

titute of water, into lower strata loaded with subterraneous sheets of this important fluid, which ascends by hydrostatic pressure, through pipes let down to conduct it to the surface. The name is derived from Artois (the ancient Artesium,) where the practice of making such wells has for a long time extensively prevailed.*

* The manner of action of an Artesian Well is explained by the Section Pl. 69. Fig. 3, copied from M. Héricart de Thury's representation of a double Fountain at St. Ouen, which brings up water, from two water-bearing strata at different levels below the surface. In this double fountain, the ascending forces of the water in the two strata A and B are different; the water from the lowest stratum B rising to the highest level b'' ; that from the upper stratum A rising only to a' . The water from both strata is thus brought to the surface by one Bore Hole of sufficient size to contain a double pipe, viz. a smaller pipe included within a larger one, with an interval between them for the passage of water; thus, the smaller pipe b brings up the water of the lower stratum B, to the highest level of the fountain b'' , whilst the larger pipe a brings up the water from stratum A to the lower level a' : both these streams are employed to supply the Canal-basin at St. Ouen, above the level of the Seine. Should the lower stratum B contain pure water, and that in the upper stratum A be tainted, the pure water might by this apparatus be brought to the surface through the impure, without contact or contamination.

In common cases of Artesian wells, where a single pipe alone is used, if the boring penetrates a bed containing impure water; it is continued deeper until it arrives at another stratum containing pure water; the bottom of the pipe being plunged into this pure water, it ascends within it, and is conducted to the surface through whatever impurities may exist in the superior strata. The impure water, through which the boring may pass in its descent, being excluded by the pipe from mixing with the pure water ascending from below.