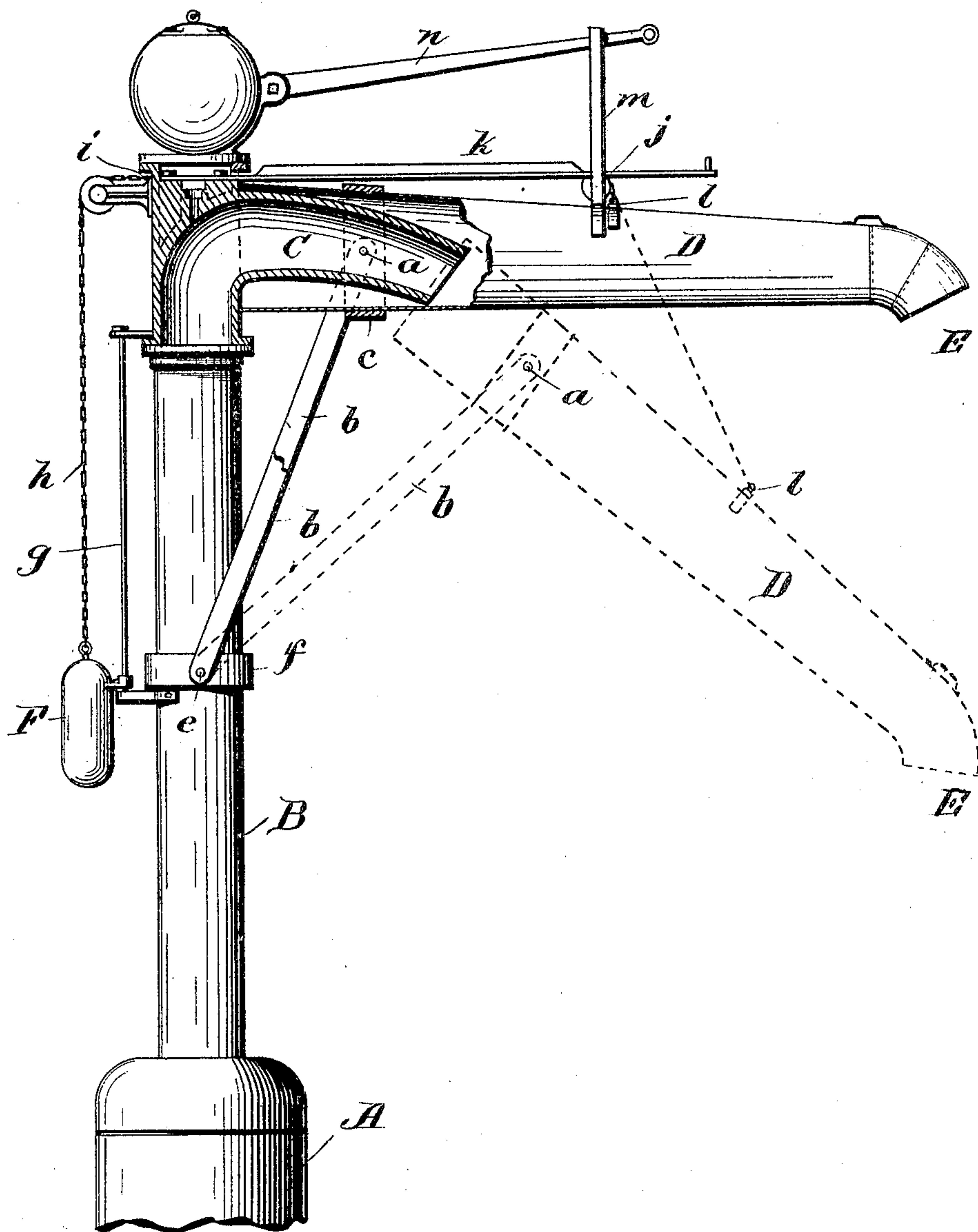


No. 798,406.

PATENTED AUG. 29, 1905.

F. M. FOSTER.
WATER COLUMN.
APPLICATION FILED JAN. 23, 1904.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK M. FOSTER, OF CINCINNATI, OHIO, ASSIGNOR TO THE AMERICAN VALVE & METER COMPANY, OF CINCINNATI, OHIO, A CORPORATION OF WEST VIRGINIA.

WATER-COLUMN.

No. 798,406.

Specification of Letters Patent.

Patented Aug. 29, 1905.

Application filed January 23, 1904. Serial No. 190,313.

To all whom it may concern:

Be it known that I, FRANK M. FOSTER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Water-Columns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of water-columns which have a loose-jointed connection between the delivery-spout which conveys the water into the tender-tank of a locomotive and a projecting curved spout extending from the head of the stand-pipe of the column, the delivery-spout being so coupled to the curved spout and supported by the stand-pipe that it can swing with its delivery end practically in a vertical plane from its highest to its lowest position, thus accommodating it to tenders of different height and giving it a wide range of action.

The novelty of my invention will be hereinafter more fully set forth, and specifically pointed out in the claims.

In the accompanying drawing the figure represents in side elevation a water-column partly in section, or rather so much thereof as is necessary to illustrate my invention.

From the base A of the stand-pipe extends upward the continuation of the column B, having suitably secured at its top a laterally and downwardly projecting coupling-nozzle C, over which is loosely fitted the final discharge-pipe D with the usual outer curved downward end E. This discharge-pipe D has pivoted to it, as at *a*, on each side near its inner end a link *b*, said link being preferably pivoted to a collar or band *c*, surrounding the pipe D. The lower ends of the links *b* are pivoted, as at *e*, to the column B and preferably to a band or collar *f*, surrounding the column, and said band is preferably adjustable on the column up or down, as desired, and is secured rigid to the column in its adjusted positions.

The pipe D is counterbalanced by a weight F, in this instance guided on a rod *g*, secured to brackets projecting from the column B, and has secured to its upper end a chain *h*, which passes up over a guide-pulley *i*, journaled in brackets projecting from the head of the spout C. From the pulley *i* the chain

extends horizontally over another guide-pulley *j*, journaled to a bracket-frame *k*, secured to and projecting from the head of the column over the spout D, the pulley being located at or near the middle of the spout and the end of the chain being connected to the spout, as at *l*. Also secured to the bracket-frame *k* is a vertical standard *m*, whose lower end is forked and straddles the spout D to limit its upward movement, and said standard also serves as a guide for the lever *n*, which actuates the valve mechanism (not shown) at the base of the column, which forms no part of my present invention and may be of any suitable construction. When the spout is up and entirely out of the way of passing trains, as seen by the solid lines in the figure, its inner end completely envelops the nozzle C and rests against the head of the stand-pipe; but when it is desired to supply a tender-tank with water the spout D is pulled down, swinging on the pivoted links *b* to the position indicated by the dotted lines in the figure, when the discharge end of the pipe D will enter the manhole of the tank, and then the water is turned on. In the figure the two extreme positions of the pipe D are shown, and it will be observed that in the extreme low position the inner end of the pipe D will not be entirely withdrawn from the outer end of the nozzle C, so that there will be no wasting of water whatever and there will be free access of air to the interior of the upper end of the pipe D, thus insuring a perfectly free flow of water through the pipe D. Of course the pipe D will only be lowered sufficiently to suit the height of the particular tank to be filled, and it will be observed that a large range of movement is obtained for this purpose without taking the discharge end E of the pipe D out of a vertical plane parallel with the track, so that in whatever position of elevation it may be it will always come over the filling-hole of the tank.

The water-column is so constructed that it may be swung to carry the delivery-pipe entirely to either side and off the track, as is common in this class of water-columns.

Having thus fully described my invention, I claim—

1. In a water-column of the character described, the combination of a revoluble stand-pipe, an extended discharge-nozzle secured at the head thereof, a discharge-pipe whose in-

ner end is united loosely and telescopically with said discharge-nozzle so as to be moved freely thereon, a pivoted link connection uniting said discharge-pipe near its inner end
5 with the stand-pipe of the water-column, and means for counterbalancing the discharge-pipe, whereby said discharge-pipe may be raised or lowered always in a vertical plane, no matter at what angle it may occupy to the
10 track substantially as described.

2. In a water-column of the character described, the combination of a stand-pipe, an extended downwardly-curved discharge-nozzle secured at the head thereof, a discharge-
15 pipe, whose inner end is united loosely and

telescopically with said discharge-nozzle so as to be moved freely thereon, pivoted links whose upper ends are pivoted to a band surrounding the discharge-pipe near its inner end and whose lower ends are pivoted to a
20 band adjustably secured upon the stand-pipe at a distance below the lower end of the discharge-nozzle, and means for counterbalancing the discharge-pipe, substantially as described.

FRANK M. FOSTER.

Witnesses:

EDWARD PECK,

EDWARD SUSSDORF.