

## CHAPTER XII.

## ARTESIAN WELLS.

The closing portion of the first report was devoted to this mode of obtaining water, which is applicable to a large portion of the State. As the success of Artesian wells depends upon geological structure, I pointed out (with reference to the map) those geological formations in which we may reasonably expect by this means to procure good water. If in all cases it will not flow above the surface in those formations, it will rise sufficiently high to be made available by ordinary pumps.

Whilst asking attention to the suggestions in the first report upon this subject, I propose to present at this time some new facts. It is to be regretted that an accurate account was not kept of the strata passed through in all the wells bored in our State, numbering more than one hundred. This would have furnished important information relating to the propriety of sinking wells in a number of counties.

I have recently obtained from Mr. J. N. Bolles, to whom I formerly referred, an account of the strata passed in boring three wells near and south-eastward of Baltimore.

1st. At Smith's Distillery. Surface, ten feet above mid-tide level :

Thickness.		Whole depth
52 feet,	Alluvial deposit or river mud,	52 feet.
6 "	Sand, gravel and boulders, with impure water,	58 "
9 "	Hard blue clay,	67 "
6 "	Red clay,	73 "
5 "	Red ochre,	78 "
4 "	White sand,	82 "
32 "	White clay,	114 "
8 "	White sand and gravel, with good water,	122 "
3 "	White clay,	125 "
7 "	White sand, gravel and boulders, with good } water rising 4 or 5 feet, . . . }	132 "

The auger at this depth reached the gneiss rock, upon which and through the superincumbent bed of gravel and sand there was an abundant flow of good water, *held down* by the white clay at 125 feet until pierced by the well.