

by means of very shallow wells, many of the large distilleries, sugar houses, and some of the breweries with astonishing quantities, of which some notice will hereafter be taken in treating of Alluvium generally. The soft pump water afforded by some of the wells in London, and very many on its north and north-east, (and of which several sections have already been given under the heads *a* and *f* rises from beneath the London clay); and many places, now abundantly supplied by these perforations, were without water well adapted for domestic purposes, until within the last 30 years. Wherever a well is sunk, the immediate rise of the water has some effect in depressing for a time that of the neighbouring wells; the sinking of one on the south of the Thames above London Bridge, has even lowered the water in one on the northern border of the river, proving that the currents of the river flows over this stratum. (P.)

The water afforded by these wells, and which rises from the sands of the Plastic clay formation underlying it, is very limpid and free from salts; it is therefore what is termed *soft* in a remarkable degree, is adapted to every domestic purpose, and never fails. It frequently rises so instantaneously on passing through the clay, as not to suffer the well-digger to escape without rising above his head. It appears to rise in different places to different heights: at Liptrap's distillery at Mile End near London, it stands in the well precisely at the level of high water mark in the Thames; but at Tottenham, four miles north of London, it rises 60 feet above that level, for the water has stood for twenty years in my own well within ten feet of the summit, which is 70 feet by barometrical measurement above high-water mark at London bridge; while in a well at Epping, about fifteen miles north-east of London, the water rises to within 26 feet of the summit of a well, 340 feet above high water mark in the Thames, and therefore 314 feet above that level.\* (P.)

\* The history of this well, which was sunk by my friend Isaac Payne at Epping, and of another at Hunter's Hall, two miles from Epping, furnish some facts, not readily explained on the supposition that the water of both is derived from the common source of the wells sunk through the London clay, viz. the sands of the plastic clay formation.

The summit of the well at Epping, as above stated, is 340 feet above high water mark. The first 27 feet from the surface consisted of gravel, loam, and yellow clay, then blue clay 380 feet, then alternating beds of sandy beds of blue clay, and of blue clay unmixed with sand, and three or four feet thick, continued for 13 feet more; in the whole 420 feet, of which 200 feet were sunk through, and 220 bored, four inches diameter. As no water was found, it was considered as a hopeless labour: the boring was abandoned and the well covered over: at the end of five months it was found that the water had risen to within 26 feet of the surface, and it has so con-