

**HYDRAULIC RAMS, THEIR PRINCIPLES
AND CONSTRUCTION. INCLUDING
SOME EXPERIMENTS
CARRIED OUT BY THE AUTHOR AT THE
REGENT STREET POLYTECHNIC AND
VARIOUS PARTS OF THE COUNTRY**

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Hydraulic Rams, Their Principles and Construction. Including some experiments carried out by the author at the regent street polytechnic and various parts of the country by J. Wright Clarke

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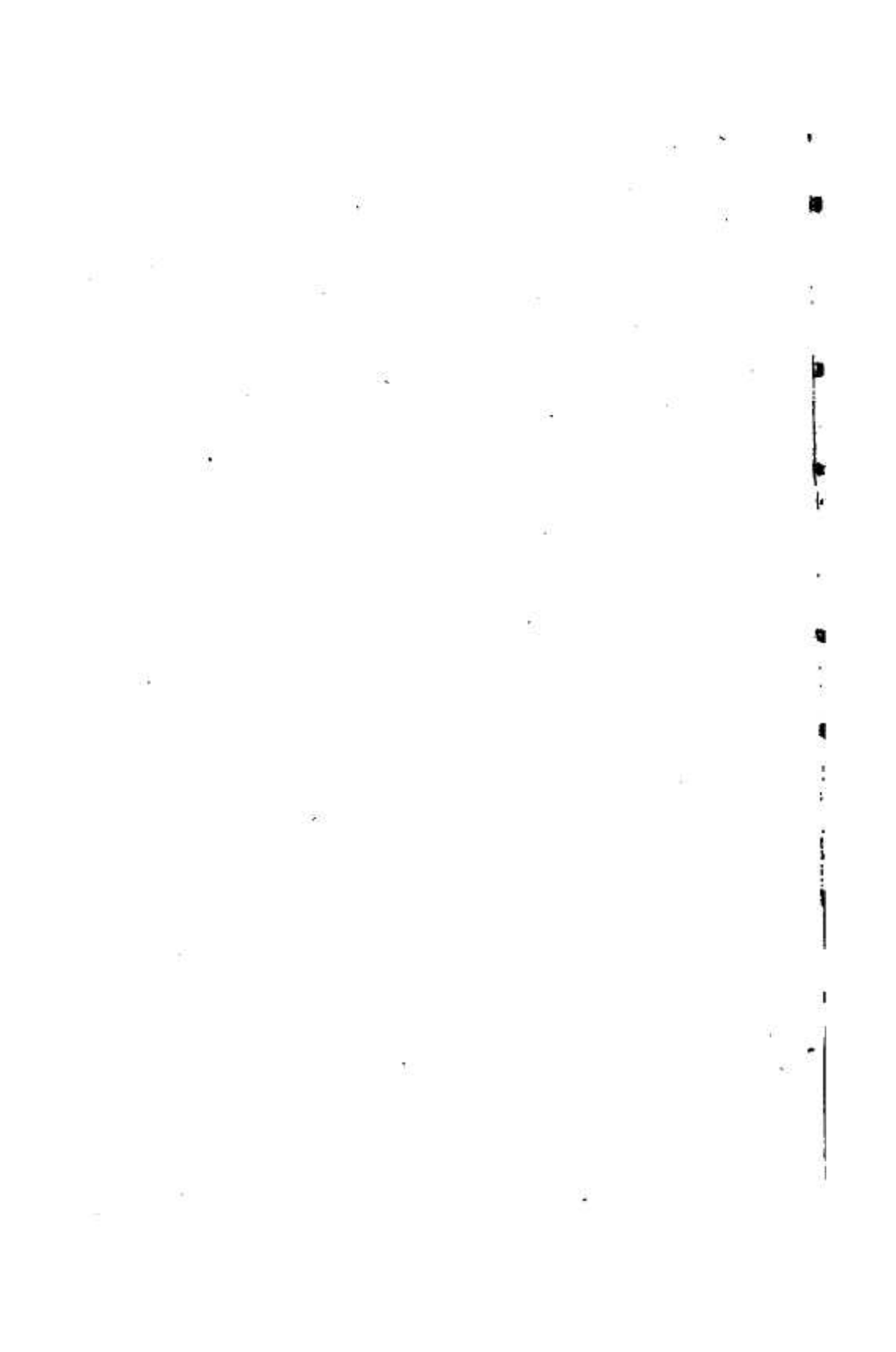
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J. WRIGHT CLARKE

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AND VARIOUS PARTS OF THE COUNTRY.

BY

J. WRIGHT CLARKE,

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"CLARKE'S TABLES," "PUMPS," ETC.

WITH THIRTY-SIX ILLUSTRATIONS.

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HYDRAULIC RAMS.

A HYDRAULIC ram is a machine with no moving parts, excepting two working valves and sometimes one air valve, and is used for raising a portion of the water which works it to a height, such as from a valley to a cistern in a house, or a reservoir or water tower, in some elevated position.

Before describing the ram and its capabilities it will be advisable to explain certain principles in hydro-mechanics and thus help to make the action more clearly understood.

In earlier lectures the principles of what is commonly known as "water-hammer" in pipes were explained, and also the appliances used by plumbers for preventing the objectionable noises made when the flow of water in pipes is suddenly arrested.

In those lectures the action of air vessels was explained and also their object, which is to slowly arrest the impetus, or momentum, of the water moving in a pipe when a cock attached to it is suddenly closed.

If, instead of fixing an air-vessel to the service-pipe, and near the bib-cock, the end of the pipe was continued upwards above the level of the cistern, or reservoir, as shown by diagram, Fig. 1, and water allowed to flow out of the cock, on quickly closing the latter the water will rush up the pipe A, to a considerable height above the level of that in the cistern, and then subside again to the level line.

As another illustration, it has been found in