

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

An expensive blunder in the arrangement of pumping plants which appears to be not uncommon, was discussed at the recent meeting of the American Society of Mechanical Engineers. It seems to be a common idea that a pump must not have its suction side under any considerable pressure. In a case cited the water supply for the pumping station of a town water-works was piped to the pumping station under a head of about 60 ft. Instead of utilizing this head to assist the pumps, the pipe was allowed to empty into a receiving well at the pump station and the pump suction was taken from the well. The engineer who had the temerity to suggest that the supply main might be connected directly to the suction with a large decrease in the load on the pump had a hard fight to get his plan carried into effect. Other cases were reported where large sums were expended to make pumps and reservoirs for pumps to draw from and avoid placing any pressure on the suction side of the pump plunger. The only reason cited for this wasteful method of working is that the suction valves would not seat, were the suction under a head; but this is apparently pure theory. The real reason, probably, why a prejudice exists against pressure on the suction side of the pump is the water hammer which is apt to accompany it. This is easily obviated by placing an air chamber on the suction side, and indeed, this is a benefit to any pump where the suction main is of any considerable length. The necessity of an air chamber on the force main seems to be easily comprehended; but the advantages of a similar cushion on the suction main escape the attention of all but a very few. A large proportion of the troubles with water hammer, in pumps could be obviated by a proper arrangement of air chambers. That placing an air cushion on the suction is far preferable in point of economy to the frequently practiced plan of sniffling in air or ever forcing it in by an air compressor will hardly be denied. *Engineering News.*

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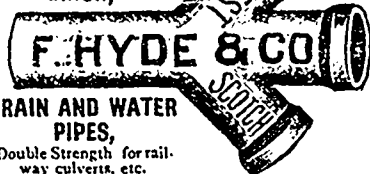
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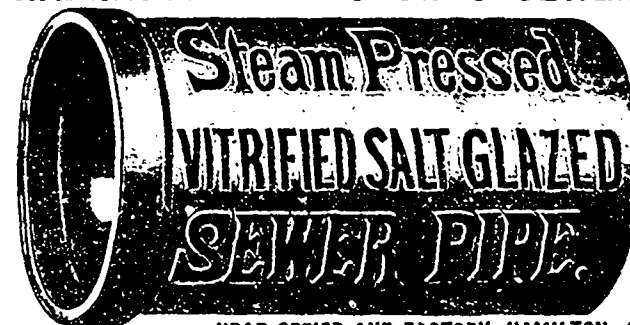
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