

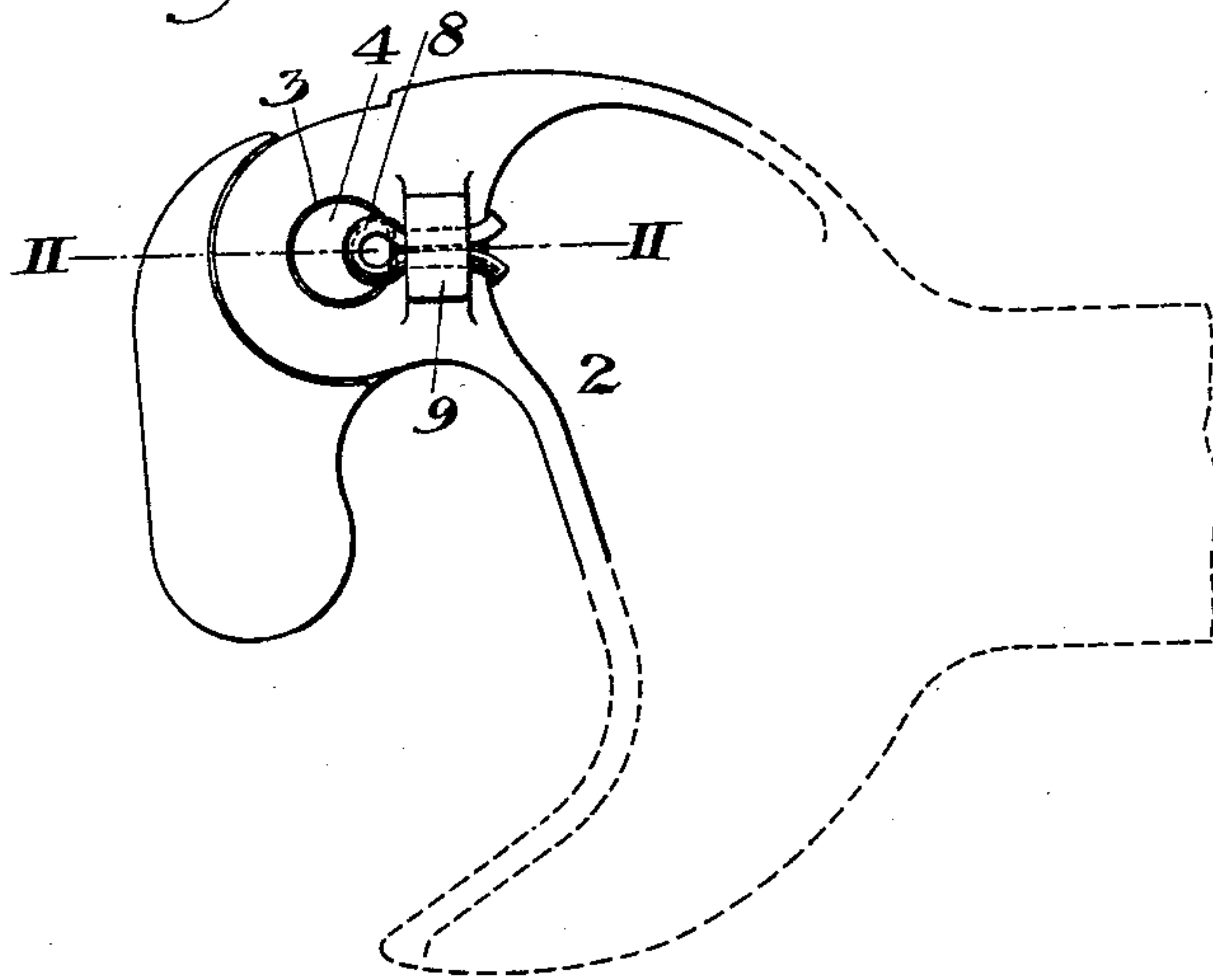
No. 735,000.

PATENTED JULY 28, 1903.

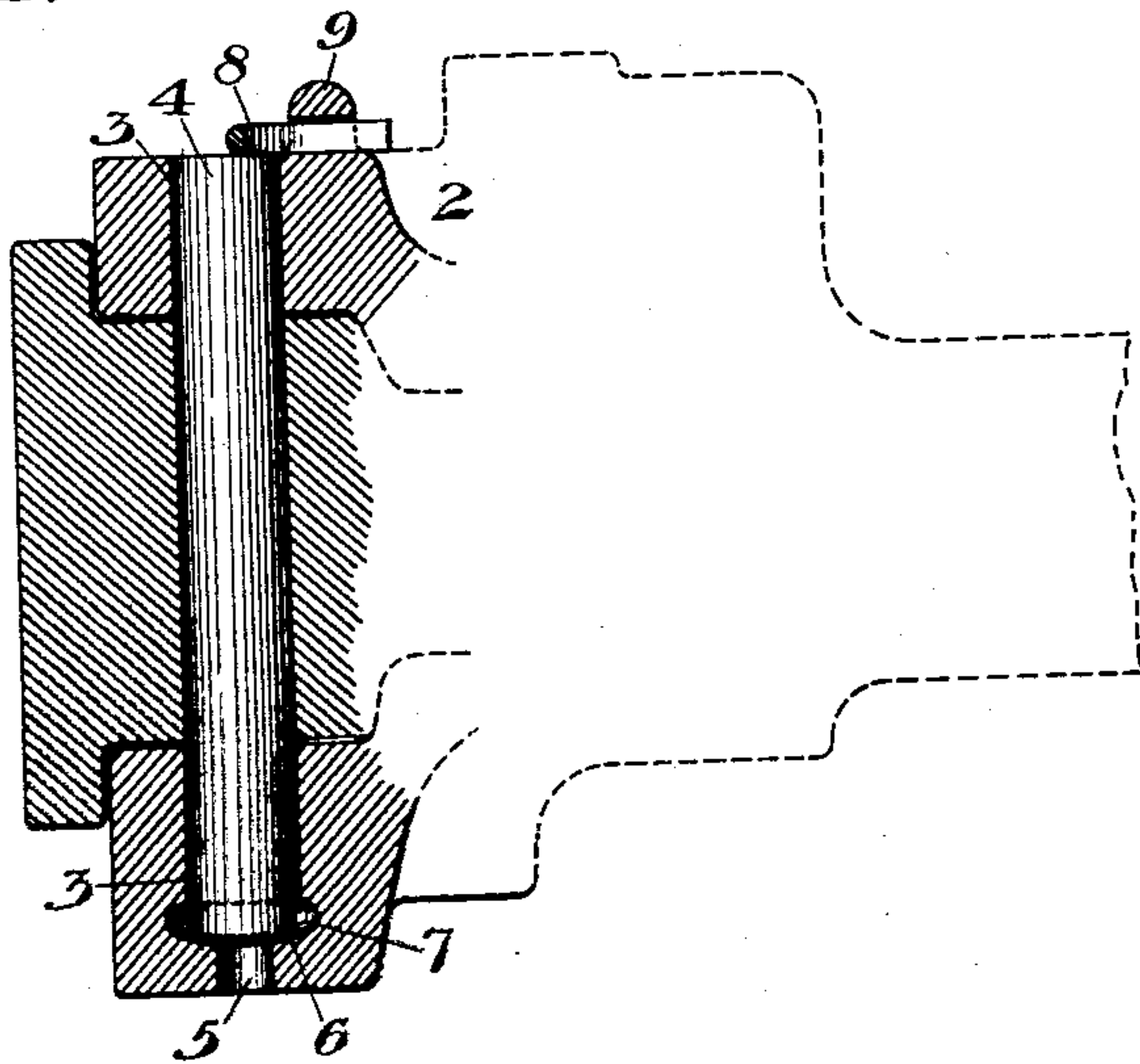
C. A. TOWER.  
PIVOT PIN FOR COUPLINGS.  
APPLICATION FILED JAN. 21, 1903

NO MODEL.

*Fig. 1.*



*Fig. 2.*



WITNESSES

*Warren W. Swartz*  
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INVENTOR

*C. A. Tower*  
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*his Attorneys.*

# UNITED STATES PATENT OFFICE.

CLINTON A. TOWER, OF CLEVELAND, OHIO.

## PIVOT-PIN FOR COUPLINGS.

SPECIFICATION forming part of Letters Patent No. 735,000, dated July 28, 1903.

Application filed January 21, 1903. Serial No. 139,958. (No model.)

*To all whom it may concern:*

Be it known that I, CLINTON A. TOWER, of Cleveland, Cuyahoga county, Ohio, have invented a new and useful Pivot-Pin for Couplers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of a coupler, showing the ear, pin, and knuckle in full lines. Fig. 2 is a vertical section on the line II II of Fig. 1.

The purpose of my invention is to provide means for preventing the loss of the pivot-pin of a coupler-knuckle in case the pin should break. It also enables the pin to be made without a head, which is desirable because the heating of a steel pin, which is necessary in order that the head may be upset, is apt to injure the steel, and thus render the pin weak.

As shown in the drawings, I cast the coupler-head 2 with a pivot-pin hole 3, extending vertically at the outer forked end of the head and adapted to receive the pin 4, which is a straight headless piece of metal and constitutes a pivot for the coupling-knuckle. The lower end of the hole at 5 is of less diameter than the pin, so that a shoulder 6 is afforded in the hole on which the end of the pin rests and by which it is prevented from dropping through the hole, while the extension 5 of reduced diameter permits access to the hole when it is desired to remove the pin. Above the shoulder 6 the hole is cast with an enlarged portion 7. This is of importance because it enables a drifting-tool to be forced down through the hole after the coupler is

cast in order to broach the hole, the enlargement 7 affording a cavity into which the metal dislodged by the drifting-tool can fall. When the knuckle is applied to the coupler, the pin 4 is set in the hole through the coupler and knuckle, the lower end of the pin resting on the shoulder 6 and the upper end being about flush with or below the surface of the coupler. It may then be held from working up by a cotter or rivet 8, which fits in a lug 9 on the coupler and extends over the pin.

If the pin should break, it is held by the shoulder 6 from dropping from the hole.

I claim—

1. A coupler having a pivot-pin hole with a supporting-shoulder at its lower end and an enlargement above the shoulder; substantially as described.

2. A coupler having a pivot-pin hole with a shoulder at its lower end and an enlargement above the shoulder, said hole having a reduced portion below the shoulder; substantially as described.

3. A coupler having a pivot-pin hole with a shoulder at its lower end on which the end of the pin rests, in combination with a headless pin having its upper end at or below the surface of the coupler, and a device on the coupler above the pin by which it is retained; substantially as described.

In testimony whereof I have hereunto set my hand.

CLINTON A. TOWER.

Witnesses:

D. W. CALL,  
E. W. WHITTEMORE.