

On the Discharge of a Jet of Water under Mercury.

By R. W. Fox, Esq.

Having observed that a communication of mine “on the discharge of a jet of water under water,” inserted in No. 47 of the *Philosophical Magazine*, has been noticed in the last number of the *Journal of the Royal Institution*,* I will take this opportunity of mentioning, that where a jet of water is discharged under mercury, the results are the same, under a given force, as when it takes place in water, or air, the quantity discharged being in all cases the same, in the same time.

Hence, it appears that the force with which a moving or spouting fluid recoils is not affected by the surrounding medium, however rare or dense it may be: and thus we may understand why the attempts which have been made to propel vessels by forcing water through them against water, have not proved advantageous.

The well known fact that large rivers penetrate, in a direct course, far into the ocean, notwithstanding its agitation by tides and currents, is somewhat analogous; and were it not for this remarkable degree of mobility in water, the sediment, which is now mostly deposited at a considerable distance in the sea, would accumulate near the mouths of rivers, and tend to divert them from their course.

Whilst making my experiments on the jet of water, I noticed that when sand was dropped into the water near the orifice from which the jet issued, it was drawn laterally toward the hole, till it distinctly appeared to enter it, but it was in fact only an optical deception, the grains of sand being carried away by the jet as soon as they came in contact with it, with such great velocity as to be perfectly invisible.

[*Jour. Roy. Inst.*

Tanning of Leather by Grape Marc.

A medical man of the neighbourhood of Narbonne has announced that the marc of grapes, after being distilled for the purpose of separating the alcohol, is an important assistant to oak bark, in the tanning process. After preparing skins in the usual manner, he placed them in the pits with the marc, in the place of bark. In thirty-five or forty days the tanning was finished. The expected advantages are, 1, shorter time; 2, reduction of the price of oak bark; 3, a more agreeable odour of the leather than that given by oak bark; 4, greater strength in the leather.

[*Recueil Industrielle.*

Planting Potatoes whole.

A correspondent of the *Gardener's Magazine*, No. xxxv. for December, writing upon the above question, agrees with Mr. T. A. Knight in recommending that they should be planted whole: and adds, “as a testimony, I will state an experiment of mine in 1828. I planted four plants containing two eyes to each; four, the crowns

* See vol. viii. p. 69, of this *Journal*.