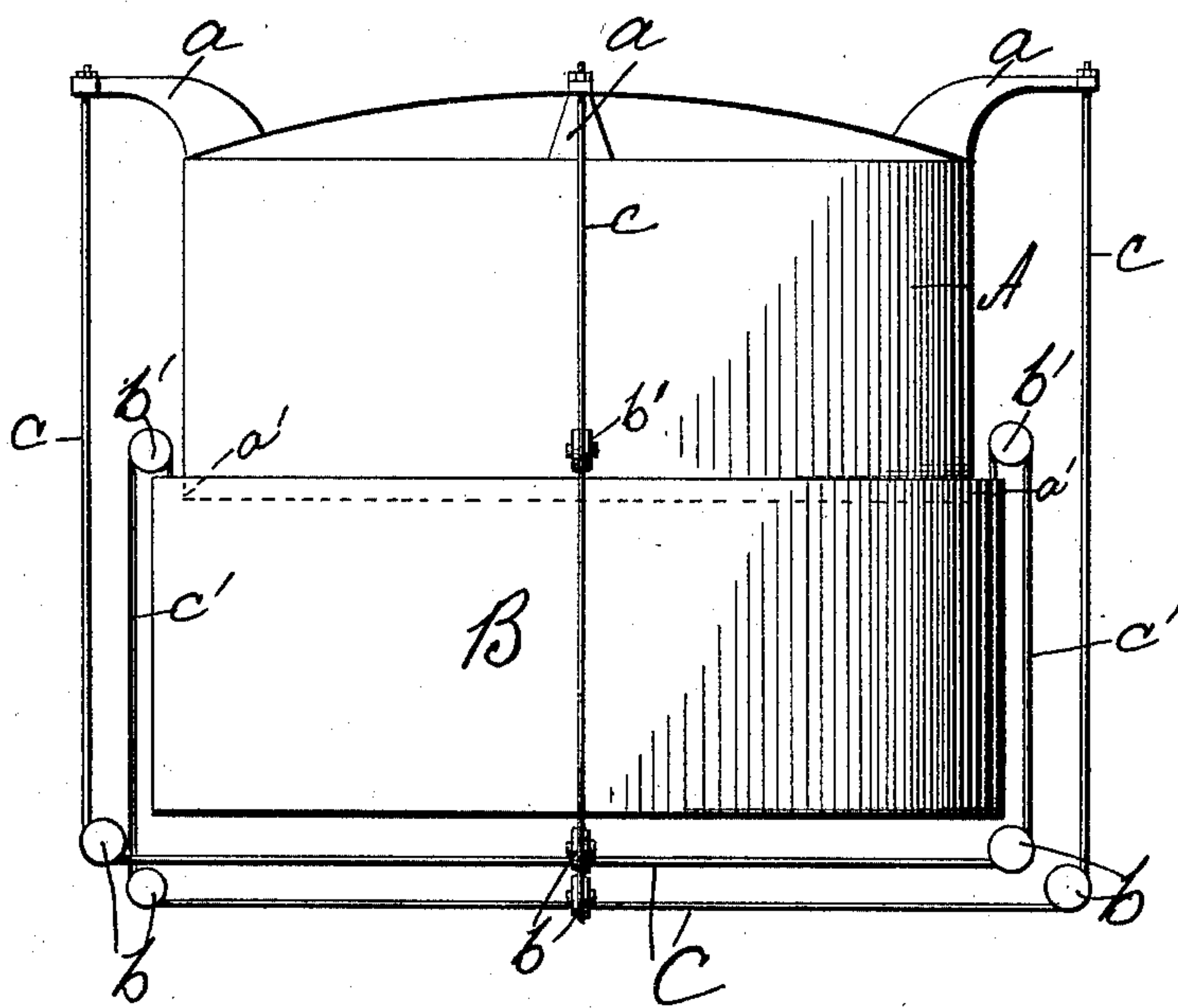


(No Model.)

E. L. PEASE.

MEANS FOR REGULATING THE MOVEMENTS OF GAS HOLDERS.  
No. 435,186. Patented Aug. 26, 1890.



Witnesses  
Will E. Aughinbaugh  
H. L. Ferman

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Edward Lloyd Pease  
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# UNITED STATES PATENT OFFICE

EDWARD LLOYD PEASE, OF DARLINGTON, COUNTY OF DURHAM,  
ENGLAND.

## MEANS FOR REGULATING THE MOVEMENTS OF GAS-HOLDERS.

SPECIFICATION forming part of Letters Patent No. 435,186, dated August 26, 1890.

Original application filed July 31, 1889. Serial No. 319,361. Divided and this application filed June 19, 1890. Serial No. 355,936. (No model.) Patented in England December 14, 1888, No. 18,272; in Germany June 1, 1889, No. 49,803; in France June 13, 1889, No. 198,910; in Spain July 31, 1889, No. 9,883; in Belgium August 3, 1889, No. 87,249; in Cape Colony August 24, 1889, No. 540; in South Australia October 24, 1889, No. 1,443; in Tasmania October 24, 1889, No. 754/10; in Victoria November 26, 1889, No. 7,299; in New South Wales November 26, 1889, No. 1,876, and in Queensland December 13, 1889, No. 891.

*To all whom it may concern:*

Be it known that I, EDWARD LLOYD PEASE, a subject of the Queen of Great Britain, residing at Darlington, in the county of Durham, England, have invented certain new and useful Improvements in Means for Regulating the Movements of Gas-Holders, (which has been patented in Great Britain, No. 18,272, dated December 14, 1888; in Germany, No. 49,803, dated June 1, 1889; in France, No. 198,910, dated June 13, 1889; in Spain, No. 9,883, dated July 31, 1889; in Belgium, No. 87,249, dated August 3, 1889; in Cape Colony, No. 540, dated August 24, 1889; in South Australia, No. 1,443, dated October 24, 1889; in Tasmania, No. 754/10, dated October 24, 1889; in Victoria, No. 7,299, dated November 26, 1889; in New South Wales, No. 1,876, dated November 26, 1889, and in Queensland, No. 891, dated December 13, 1889;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In the application filed by me on July 31, 1889, Serial No. 319,361, Patent No. 432,434, dated July 15, 1890, (of which application this is a division), I have shown a regulator for the movements of the lifts of gas-holder, consisting of a circulating ring arranged concentrically to the said holder and connected to the top and bottom thereof by means of ropes branching off in directions dependent upon their connection with the holder, and in the present application I will show means for accomplishing the same purpose, consisting of a plurality of independent check-ropes having their ends directly attached to the sides of the lift, the body of the said ropes passing over anti-friction bearings mounted upon fixed supports; and my present invention also consists in the combination, construction, and arrangement of the several parts of which it is composed, as will be hereinafter described and claimed.

Referring to the accompanying drawings, which is an elevation of a gas-holder having

this invention applied thereto, corresponding parts are designated by similar letters.

The lift A has secured to one side thereof near its top, as at *a*, one end *c* of a check-rope C, the body of which passes down and around pulleys *b*, firmly anchored in the the ground and under the tank B, while its opposite end *c'* passes over pulley *b'*, also suitably anchored, and is connected to an opposite side of the lift near its bottom, as at *a'*, similar check-ropes being brought across from the upper part of one side to the lower part of another side of the lift, the length of the ropes being such as to apply to the requisite strain for the proper control thereof. The pulley *b*, over which the end *c* of the ropes passes, is situated at a point below the lowest level of the point of attachment of the end *c* to the holder, while the pulley *b'*, over which the end *c'* of the rope passes, is situated at a point above the highest level of the point of attachment of the end *c'* to the holder, and is preferably mounted on the upper edge of the tank. As the lift rises by the gas contained therein, the end *c* of the rope which serves as an upper check is given out, while the end *c'* which serves as the lower check is taken in, causing the opposite sides of the lift to rise together, while upon the lift falling again the reverse operation takes place, and it thus follows that such check-ropes applied to the lift at more than two equidistant parts will generally serve to cause all the sides of the lift to rise or fall together and to the same extent, preventing its leaving its proper vertical position.

Although in the accompanying drawings I have shown (for the purpose of the better illustration of my invention) the check-ropes as being carried down or under the holder, it will be understood that this is not necessary, for the ropes may be carried around the holder, either above or below the surface of the ground, it only being requisite that the opposite ends of the same rope are attached to opposite sides of the lift, one of the said ends being brought up to be connected with the lift while the opposite end is carried down



to be connected therewith; and although I have described that part of the drawings which is lettered B as a tank, it may be in practice a second lift concentric to the inner lift A, the pulleys *b* and *b'* in this case being carried by the said outer or second lift, and I do not therefore desire to limit myself in respect to either of the above constructions; but

10 What I do claim, and desire to secure by Letters Patent of the United States, is—

In a controller for gas-holders, the combination of a tank, a lift resting therein, bear-

ings mounted upon said tanks, and a plurality of check-ropes having their opposite ends attached to the opposite sides of the said lift, one of the said ends being brought up and connected to the lift, while the opposite end is carried down to be connected therewith as described. 15 20

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

EDWARD LLOYD PEASE.

Witnesses:

GEORGE JAMES CLARKSON,  
EDWARD THOMAS ELCOAT.