

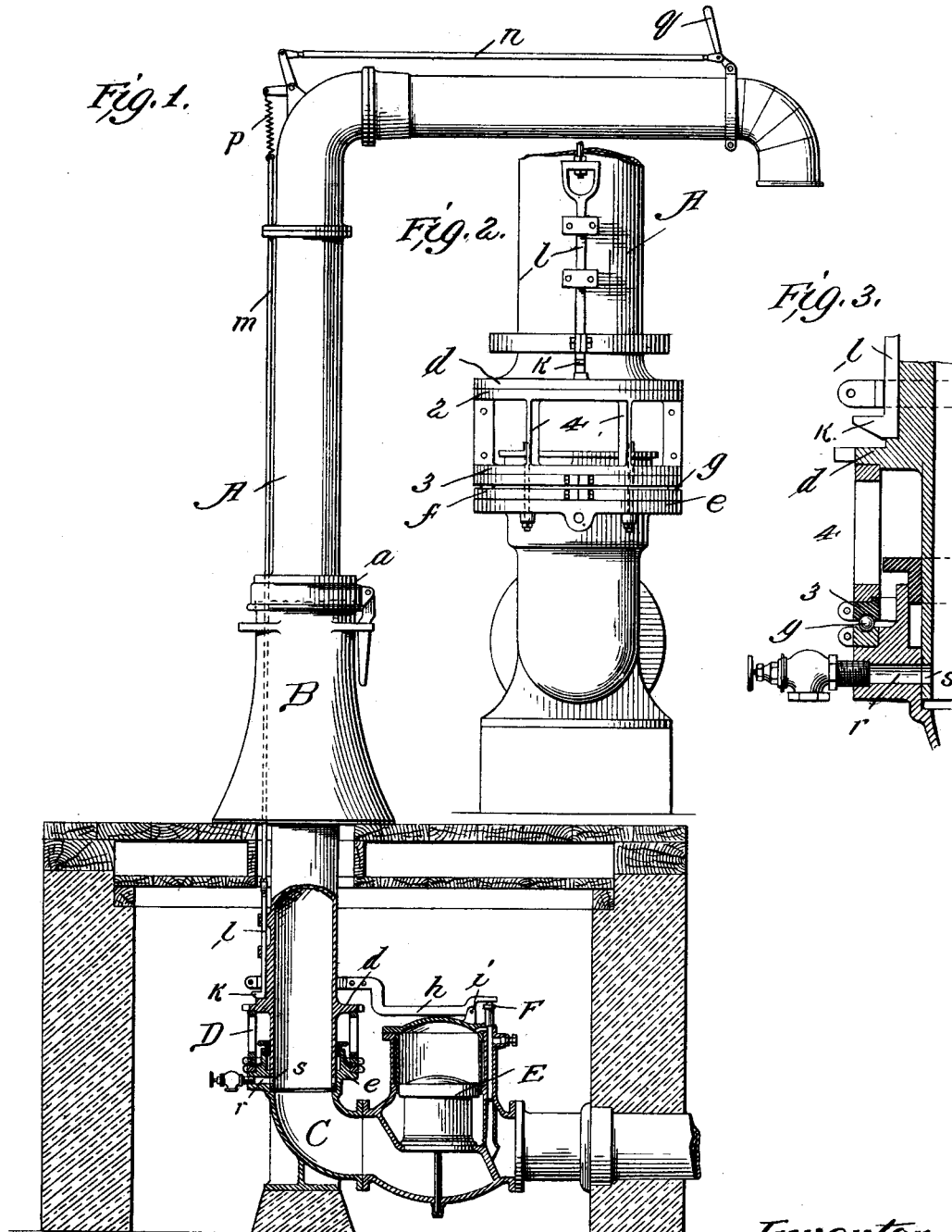
No. 675,889.

Patented June 11, 1901.

C. GULLAND.
STAND PIPE FOR LOCOMOTIVES.

(Application filed Aug. 8, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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STAND-PIPE FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 675,889, dated June 11, 1901.

Application filed August 8, 1900. Serial No. 26,295. (No model.)

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 for Locomotives, of which the following is a specification.

My invention relates to a stand-pipe for locomotive use, and is designed to produce a simple construction in connection with a valve of the Gulland type as disclosed in Letters Patent No. 655,342, dated August 7, 1900, the improvement being devoted to the details of construction whereby I secure ease of movement in the turning or swiveling action of the stand-pipe and provide for repairs or replacement of the parts when worn or injured without requiring the dismantling or taking apart of the structure.

I have illustrated the invention in the accompanying drawings, which show, in—

Figure 1, the upper part of the stand-pipe in elevation, with the lower part, including the valve, in section. Fig. 2 shows simply the lower part in elevation to illustrate some of the details. Fig. 3 is a detailed sectional view of a part of the cage and its support.

The stand-pipe proper is shown at A and extends down through a pedestal B, which aids in its support and keeps it steady, the upper end of the pedestal being covered by a flange *a*, secured to or forming a part of the pipe A. The pipe A turns in the pedestal, and at its lower end it is fitted to the recessed end of an elbow C, the open end of which constitutes a stuffing-box to make the joint water-tight. The lower end of the stand-pipe turns in the recessed end of the elbow C, but does not rest upon the bottom of the recess, being held away from the bottom by a supporting-cage D, which is made preferably in halves bolted together, as shown in Fig. 2. This cage has an upper ring and a lower ring 2 3, connected by integral struts or braces 4, and is interposed between a flaring projection *d*, extending out from the periphery of the stand-pipe a short distance above its lower end, and a projecting flange *e*, extending out from the upper end of the elbow C. Resting upon the flange *e* is a two-part ring *f*, grooved to receive a series of rollers *g*, and resting upon these rollers is the lower ring 3 of the

cage, which is also channeled or grooved to correspond with the channel or groove of the ring *f*. It will thus be seen that the stand-pipe is supported through the cage D upon a series of rollers, and this provides for a very easy movement in the swiveling action of the stand-pipe as it is turned into and out of line with the tender of the locomotive. The grooves in the rings *f* and 3 are, as shown, sufficiently shallow to provide a space between the rings, and through the opening oil may be freely supplied to the balls and their condition may be readily observed at all times. By making the cage and the ring *f* in halves or sections they may be detached and removed for repairs without dismantling the apparatus. In order to facilitate the removal of the parts, I have provided the flange *d* with projecting lugs, and when it is desired to take out the cage I jack up the stand-pipe A through these lugs, and thus support the pipe while the parts are being repaired or replaced. The valve, which is of the Gulland type, is shown at E, and the auxiliary valve F, which controls the operation, is acted upon by the end of a lever *h*, pivoted at *i* on the casing of the valve. The end of this lever is bent into ring or circular form and is made of two parts bolted together encircling the lower end of the stand-pipe. In order to operate the valve, the circular end of the lever *h* must be raised, and this movement is effected through the bent end *k* of a rod *l*, which moves in guides secured to the stand-pipe, and this rod is connected by a rod *m* to a horizontal rod *n* to a bell-crank and a spring *p* to a lever *q*, pivoted at the discharge end of the stand-pipe, so that by drawing upon this lever the rod *m* is raised, lifting the bent end *k*, which engages the encircling or ring-shaped end of the lever *h*, thus opening the auxiliary valve and allowing the main valve to operate. By encircling the stand-pipe with the end of the lever *h* the end *k* will engage the ring whatever its position.

In order to drain the stand-pipe, the elbow is provided with a channel *r*, to which is fitted a discharge-valve, which may lead to a suitable drain. The end of the stand-pipe has an opening *s* therein alining with the opening *r*, and this allows the stand-pipe to be drained in certain positions; but when moved

to close the opening to the passage of the draining action ceases.

What I claim is—

1. A stand-pipe comprising a pipe A, a cage
5 supporting the same and antifriction-bearings supporting the cage, said cage being made sectional and adapted to be removed.

2. A stand-pipe comprising a pipe A, a cage
10 supporting the end thereof and having a grooved lower ring and a lower bearing-ring also grooved and adapted to contain a series of balls, the grooves being shallower than the diameter of the balls so as to leave a space
15 between the cage and the lower ring for lubricating purposes, substantially as described.

3. A stand-pipe comprising a vertically-movable pipe A, a sectional cage supporting the same, said cage being removable, substantially as described.

20 4. A stand-pipe comprising a pipe A, an elbow adapted to receive the end of the pipe, a ring supported by said elbow and grooved to receive antifriction-bearings, and a cage interposed between said bearings and said
25 stand-pipe for supporting the latter, substantially as described.

5. In a stand-pipe, a pipe A, a flange projecting from the lower end thereof and a sectional cage surrounding the lower end of the said pipe and serving to support the same
30 through the said flange, substantially as described.

6. A stand-pipe comprising a pipe A, a cage independent of the stand-pipe and adapted to support the same and lugs projecting from
35 the stand-pipe and adapted to be utilized to support the same when the parts are required to be renewed or replaced, substantially as described.

7. In a stand-pipe, a valve, a lever for operating the valve having an end encircling
40 the stand-pipe and a rod having a bent end adapted to engage the encircling part of the lever to operate the same and means for giving movement to the rod, substantially as de-
45 scribed.

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

CHARLES GULLAND.

Witnesses:

MARK McDANIEL,

JOHN A. WILSON.