

UNITED STATES PATENT OFFICE.

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STAND-PIPE.

SPECIFICATION forming part of Letters Patent No. 791,093, dated May 30, 1905.

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To all whom it may concern:

Be it known that I, CHARLES GULLAND, a citizen of the United States, residing at Pittsburg, Pennsylvania, have invented certain new and useful Improvements in Stand-Pipes, of which the following is a specification.

My invention relates to stand-pipes, and is designed to provide a swinging head or arm adapted to have vertical movement in order to adjust the height to locomotives of varying sizes.

I have aimed to provide a form of head or arm which will normally be in a raised position, but so supported as to be capable of being lowered for use in connection with locomotives having water-tanks varying within the outside limits, the arm being readily pulled down to meet the requirements of the particular locomotive and automatically returned to its highest position after the tank has been filled.

In the accompanying drawings I have shown in Figure 1 a side elevation of a stand-pipe with the elbow and adjacent parts in section. Fig. 2 is a plan view with the interior parts in dotted lines. Fig. 3 is a view of a spring for holding the head up.

In the drawings, A represents a stand-pipe which has turning movement in a base B, which may be of any ordinary or improved construction. The stand A terminates in an elbow C, and supported in this elbow is a swinging arm or head D, which has vertical movement in a socket formed in the elbow, so as to be adapted to supply locomotive-tanks of varying heights.

As shown in the drawings, the elbow C has an open mouth with thickened walls *a*, forming a socket, and the end of the head or arm is fitted to this socket by having projections formed on the end thereof at top and bottom curved to correspond with the curve of the inner face of the thickened portions *a*. The diameter of the head or arm D is preferably uniform, as shown, and the projections *b* extend upwardly and downwardly from the outer periphery, so as to form a rounded bearing and to act as in the nature of a ball-and-socket joint in the vertical movement of

the arm or head. No lateral movement is permitted, nor is this necessary, as the entire stand-pipe A, with its head, may swing laterally, and it is only necessary to make provision for the vertical movement referred to. In order to support and suspend the joint between the bearing *a* and the end *b* of the head or arm, I provide an axle or journal *c* centrally of the end of the arm or head D, this axle being supported in bearings, as at *o* and *p*, in the lateral walls of the head D. At *o* the recess receiving the end of the axle is in one piece with the wall, while at *p* a cap is provided to cover the end of the axle. The axle is connected to the elbow by an eye *d*, which has a rearwardly-extending bolt having a squared shank, which passes through a brace *e*, extending across between the walls of the elbow, the end of the bolt, which is rounded, passing out through an opening *f* in the rear of the elbow, where it is threaded and secured by a suitable nut *g*. It will thus be seen that the arm swings freely, having a water-tight connection at the socket, leakage being prevented at this point by an overhanging flange *h*, bolted to the elbow and having an interposed packing *i* between the flange and the face of the elbow. The head or arm turns upon the axle *c*, which is in turn braced and supported.

The arm may be held up normally by a spring or weight; but I prefer to use the spring shown in Fig. 3 at *k*, this being connected at one end to a collar *m*, bolted to the head D, and at the other end to a standard *n*, secured to or forming a part of the elbow.

In Fig. 2 the bolt of the eye *d* is shown as broken with its cross-sectional shape indicated between the broken parts.

I claim as my invention—

1. In a stand-pipe, a vertically-movable arm or head having a socket connection with the vertical part of the stand-pipe allowing it movement up and down, an axle upon which the head turns and a brace for the axle.

2. In a stand-pipe, a vertically-movable head or arm having a swiveled and packed connection with the elbow of the stand-pipe, an axle upon which the stand-pipe turns, a support

for the axle, and means for keeping the head or arm raised, substantially as described.

3. In a stand-pipe, a vertically-movable head or arm having a hinged connection, a bolt having a threaded end in connection with the stationary part of the head and a stay or support for the bolt, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES GULLAND.

Witnesses:

WILLIAM ROBINSON,
EDNA B. HARTLEY.