(12) **United States Patent**
Williams

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(54) **GASOMETER**

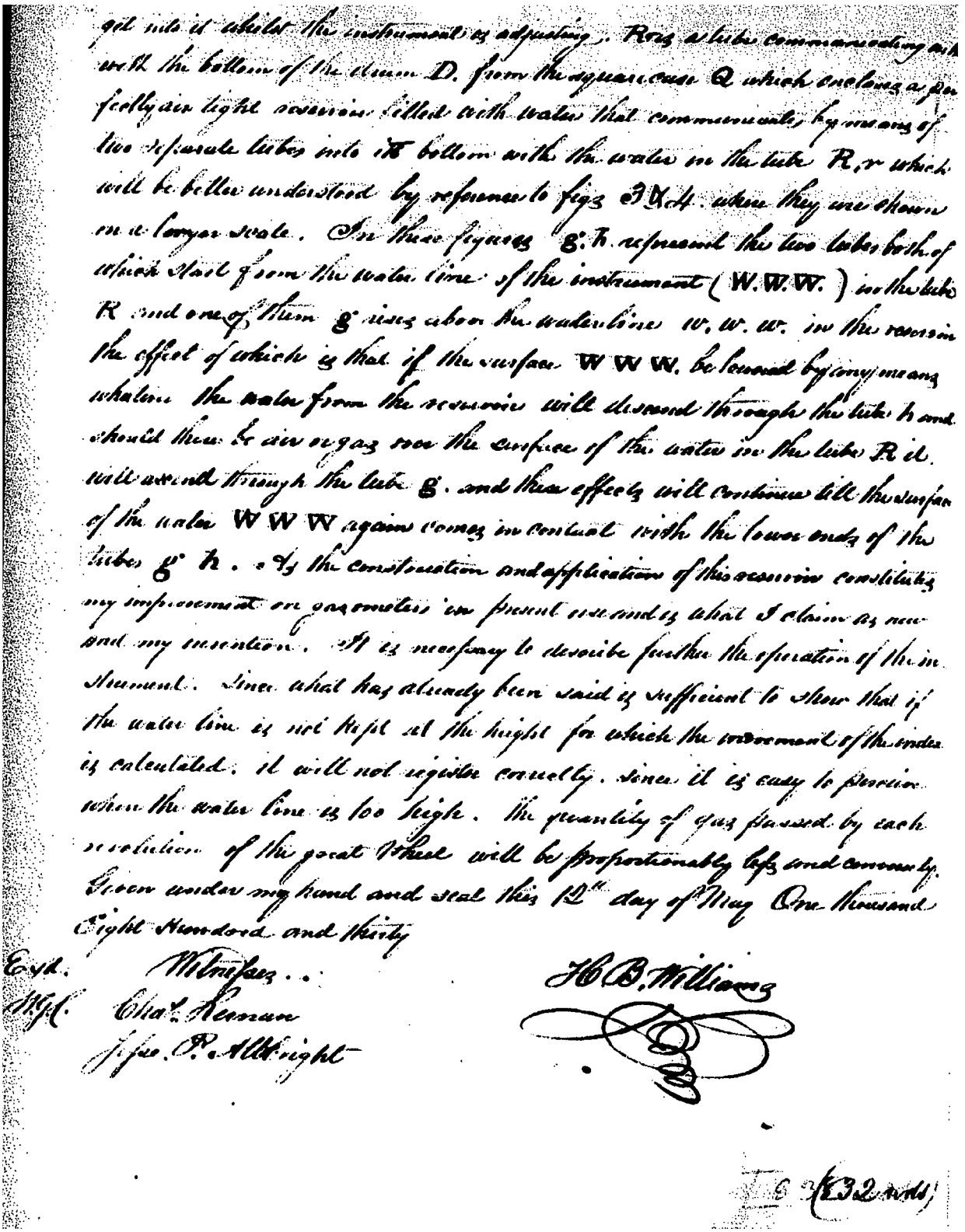
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Henry B Williams Baltimore City Maryland

Letters Patent Dated June 11. 1830.

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Henry B Williams himself of his Improvement in Gasometers

To all to whom these presents shall come: Be it known that I Henry B Williams of the City and County of Baltimore and State of Maryland have invented a new and useful improvement in Gasometers, whereby to equalize the water line of said instrument and keep it always at the same height by which means the instrument is made to regulate at all times alike. and the inconvenience arising from evaporation or leakage of the water in gasometers on the common construction is obviated. and that the following is a description of said improvement, In the annexed drawings Figs 1. & 2. are front and side views of the gasometer without the index and cog wheels or movement. In fig 1. the upper part of the square side case is removed to show the inside and Fig 2. is a vertical section of the side view. D (fig 1.) is the drum which contains the great wheel or measure. C the circular communication between the drum and the square side case A.B. fig 1. the gas admission pipe to the side case which is furnished with a conical valve and ball &c. W.W.W. is the water line of the instrument the height of which regulates the quantity of gas passed in one revolution through the great wheel contained in the drum. of which a vertical transverse section without the oblique radii or planes is seen in fig 2. E.E. is a rectangular tube communicating the gas from the space above the water line in the side case A.B. to the hood or chamber S. of the great wheel. from which the gas thus conveyed passes into the compartments of the great wheel which lie between the side plates and the oblique transverse radii. or planes which the great wheel to revolve. is discharged into the drum on the opposite side of the wheel and passes through the pipe g. to the burners. The foot of the tube E E descends through the bottom of the side case and has a stopcock which is governed by a screw n. for the purpose of drawing off any water which may



gal into it whilst the instrument is adjusting. Rod a tube communicating with the bottom of the chamber D. from the square case Q which encloses a perfectly air tight reservoir filled with water that communicates by means of two siphonic tubes into it bottom with the water in the tube R. as which will be better understood by reference to figs 3 & 4. where they are shown on a larger scale. In these figures g. h. represent the two tubes both of which start from the water line of the instrument (W.W.W.) in the tube R and one of them g. rises above the water line W. W. W. in the reservoir the effect of which is that if the surface W W W. be lowered by any means whatever the water from the reservoir will descend through the tube h and should there be no air to pass into the surface of the water in the tube R it will ascend through the tube g. and these effects will continue till the surface of the water W W W again comes in contact with the lower ends of the tubes g & h. By the construction and application of this reservoir constitutes my improvement or pneumatics in general regarding what I claim as new and my invention. It is necessary to describe further the operation of the instrument. Since what has already been said is sufficient to show that if the water line is not kept at the height for which the instrument of the index is calculated. it will not register correctly. Since it is easy to perceive when the water line is too high. The quantity of gas passed by each revolution of the great wheel will be proportionably less and conversely. Given under my hand and seal this 12th day of May One thousand Eight Hundred and thirty

Witness
Chas. Keenan
Jesse R. Allright

H B. Williams

Enrd. 13 Sept.

(132 words)