

A. DUBUQUE.

CROSS HEAD.

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934,147.

Patented Sept. 14, 1909.

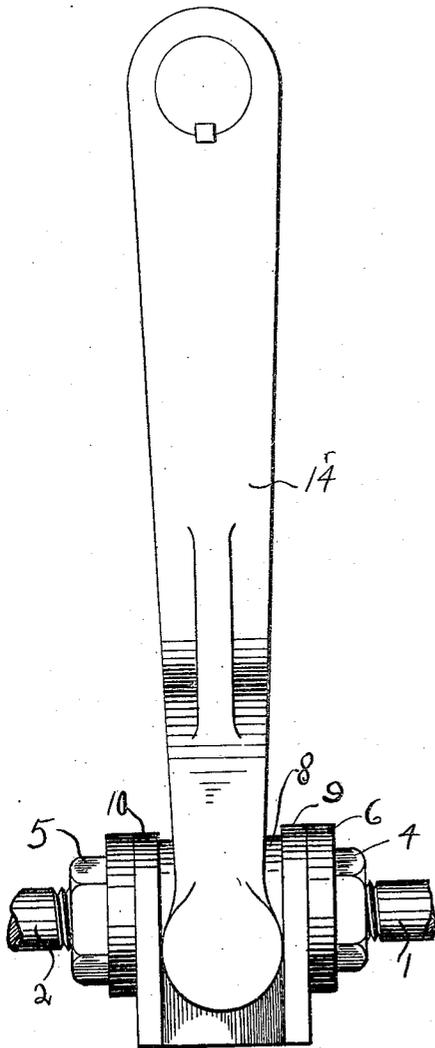


Fig 1

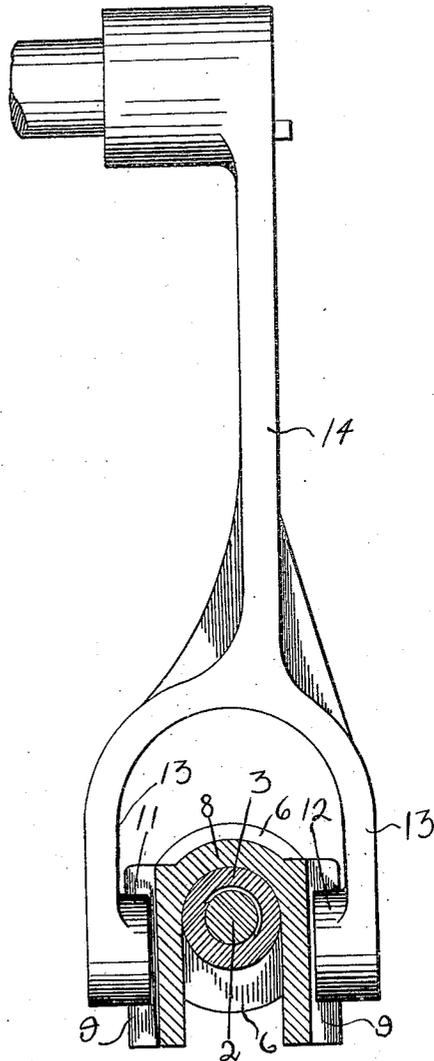


Fig 2.

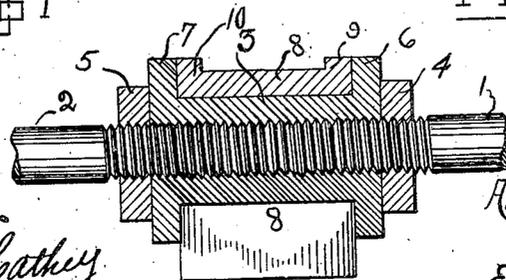


Fig 3.

WITNESSES:

Wm. A. Cathey

INVENTOR

Arthur Dubuque

BY

Edward U. Hardway
ATTORNEY

UNITED STATES PATENT OFFICE.

ARTHUR DUBUQUE, OF HOUSTON, TEXAS.

CROSS-HEAD.

934,147.

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To all whom it may concern:

Be it known that I, ARTHUR DUBUQUE, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Cross-Heads, of which the following is a specification.

My invention relates to new and useful improvements in cross heads, and more particularly to pump piston cross heads.

The object of the invention is to provide a device of the character described, whereby the rocker arm may be readily attached to the plunger rod of a pump and one which will provide a means for allowing the plunger rod to be turned without affecting the position of said cross head.

Another object of the invention is to provide in a device of the character described, a cross-head which will prevent the breakage of the rocker yoke, which so often occurs while the operator is attempting to remove the cross-head from the plunger rod.

A still further object of my invention is to provide a device of the character described which will be simple, strong, durable, efficient and one in which there will be no moving parts to get out of working order.

With the above and other objects in view my invention has relation to certain novel features of construction and operation, an example of which is described in this specification and illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of my device, with the rocker arm attached thereto. Fig. 2 is an end elevation thereof showing a sectional view of the cross head. Fig. 3 is a transverse sectional view of the cross head and its co-acting parts.

Referring now more particularly to the drawings, wherein like numerals of reference designate similar parts in each of the figures, the numeral 1 designates a plunger rod and the numeral 2 refers to a piston rod, both of which rods are secured in a spool-shaped sleeve 3, preferably, by being screwed therein, and are held in position by lock nuts numbered, respectively 4 and 5. The ends of the sleeve 3 carry flanges 6 and 7 adapted to hold the cross head 8 in position. This cross head is U-shaped and disposed so as to set over the spool-shaped sleeve 3 and rest between the flanges 6 and 7 thereof, in the manner of a saddle. This cross head comprises a semi-cylindrical body with its

free edges prolonged into downwardly extending flanges which embrace the sleeve 3, and at its extremities carries outwardly extending flanges 9 and 10 between which the lugs 11 and 12, carried at the extremities of the fingers of yoke 13, are adapted to engage. This yoke is carried by the rocker arm 14 which operates in the usual manner and controls the action of the pump valves (not shown).

In practice, as is well known, the plunger rod wears out before the piston rod, and in making repairs it becomes necessary to remove the worn rod and replace it with a new one. These rods are preferably made separate and distinct, as shown in detail in Fig. 3. In the devices of this kind now in common use, the rod is secured directly to the cross head and in disengaging the rod, by means of a wrench, or otherwise, the cross-head is often turned, with the rod, and one of the fingers of yoke 13 is thereby broken. In my improved device I have obviated this liability of breakage, or injury, by providing the spool-shaped sleeve 3, to which the plunger rod and piston rod are directly attached, and over which the cross-head sets loosely. Thus when it becomes necessary to unscrew either the plunger rod or the piston rod, nothing more than the sleeve can possibly be turned, and when said sleeve does turn no turning motion will be transmitted to the cross head, and consequently there can be no liability of breakage to the yoke of the rocker arm.

What I claim is:—

1. In a device of the character described, the combination with a means for connecting the piston rod and plunger rod, of a pump, of a rocker arm, a cross head carried by the said means and flanges arranged on the cross head adapted to engage with lugs carried by the yoke of said rocker arm.

2. In a device of the character described, the combination, with a sleeve arranged to connect the piston rod and plunger rod of a pump, of flanges carried by the sleeve, a cross head mounted on the sleeve and held in position by said flanges, and flanges carried by the crosshead adapted to engage with a rocker arm.

3. In a device of the character described, a connecting sleeve, and a cross head; annular flanges carried by said sleeve and adapted to hold said cross head in position on the sleeve; outwardly extending flanges,

carried by the cross head and adapted to engage with a rocker arm; said cross head being loosely mounted on said sleeve, and being detachable therefrom.

5 4. In a device of the character described, a connecting sleeve; a cross head; flanges carried by said sleeve and adapted to hold said cross head in position thereon; means, carried by the cross head and adapted to
10 engage with a rocker arm, as set forth.

5. In a device of the character described, a detachable U-shaped cross head, and means carried by said cross head adapted to engage with a rocker arm as set forth.

6. In a device of the character described, 15 a connecting sleeve; a cross head; means carried by said sleeve whereby said cross head is held in position thereon; means carried by the cross head and adapted to engage with a rocker arm as set forth. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR DUBUQUE.

In the presence of—
GLYNN DAVIS,
R. G. HIGH.