

PRINTING BY WATER POWER.—The proprietors of the Boston Traveller have just introduced in connection with their fast press, a motive power, which we believe is now applied to a printing press for the first time. We refer to water power. Mr. Samuel Huse, an ingenious mechanic, of Boston, has recently invented a wheel, which, driven by a two inch stream of water, fed by a lead pipe, produces a force of three horse power. This machine was originally invented as a water measurer; and this is the first application of it as a motive power, it being found to possess this power to a most unexpected and extraordinary degree. It is simple, yet wonderfully efficient. It consists of a hollow cylinder, 10 inches wide and 16 inches in diameter; inside of which is a flange cylinder, about 6 inches in diameter. This inner cylinder has flanges, on which are four valves extending from one end to the other of the cylinder, and attached to it by hinges. These valves, when folded, or shut into the cylinder, form a little more than half its surface. Upon one side of the metre, the space between the inside of the hollow and the surface of the flange cylinder, is so filled as to occupy something more than the width of one of the valves. This filling is made to fit so exactly as to prevent the water from passing. Upon one side of this filling, the water enters the metre, and upon the other side the water is discharged. The metre is so placed that the valves will, by the force of gravity, open as they reverse from under the solid filling, and shut upon the opposite side previous to coming in contact with it. When thus arranged, the water is let into the cylinder, and comes in contact with the open valves; the inner cylinder revolves until the water escapes upon the opposite side; and of course for every revolution of the interior cylinder, a given quantity of water must pass through the metre. This is carefully marked by means of a clock which is attached to the cylinder, and which will indicate the precise quantity of water which has passed through the machine in any given time. The revolving flange cylinder is connected, externally, with cog wheels, a shaft, and pulley; and from a pulley a belt extends to the driving wheel of the printing machine. This metre, or water wheel, is driven by the Cochichuate water, introduced from a six inch distributing pipe through a 2 inch lead pipe; and the flow of the water is regulated by means of a screw gate near the metre. This wheel, though so small as to occupy only about 24 inches of room, affords about three horse motive power.