

The garrisons, at Fort McHenry, from the first occupation of that well-known post, have been compelled to suffer from the use of bad water, often pumping it from a depth of ninety-five feet. A more enlightened economy recently prevailed, which resulted in sinking an artesian well with most valuable results.

The surface of the ground within the Star fort where the well was commenced, is thirty-four feet above mid-tide and the strata are as follows :

| Thickness. | Whole depth. |
|---|--------------|
| 4 feet yellow sand, | 4 feet. |
| 15 " light colored clay, | 19 " |
| 1 " red sandstone, | 20 " |
| 28 " lead colored clay with nodules of carbonate of iron, | 48 " |
| 2 " sandy clay, | 50 " |
| 6 " white sand, | 56 " |
| 12 " light colored clay, | 68 " |
| 9 " chocolate colored clay, | 77 " |
| 33 " light blue clay, | 110 " |
| 7 " yellow sandy clay, | 117 " |
| 13 " lead colored clay, with lignite, | 130 " |
| 6 " pink colored clay, | 136 " |
| 2 " red ochre, the lower portion very hard, | 138 " |
| 7 " white sand, | 145 " |

At this point the work of boring was arrested with an ample supply of excellent water, rising to within $29\frac{1}{2}$ feet of the surface.

Upon placing a force pump it was found that eight men, pumping 60 gallons per minute, could only reduce the height of the water four feet after several hours work.

There is scarcely a doubt that an overflow of water could have been secured at little additional depth, but the "hard red ochre" offered such resistance to forcing the pipe through it, that boring was stopped at the depth of 145 feet. The stoppage was the more willingly assented to because the supply of water was more than sufficient for any garrison the fort could require.

Another Artesian well is in progress at Fort Carroll, about five miles south-east from Fort McHenry. The fort is situated upon an artificial island, which was raised to the height of six feet above high water, the whole depth of filling being 21 feet above the bar on which the island was constructed. The strata passed through are as follows :

| Thickness in feet. | Above high water. |
|--|----------------------|
| 21 of artificial filling, | 21 |
| 9 sand and mud, with oyster shells, | 30 |
| 8 sand, | 38 |
| 6 gravel and boulders of quartz, | 44 |
| 3 blue and yellow clay, | 47 |
| 5 gravel of gravel and boulders of quartz, | 52 |