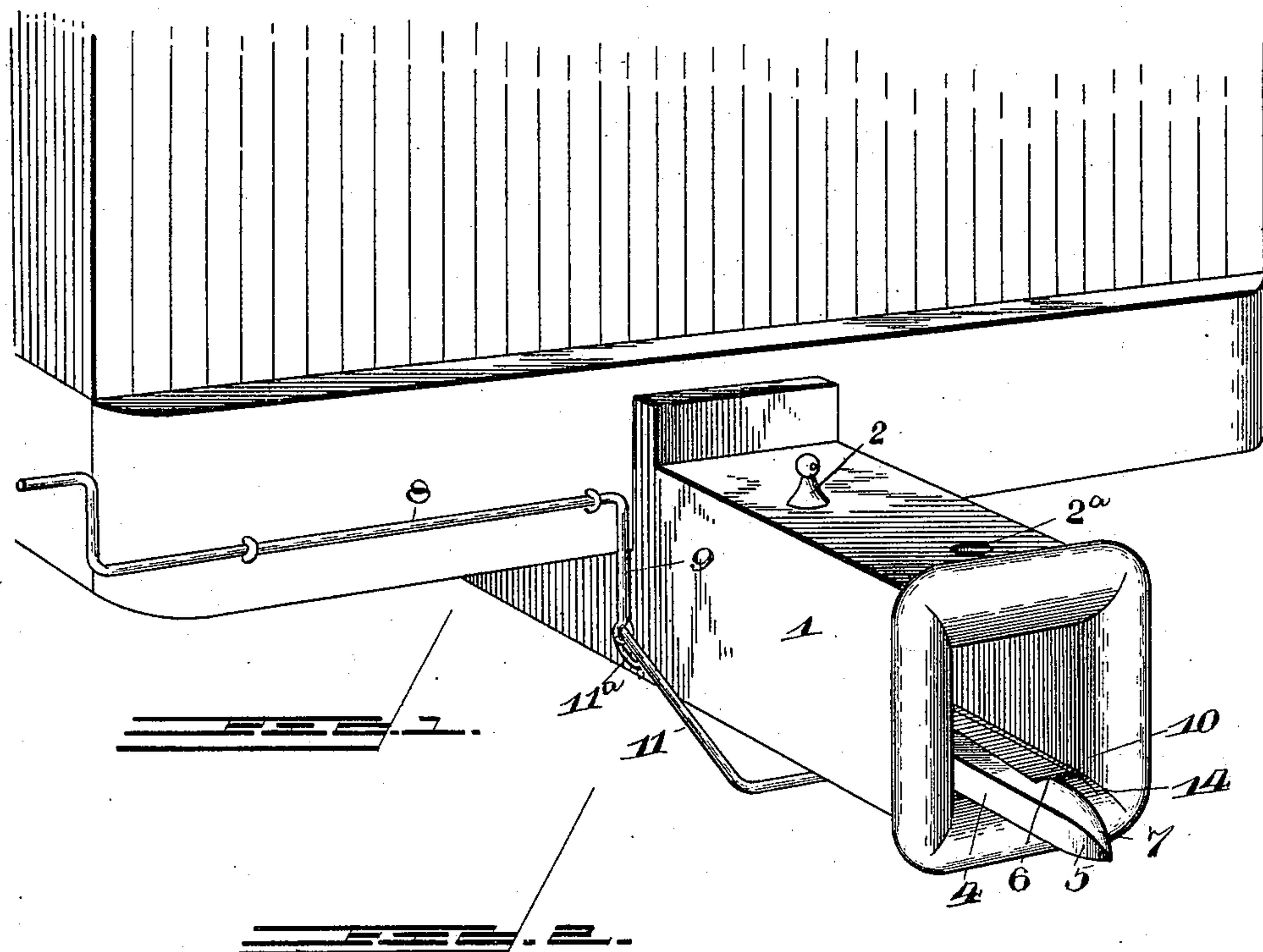


(No Model.)

A. L. ARNEY.
CAR COUPLING.

No. 576,533.

Patented Feb. 9, 1897.



Inventor,

Albert L. Arney,

By his Attorneys,

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UNITED STATES PATENT OFFICE.

ALBERT L. ARNEY, OF ALBION, IOWA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 576,533, dated February 9, 1897.

Application filed November 9, 1895. Serial No. 568,487. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. ARNEY, a citizen of the United States, residing at Albion, in the county of Marshall and State of Iowa, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

10 The object of the present invention is to improve the construction of car-couplings and to provide a simple, inexpensive, and efficient one, capable of coupling automatically and adapted to be readily uncoupled with-
15 out going between cars.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed
20 out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention. Fig. 2 is a horizontal sectional view showing two draw-heads
25 coupled. Fig. 3 is a longitudinal sectional view of two draw-heads, the parts being arranged for uncoupling.

Like numerals of reference designate corresponding parts in all the figures of the drawings.
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1 designates a draw-head having a link-cavity and provided with a coupling-pin perforation receiving a coupling-pin 2, which engages a slot 3 in a semi-arrow-head link 4. The head 5 of the link tapers to a point and extends laterally from one side of the link to form a shoulder 6, and its outer side edge 7 is beveled at its upper and lower faces to enable a corresponding link to readily ride over
35 it and engage the shoulder 6 to effect the operation of coupling, as illustrated in Fig. 2 of the accompanying drawings. The slot in the link permits the necessary play to enable the cars of a train to be successively started, similar to the ordinary pin-and-link car-couplings.
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The shoulder 6 of the link is provided with a series of horizontal corrugations, forming ribs which are adapted to interlock with corresponding ribs or corrugations of another link when two draw-heads are coupled, and

these corrugations and ribs, which are oppositely beveled, are adapted to prevent any liability of the links becoming accidentally uncoupled or thrown out of engagement by
55 the jars or jolts incident to the passage of a train.

The operation of uncoupling is performed from one side of a car by means of a rock-shaft 8, provided at its outer end with a handle and having an arm 9 at its inner end, which is connected with a pivoted link-lifter 10 by an L-shaped rod 11, extending downward at one side of the draw-head and transversely beneath the same. The inner or rear
60 end of the rod 11 is provided with a loop 11^a, which is connected with the arm 9 of the rock-shaft and which permits the necessary longitudinal movement of the draw-head.

The link-lifter is substantially sector-shaped and is pivoted at its apex or angle in a slot 12 of the bottom of the draw-head by a transverse pin 13, and the upper edge of the link-lifter is arranged normally horizontally and is flush with the upper face of the
65 bottom of the draw-head, the latter being recessed at its front to accommodate a lug or projection 14. The lug or projection 14 is beveled at its upper face to conform to the flare of the draw-head. It is located at the
70 upper terminus of the curved edge of the sector-shaped link-lifter, and it engages the draw-head to form a stop to limit the downward swing of the link-lifter. The link-lifter is provided near the lower terminus of its
75 curved edge with a projection 15, forming a stop to limit the upward swing of it. The body portion or main weight of the link-lifter is located in advance and below the transverse pin or pivot 13 and serves to hold the
80 link-lifter normally in the position described.

The link-lifter is located at one side of the link 4, and when two draw-heads are coupled, as described, it is arranged directly beneath the link of the other draw-head, and when it
85 is swung upward it lifts the link above the plane of the adjacent link to disengage the shoulder 6, and the lug or projection 14 is carried past the end of the contiguous link and engages the same and holds the link in a lifted
90 position and prevents it from dropping back into engagement with the other link when
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the rock-shaft is released by the operator. As soon as the cars are separated the link-lifter drops back to its normal position.

The rock-shaft may be duplicated, so as to enable the operation of uncoupling to be performed at either side of a car; but by arranging one rock-shaft at each end of a car and locating them at opposite sides thereof the rock-shafts of the adjacent ends of two cars will be located at opposite sides of the track, so that either one may be operated.

Any suitable means may be provided for enabling the operation of uncoupling to be performed from the top of a car or the platform of a coach.

The coupling-pin is removable and is adapted to engage the ordinary construction of link when desirable, and when a link of the ordinary construction is employed the coupling-pin is removed from the coupling-pin perforation at the back of the draw-head and is placed in a coupling-pin perforation 2^a at the front of the draw-head. When the link is not employed, it is adapted to be stored in the rear portion of the draw-head and may be readily arranged out of the way of an ordinary link.

It will be seen that the car-coupling is exceedingly simple and inexpensive in construction, that it is capable of coupling automatically, and that it may be readily uncoupled from the top and sides of cars without going between them.

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

What I claim is—

1. In a car-coupling, the combination of a draw-head, a link connected to the draw-head and provided with a shoulder adapted to engage the shoulder of a corresponding link, and

a link-lifter pivotally mounted on the draw-head at the bottom thereof and located adjacent to the said link and provided at its top with a lug or projection, forming a stop to limit the downward swing of the link-lifter and capable of engaging the outer end of a link, whereby the latter is maintained in an elevated position, substantially as described.

2. In a car-coupling, the combination of a draw-head, a semi-arrow-head link, and a sector-shaped link-lifter pivotally mounted on the draw-head at the bottom thereof and located adjacent to the shank of the link and adapted to lift the link of another draw-head, and provided at the upper terminus of its curved edge with a lug or projection forming a stop and capable of engaging the outer end of the link, said link-lifter being provided near the rear terminus of its curved edge with a stop to limit its upward swing, substantially as described.

3. In a car-coupling, the combination of a draw-head, a link secured therein and having a semi-arrow-head link beveled on its upper and lower faces at its side edge, a substantially sector-shaped link-lifter pivotally mounted in the bottom of the draw-head and located at one side of the shank of the link and provided at its front with a projection or lug, forming a stop and limiting the downward swing of the link-lifter and adapted to engage the outer end of a link, and a rock-shaft designed to be journaled on a car and connected with the link-lifter, 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.

ALBERT L. ARNEY.

Witnesses:

H. J. DENBOW,
IRVIN RICHEY.