

WATER COMMISSIONERS vs. COMMON COUNCIL.—

The present board of water commissioners disapproved of the stop-cocks now made use of by the Corporation, for several reasons—among which was their insecurity, arising from their plan of construction, and also from the imperfect metal of which they are made. The price also was deemed extravagant. The present board never have recommended or approved of them, and their engineers entirely disapprove of them. Until the question was agitated ninety-seven dollars each were paid for them; but even at this price, if allowed to be used at all, they are quite too high.

After a long and careful examination of the subject, the following opinion is expressed by the gentlemen who composed the committee of the American Institute, and a special committee who were associated with them.

Report.

“It also appears in evidence that to shut off the water from any particular point, it is necessary to close two cocks, and often four; it is therefore apparent that one or more of them must act against a reverse pressure. But in the case of No. 2, this would be different, especially when under the increased head of the Croton water; for as the valve acts against the seat only in one direction, it may be by the pressure sprung from the seat so as to leak, or be subject to fracture from being supported only at two opposite points near the periphery of its disk by the wedge. For a small pipe this would not be an insuperable objection, as the valve might, in this case, be strong enough to stand without deflection or fracture.

“Your committee are compelled, however, to conclude that the use of cock No. 2 in any of the larger sized pipes would be very uncertain, and that the risk of fracture from the above cause would be very great.

“In another part the report says—‘Your committee are of the opinion that while both stop-cocks are liable to objections when considered in all the circumstances of their present and future use, number 1 is the best and safest of the two submitted to them. In another place it is said, with respect, therefore, to the plan of stop-cocks adopted by the water commissioners, we conclude that it has the requisite qualities for the safe and effectual control of the Croton water in the mains or distributing pipes through the city.’

The committee was also led to discuss the qualities of the castings heretofore used for stop-cocks which were mostly obtained from blast-furnaces, and their conclusions, they say, are the result of their own practical knowledge, “confirmed by the evidence adduced,” and they say that “all the experience of founders in the United States has shown that by a proper selection of pig iron, a greater strength may be given by remelting; and, moreover, it is well known that while the working of a blast-furnace is so capricious, that no uniformity of quality can be depended upon, a good founder can obtain from the cupola, with certainty, such variety of cast iron as the particular purpose to which it is to be applied demands.”

In conformity with this view of the subject, the testimony of every practical man examined before the committee has been in favor of remelted iron both for castings of stop-cocks, and also for water pipes.

Your committee would therefore advise and strongly recommend that in the works for the introduction of water into our city, the body which has charge of that important trust act upon the practical experience of our own country, deduced almost daily from the construction of steam cylinders, hydraulic presses, &c. and about which there is little or no difference of opinion among practical founders, who give the preference to iron carefully selected and remelted in cupola furnaces.

The committee consisted of

DUDLEY MARVIN, Chairman.	} Regular members.
JAS. CURTIS,	
RICH'D. M. HOE,	
THO. B. STILLMAN,	
J. RENWICK, L. L. D.	} Associate;
JOHN STEEL,	
M. E. THOMPSON,	
T. M. HARVEY, and	
C. W. COPELAND.	