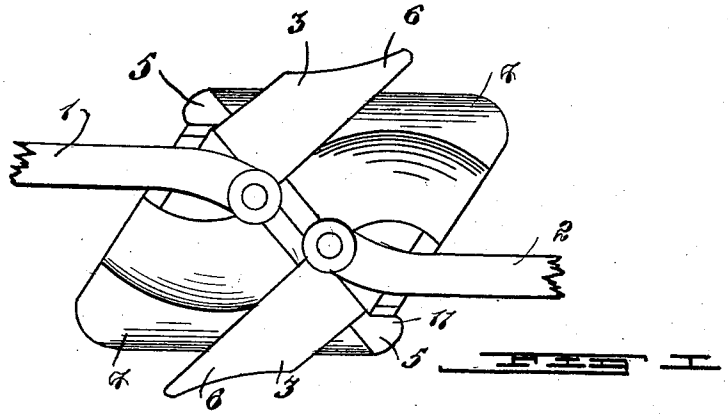
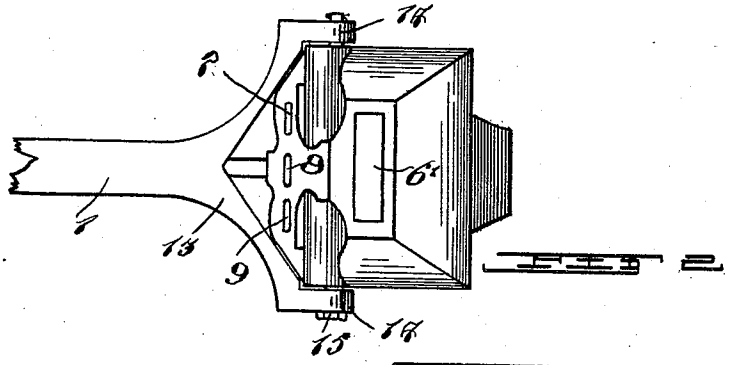
H. O. LLOYD-JONES.

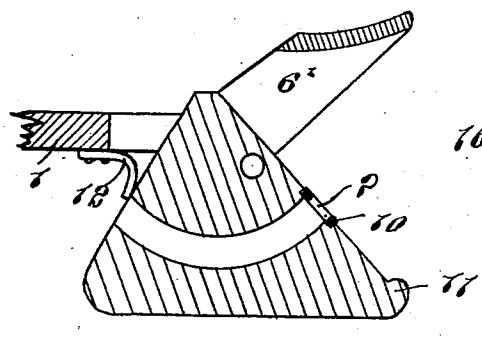
COUPLING HEAD FOR PIPE LINES.

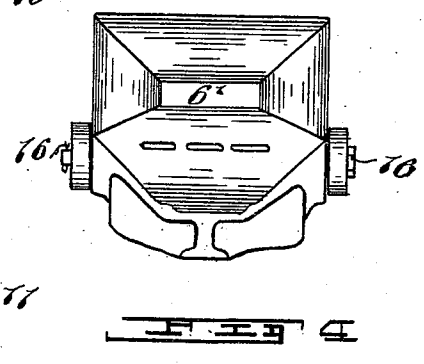
APPLICATION FILED FEB. 8, 1911.

1,007,582. Patented Oct. 31, 1911.









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UNITED STATES PATENT OFFICE.

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COUPLING-HEAD FOR PIPE-LINES.

1,007,582. Specification of Letters Patent. Patented Oct. 31, 1911.

Application filed February 8, 1911. Serial No. 607,377.

To all whom it may concern:

Be it known that I, HORATIO OWEN LLOYD-JONES, of the city of Winnipeg, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Coupler-Heads for Pipe-Lines, of which the following is the specification.

My invention relates to coupler heads for pipe lines for effectually connecting the train line, the signal line, and the steam heating line in a train of cars, and the object of the invention is to provide an inexpensive, serviceable, and efficient device which will automatically couple and effect a direct interconnection between the several pairs of pipe lines of a train of cars, the joints between the pairs being retained closed under all working conditions whether the cars be on straight or curved portions of the track.

A further object of the invention is to provide a means which will prevent unnecessary wearing of the usual gaskets carried by the coupler heads and located at the points where the pairs of pipes come together so that the possibility of leakages at the joints is reduced to a minimum.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists essentially in the arrangement and construction of parts hereinafter more particularly described and later pointed out in the appended claim.

Referring to the drawing, Figure 1 represents a plan view of two of my coupler heads engaged. Fig. 2 is a side elevation of one of the coupler heads. Fig. 3 is a horizontal sectional view through one of my coupler heads. Fig. 4 is an end view of the same.

In the drawing like characters of reference indicate corresponding parts in each figure.

The present invention relates to an improvement in the form of coupler heads described and claimed in my co-pending application, Serial Number 156549, Canada, and 579094, United States, for improvements in pipe-line couplers, wherein the connections of the heads to the car and of the pipe lines to the heads are fully detailed. I have considered it unnecessary in this present application to show anything further than the detailed construction of the heads and their pivoted connection with the shanks as therein resides the invention in this instance.

1 and 2 represent suitable shanks carrying engaging heads 3 which are constructed as now described. The heads comprise each a body portion 4 constructed with a tapering jaw 5 and carrying an open mouthed or flaring guard 6, the jaw and guard being set more or less at right angles to each other as shown best in Figs. 1 and 3 of the drawing.

Ducts 7, 8 and 9 are located in the heads, which ducts communicate with the train line, the signal line, and the steam heating line of the train.

Rubber or such like gaskets 10 are fitted or sunk in the heads in the usual way at the ends of the ducts, the gaskets carried by one head being engageable with the gaskets carried by the other head when the heads are brought together. The guards 6 have a rectangular opening 6′ formed therein at the back and are flared outwardly at the top, bottom and side so as to receive and direct the offset extremities 11 of the jaws into and through the opening 6′ when the two heads engage. I wish to draw particular attention to the offset extremities 11 of the jaws as they serve the important function of keeping the gaskets intact, that is, they prevent the gaskets from being rubbed or curled thereby allowing leakage of air from the pipe lines. The heads are held in their normal position by springs 12 carried by the shanks and engaging the rear face of the heads. The springs may become weakened in time or may be of different strengths so that there is the possibility of a head in the normal position engaging with a head which is turned slightly from the normal position. In a case such as this the extremity 11 of the jaw of the head which is in the irregular position will engage with the opposing face of the jaw of the opposite head and slide over it until the heads are finally engaged and in so doing will prevent the gaskets from rubbing or coming in contact prematurely. The gaskets are also prevented from being rubbed and curled when the heads part coupling as the bodies of the heads ride back on the extremities of the jaws so that the gaskets are parted quickly. It is of course to be understood where two heads engage under normal conditions that the extremity of each jaw rides on the ad-

joining face of the guard on the opposite jaw, the movement of the heads when engaging being restricted by the outer edges of the jaws engaging with the backs of the guards, the extremities of the jaws jamming into the opening 6′ as far as they are permitted owing to the tapered form of the jaw.

The shanks 1 and 2 have their ends bifurcated or forked at 13 to form bearings 14 which receive a bolt 15, the bolt in turn passing through the body of the head and supporting it pivotally. The bolt is retained in position by any suitable means such as a pin 16.

From the above construction it will be seen that where cars are equipped with heads such as mine that it is impossible for the jaws to jam or pass out of contact once the cars are coupled together as any quick turn or other such irregular movement of the cars is taken up in the pivotal connection between the shank and the jaw.

What I claim as my invention is:

The combination with a suitably supported shank having a forked end, of a head pivotally secured near its apex to the forked end of the shank and provided with a tapering jaw having an off-set extremity, and a flaring guard located substantially at right angles to the jaw, said guard being provided with a substantially rectangular opening, the head having suitable ducts therein, as and for the purpose specified.

Signed at Winnipeg in the Province of Manitoba, this 29th day of November, 1910.

HORATIO OWEN LLOYD-JONES.

In the presence of—
G. S. ROXBURGH,
J. K. ELKIN.