

(No Model.)

W. F. WHITE.
CAR COUPLING.

No. 543,071.

Patented July 23, 1895.

Fig. 1.

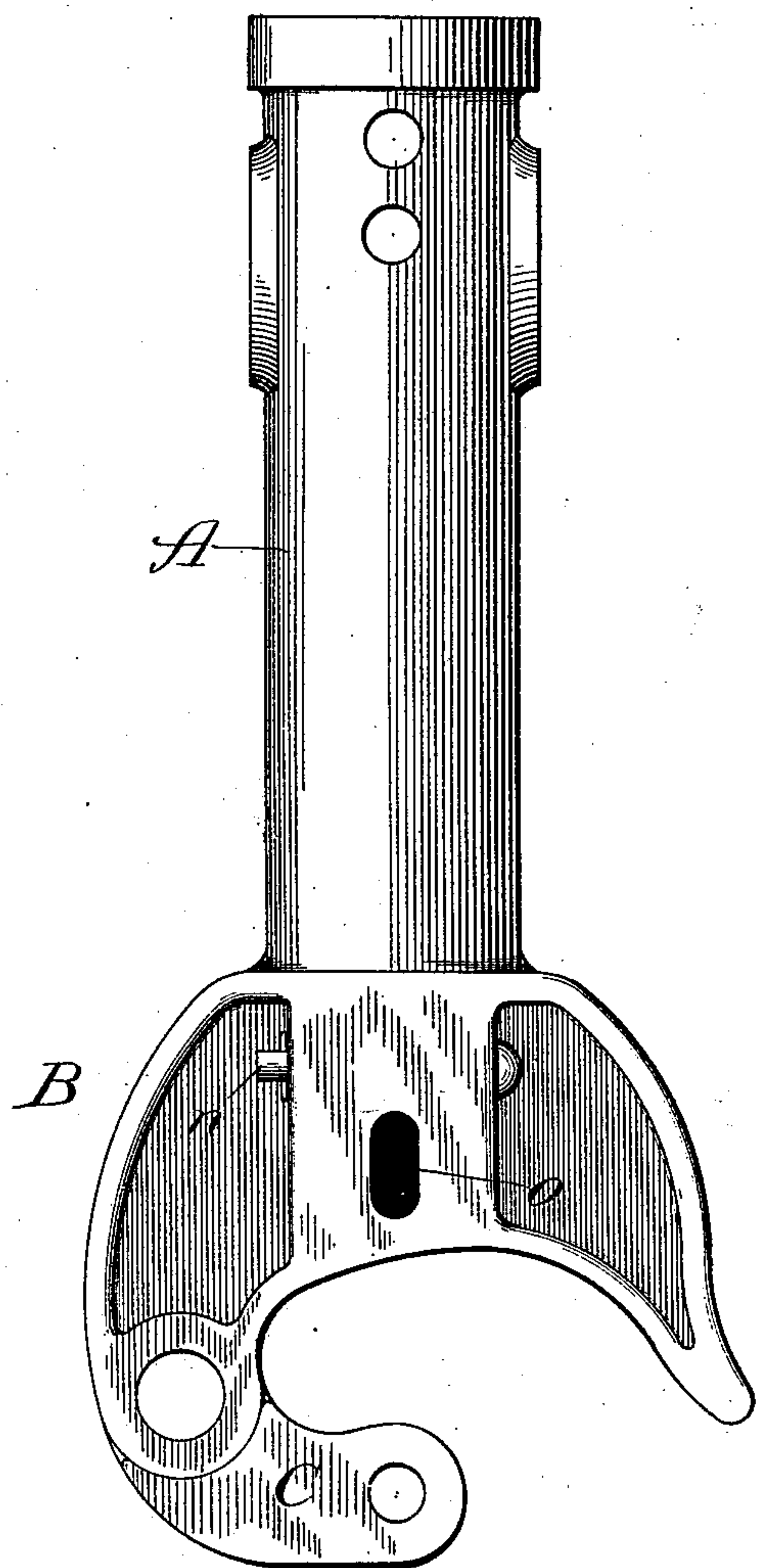


Fig. 3.

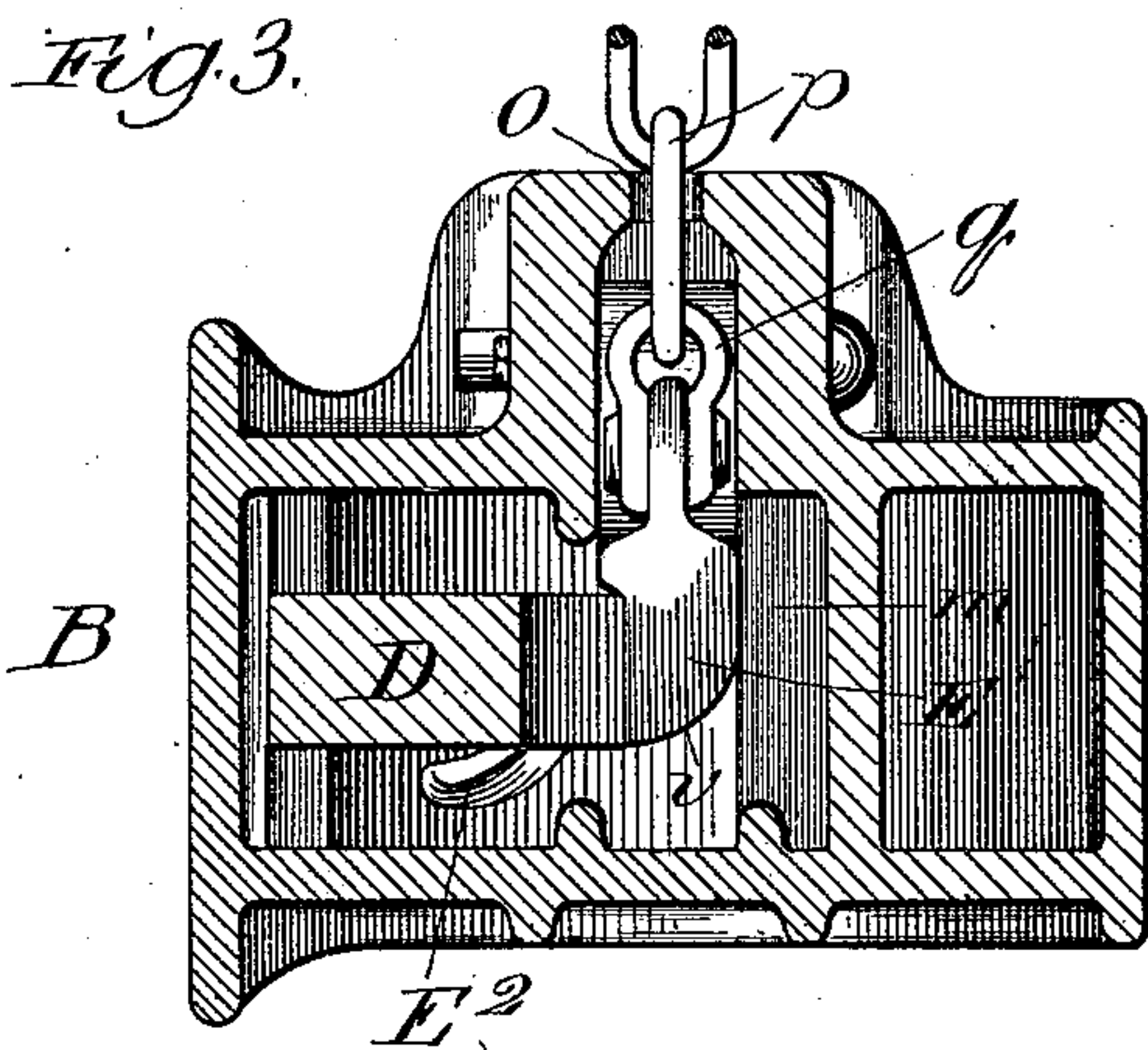


Fig. 2.

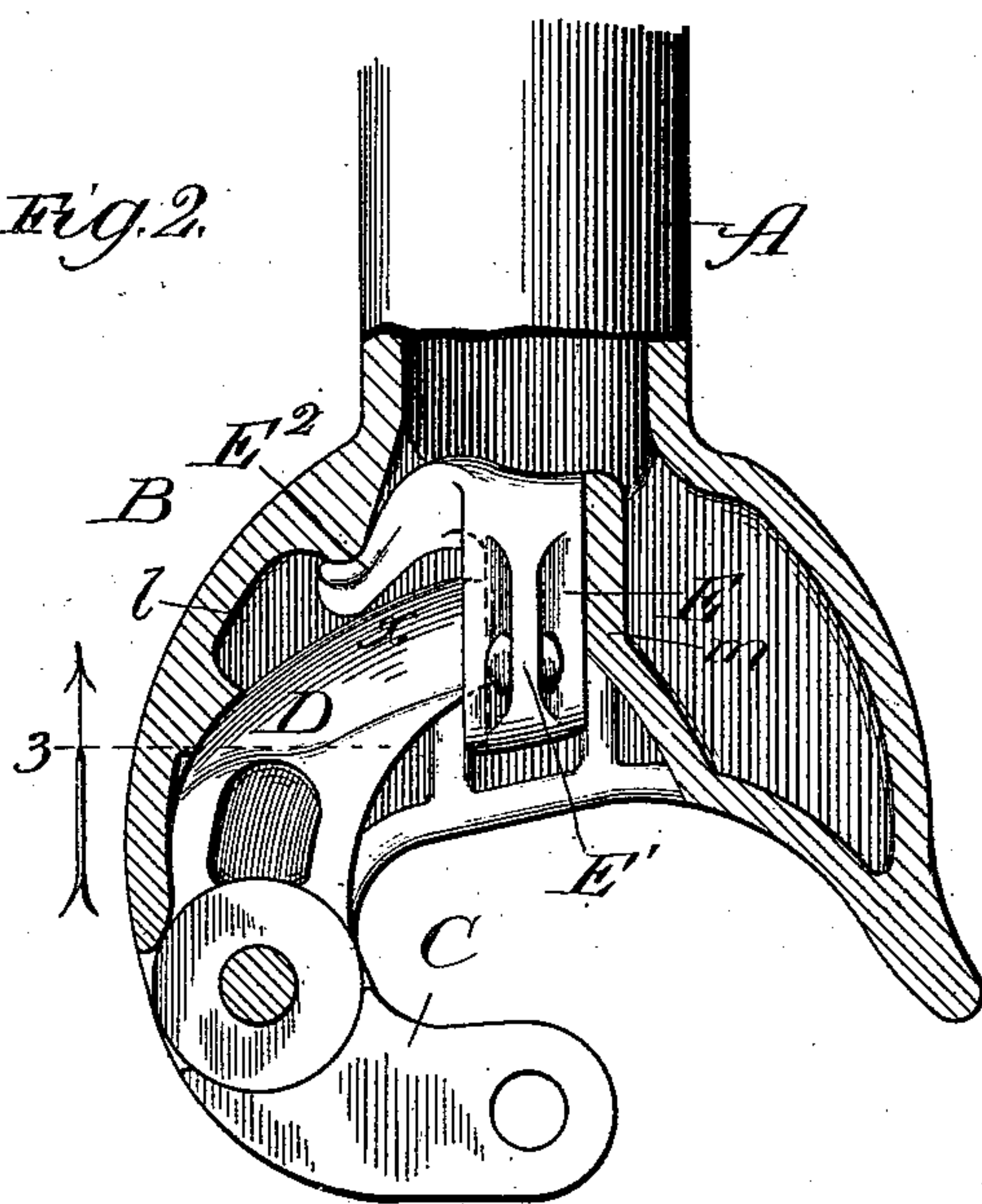
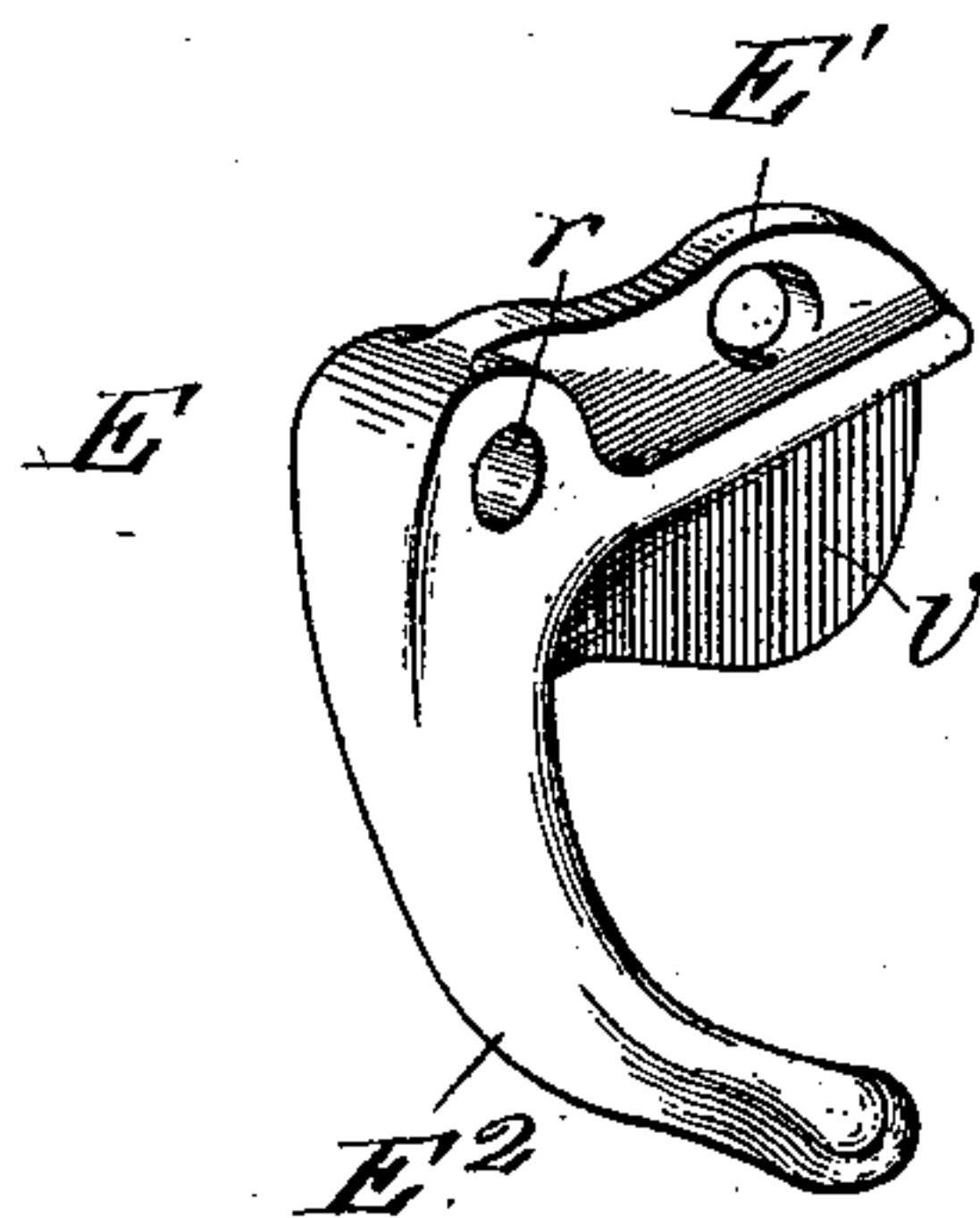


Fig. 4.



Witnesses.
E. C. Chyford,
Lester F. Altier.

Inventor:
William F. White.
By Dyrnforth & Dyrnforth,
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM F. WHITE, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOSEPH E. FORSYTH, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 543,071, dated July 23, 1895.

Application filed June 6, 1894. Serial No. 513,702. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. WHITE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

My invention relates to an improvement in the class of so-called "Master Car-Builders'" car-couplers of the Janney type, in which the locking of companion couplers is automatically effected by the abutment against each other in bumping the cars of the pivotal knuckles or jaws to cause their outer portions to mutually overlap each other in the draw-heads and the tail-pieces of the knuckles to be turned inward past the respective locking media in the heads, which obstruct the turning of the tail-pieces in the opposite or uncoupling direction.

It is desirable to maintain the knuckle of the coupler on an uncoupled car always in condition for automatic coupling, thus with the tail-piece in the position of its outward throw, thereby to avoid at all times any necessity for a brakeman entering between cars to turn the knuckle by hand to that position in case it shall have been turned inward out of position for automatic coupling. To accomplish this various forms of combined locking and unlocking means have hitherto been provided.

My invention relates particularly to an improvement in the combined locking and unlocking means referred to; and it consists in the construction thereof hereinafter described and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a plan view of a car-coupler of the variety referred to provided with my improvement. Fig. 2 is a broken view of the same, showing the draw-head in horizontal section to display the internal mechanism, including my improved combined lock and tail-piece thrust extension. Fig. 3 is a section taken at the line 3 on Fig. 2 and viewed in the direction of the arrow, and Fig. 4 is a perspective view of my improved combined lock and tail-piece thrust extension.

A is the draw-bar terminating in the head B of usual or any suitable form and general

construction and carrying at one corner the pivotal knuckle or jaw C having the tail-piece D, beveled on its upper side toward the rear, as indicated at *x* in Fig. 2.

E is my improved combined lock and thrust extension thereof for the tail-piece D. As shown, it comprises a metal and preferably cast body in the general form of a bell-crank, having a pivot-hole *r* in its angle, to one side of which is the locking head or bar E', rounded or beveled, as at *v*, on its under side, and to the opposite side of which is the extension E² in the form of a downward and outward projecting and cam-like finger. Near its end the lock E' carries pivotally a clevis *q* at which to attach a chain *p*, cable, or the like, which passes freely through an opening *o* in the top of the draw-head to the crank hereinbefore referred to, but not shown, or other operating medium, and the device E is supported at its angle by a horizontally-disposed pivot-pin in the upper part of the draw-head, as represented at *n*.

The draw-head is preferably, for the sake of economy in metal and to afford lightness, formed hollow throughout, and to lend adequate strength I cast in it, near the side opposite that at which the knuckle is pivoted, a web *m*, deflected, as shown in Fig. 2, toward its forward end, to enable the tail-piece D in swinging to clear it.

The operation is as follows: When the tail-piece is swung inward in coupling, it raises on its pivot *n* and passes under and by the lock E'. The inner side of the draw-head is shown as recessed at *l* to make room for the curved extremity of the cam-finger extension E², which is diverted, as shown, toward its lower end, there to extend in a plane lateral to that of the head E', and thus be adapted to engage the draw-head at the recess *l*. After the tail-piece has passed the lock, the latter drops back by gravity into place, wherein it obstructs the return of the tail-piece and thus locks the knuckle against uncoupling. To unlock the knuckle for uncoupling, the chain *p* is drawn, by manipulating the operating-crank, to turn the device E on its pivot *n* and thereby raise the lock E' out of the return-path of the tail-piece, and at the same time the cam-finger extension E² of the lock, owing

to its form, is thrust, by turning the device E on its pivot, against the back of the tail-piece in the direction to force it outward and thereby set it in position for subsequent automatic coupling.

While I have represented the connecting medium *p* as passing through the top of the draw-head, the parts may be so arranged as to cause it to operate my improved device E if passed otherwise through the draw-head.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, means for locking the pivotal knuckle and forcing it outward by the unlocking operation, comprising a generally bell-crank shaped body E supported near its angle on a horizontally disposed pivot in the draw-head to swing in a vertical plane, said body forming a locking head E' having the extension E² diverted laterally toward its lower end, there to extend in a plane lateral

to that of the said head and affording a downward and outward projecting cam-like finger, substantially as described.

2. In a car-coupler, means for locking the pivotal knuckle and forcing it outward by the unlocking operation, comprising a generally bell-crank shaped body E supported near its angle on a horizontally disposed pivot in the upper part of the draw-head to swing in a vertical plane, said body forming a locking head E' beveled as at *v* and carrying a pivotal clevis *q* and having the extension E² diverted toward its lower end, there to extend in a plane lateral to that of said head and affording a downward and outward projecting cam-like finger, substantially as described.

WILLIAM F. WHITE.

In presence of—

M. J. FROST,

W. U. WILLIAMS.