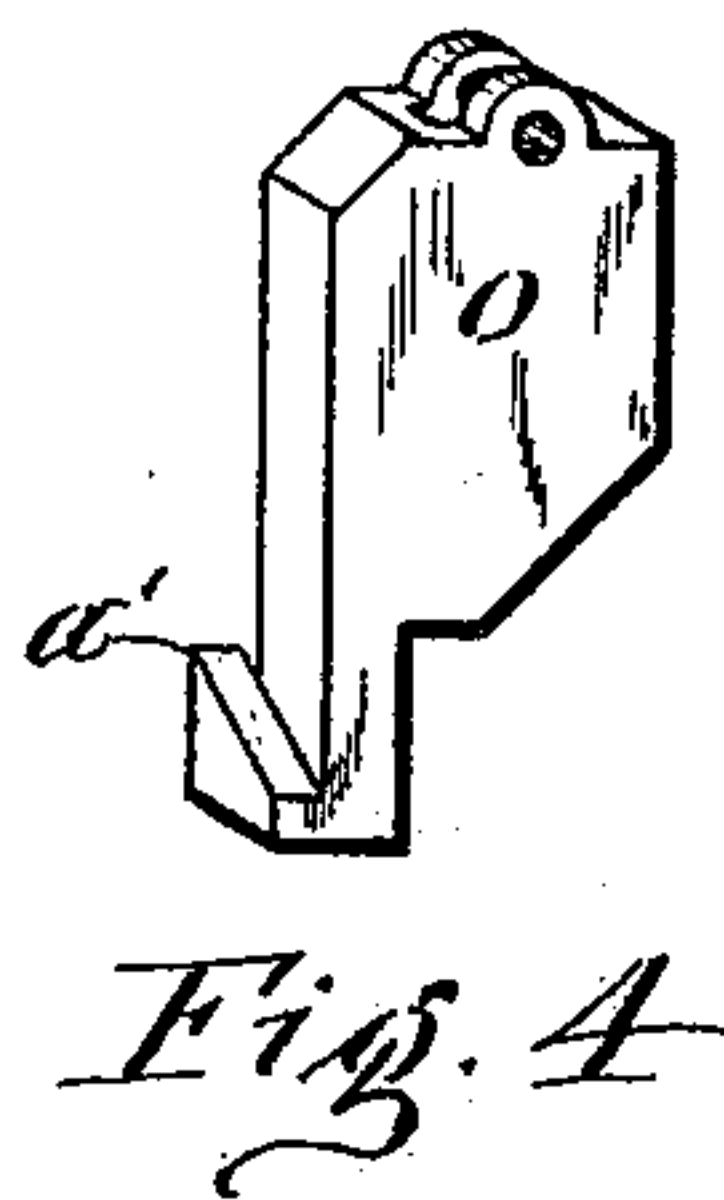
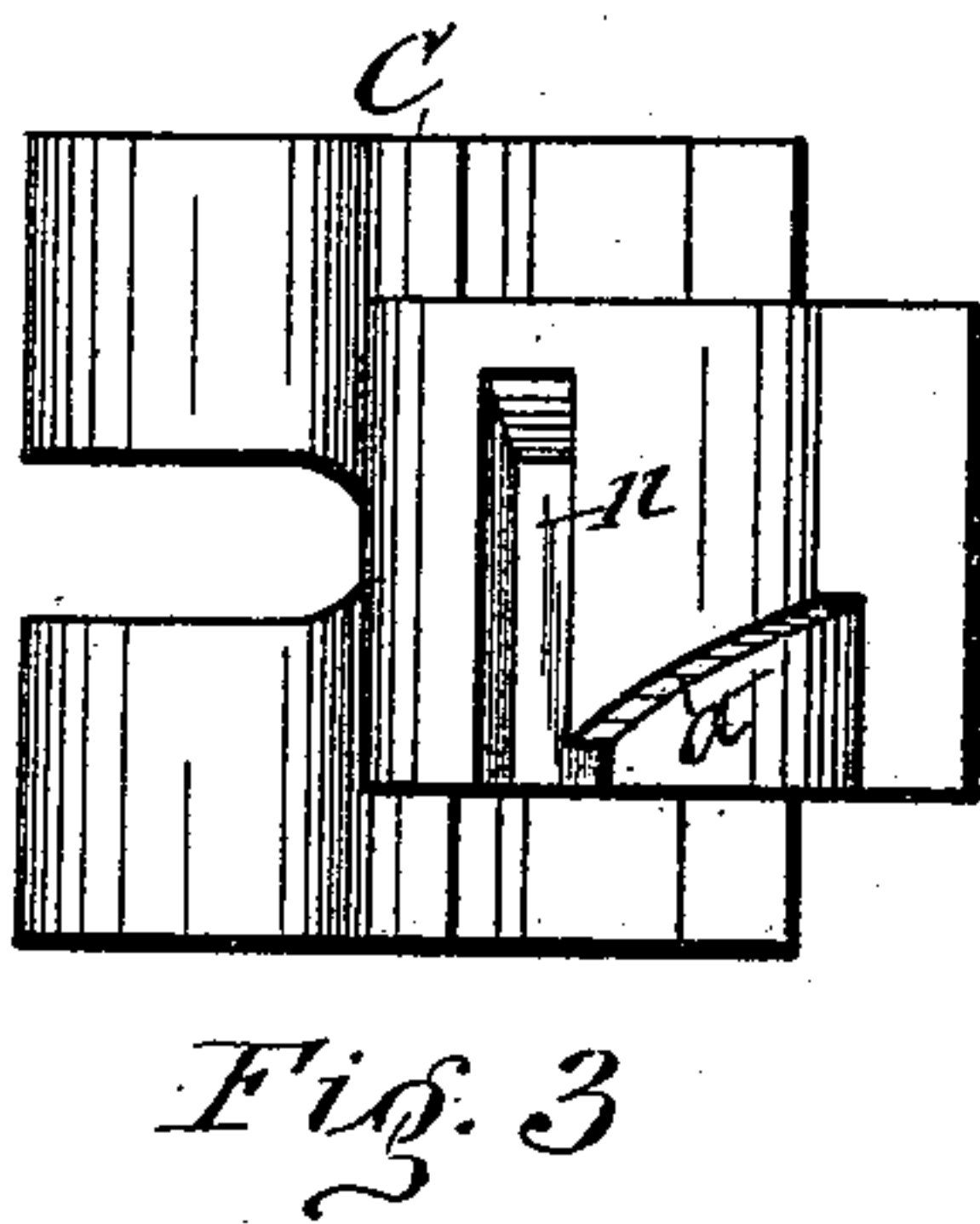
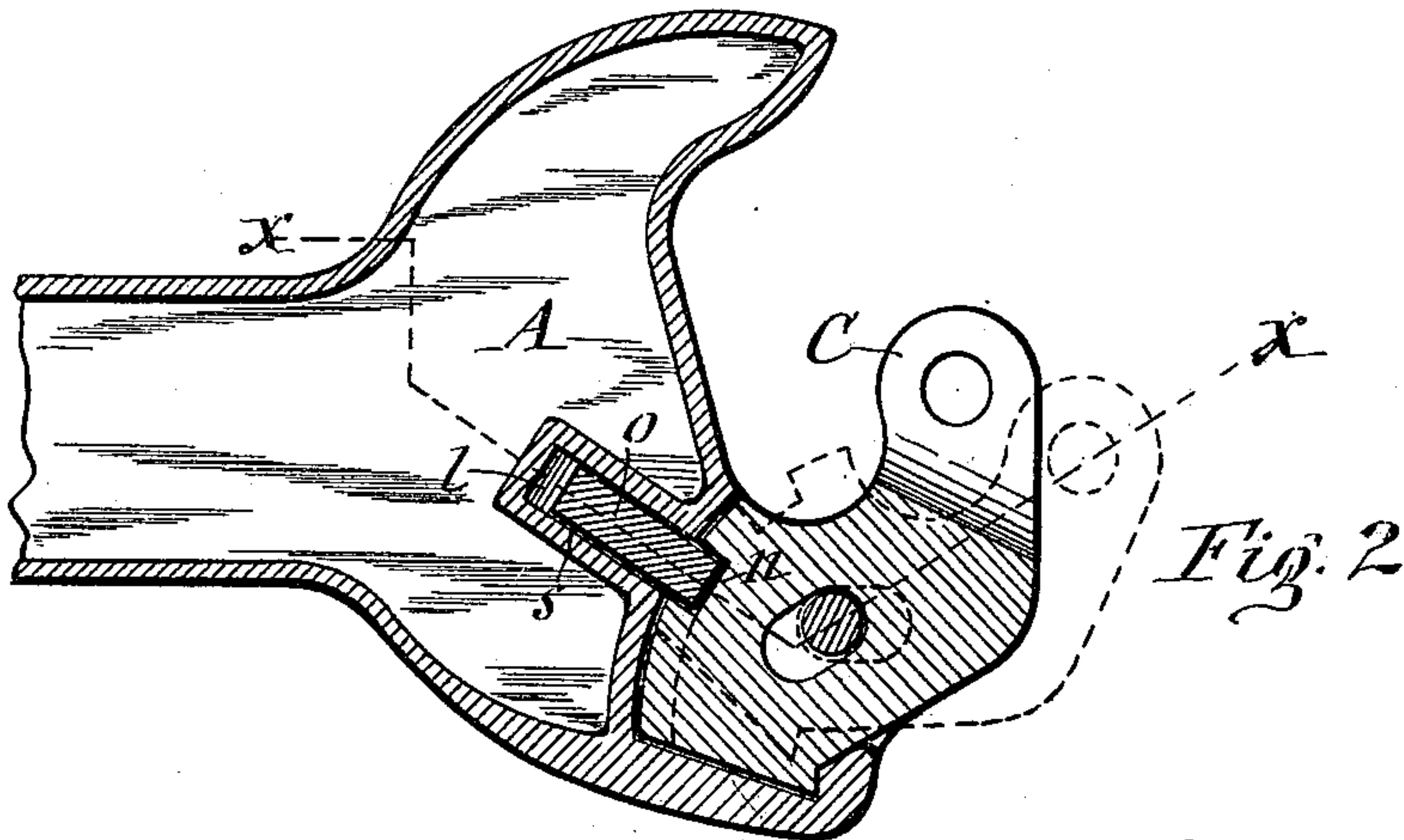
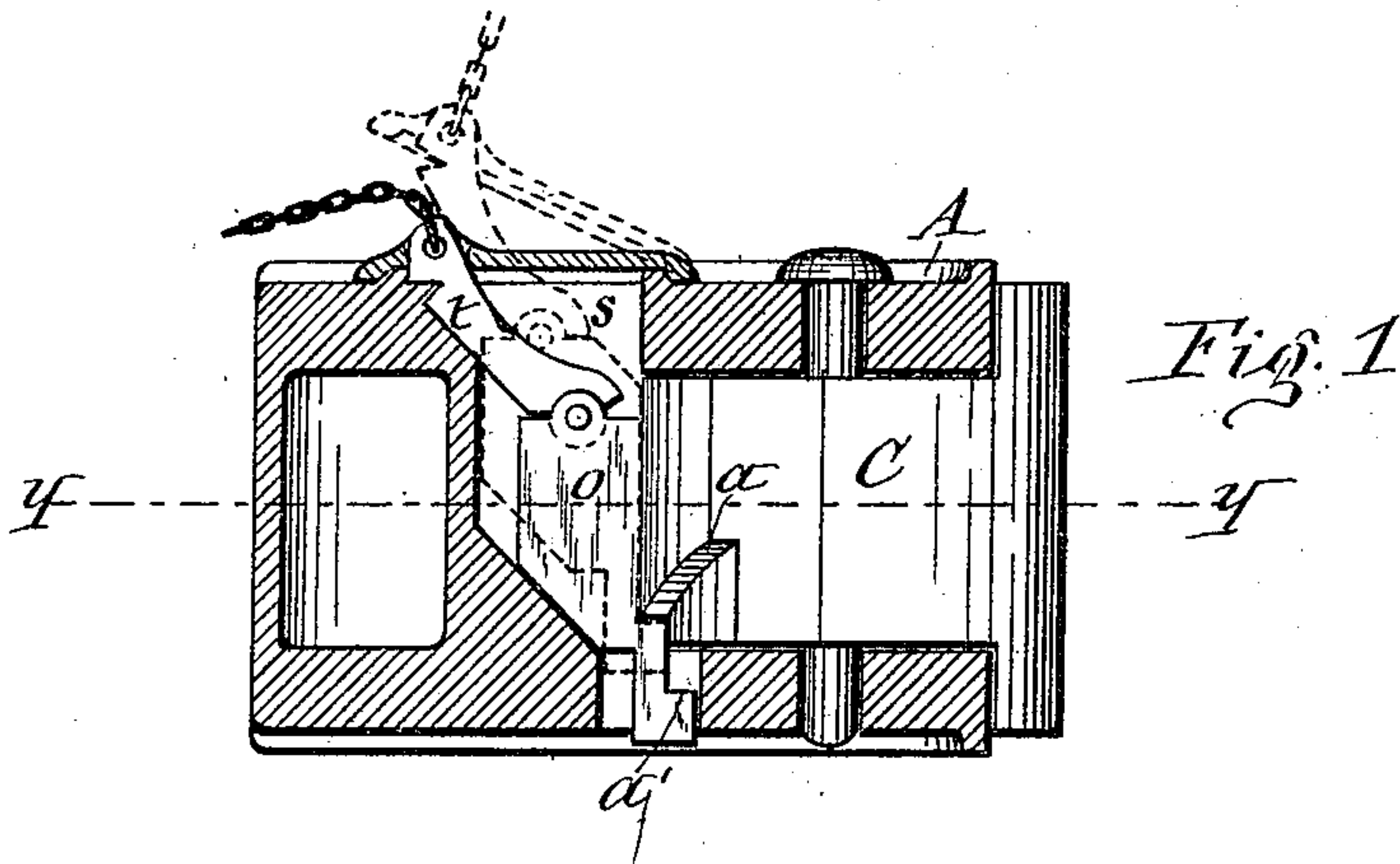


C. O. BARNES & L. BARNES, Sr.
CAR COUPLING.

Patented Mar. 24, 1891.



WITNESSES:

C. L. Bendixon
H. M. Searns

INVENTORS:

INVENTORS:
Charles O. Barnes
& Lucien Barnes Jr.
their ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES O. BARNES AND LUCIEN BARNES, SR., OF SYRACUSE, NEW YORK.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 448,852, dated March 24, 1891.

Application filed January 7, 1891. Serial No. 376,939. (No model.)

To all whom it may concern:

Be it known that we, CHARLES O. BARNES and LUCIEN BARNES, Sr., of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Car-Couplings, of which the following; taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of car-couplings which have a knuckle or hook pivoted to the draw-head and adapted to interlock with a similar device in coupling the cars.

The object of this invention is to provide the car-coupler with simple and effective means for throwing the knuckle into its uncoupled position preparatory to receiving and interlocking with the knuckle of another similar car-coupler; and to that end the invention consists in the combination, with the draw-head and coupling-knuckle connected thereto, of a key sliding vertically in the draw-head and adapted to lock the knuckle in its coupled position and a cam on said key arranged to throw the knuckle into its open position by the movement of the key beyond its release of the knuckle, all as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a vertical longitudinal section on line *x x*, Fig. 2. Fig. 2 is a horizontal longitudinal section on line *y y*, Fig. 1. Fig. 2 is a rear face view of the knuckle, and Fig. 4 is a detached perspective view of the combined knuckle-locking and knuckle-opening key and cam.

Similar letters of reference indicate corresponding parts.

A represents the draw-head; C, the hook or knuckle, which is pivoted to said draw-head, so as to swing into and out of its coupling position, and *o* denotes the key, which is seated movably in a vertical slot *s*, formed with an inclined way *l*, by means of which the said key is guided into a notch *n* in the rear face of the knuckle, and thus locks the latter in its coupled position, as represented by full lines in Fig. 2 of the drawings. A link *t* is connected to the top of the key *o* and extends up through the slot *s* to the top of the draw-head, where it may be connected to a suitable lever for lifting the key. Such

levers are common in other car-couplers, and therefore need not be illustrated in this case. In order to utilize this key for the additional purpose of throwing the knuckle into its open position, we provide said key with a cam *a'*, preferably formed in one piece therewith, and in such a position as to engage the knuckle and swing the same into its uncoupled position after the key has moved a sufficient distance to release the knuckle from its coupled position.

We preferably form the knuckle with the downwardly-facing inclined shoulder *a* on its rear face, with which shoulder the cam *a'* is brought in contact by raising the key *o* out of its locking position, as represented by dotted lines in Fig. 1 of the drawings. A further upward draft of the locking-key *o* causes the cam *a'* to press on the inclined shoulder *a*, and thereby turn the knuckle on its pivot to its open position, as represented by dotted lines in Fig. 2 of the drawings.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a twin-jaw car-coupler, the combination, with the draw-head and coupling-knuckle connected thereto, of a key sliding vertically in the draw-head and adapted to lock the knuckle in its coupled position and a cam on said key arranged to throw the knuckle into its open position by the movement of said key beyond its release of the knuckle, as set forth.

2. In a twin-jaw car-coupler, the combination, with the draw-head and coupling-knuckle, of a knuckle-locking key and knuckle-opening cam formed in one piece and in positions to successively release the knuckle from its locked position and throw the same into its open position, as set forth.

3. In combination with the draw-head, the knuckle C, formed with the inclined shoulder *a*, and the key *o*, formed with the cam *a'*, substantially as and for the purpose set forth.

In testimony whereof we have hereunto signed our names this 3d day of January, 1891.

CHARLES O. BARNES. [L. S.]
LUCIEN BARNES, SR. [L. S.]

Witnesses:

MARK W. DEWEY,
H. M. SEAMANS.