

feet long, was then put down, which rests on the offset at the bottom of the 10-inch bore. The 4½-inch bore was then enlarged to 6 inches to the depth of 1,022 feet, and a wrought iron tube of 5 inches bore, weighing more than six tons, was introduced, reaching from the top and resting of the offset at the bottom of the 6-inch bore, thus securing the work to this depth, and reducing the bore to a convenient size to work in. The 4½-inch bore has been continued to the depth of 3,843 feet 6 inches without further tubing. At the depth of 3,029 feet the first observation of temperature was taken, and the reading of the thermometer was 107° F. This first observation is stated by Dr. Stevens to be specially worthy of confidence, as having been confirmed by several repetitions, or rather, to use Dr. Steven's own words, "this was the maximum of several trials." It was taken, as well as those that followed it, by means of a registering thermometer (kind not mentioned); but in answer to our inquiries, Dr. Stevens states, upon the authority of the carpenter who attached the thermometer to the pole by which he was lowered, "that no means were taken to defend the bulb from pressure." In the absence of further information (and Mr. Atkeson himself has not yet spoken), we can place no reliance upon the temperature recorded, as the thermometer had to bear the pressure of  $\frac{2}{3}$  of a mile of water. The temperature registered at lower depths, the deepest being 800 feet lower, were all, strange to say, somewhat lower than this, a circumstance which is all the more remarkable because the pressure (which tends to make the reading higher) must have increased with the depth. At the bottom, or rather at 3,837 feet, being 6½ feet from the bottom, the temperature indicated was 105°. Either of these results, taken apart from the other and compared with the surface temperature, would give a result not improbable in itself. The mean temperature of the air at St. Louis appear to be about 53°, but it seems desirable to avoid publishing calculations till the data are better established. Unfortunately, the apparatus which was employed in boring has all been removed, after the insertion of two wooden plugs, with an iron screw at the upper end of each, one at the offset at a depth of 1,022 feet, and the other at the offset at the depth of 953 feet, for the purpose of separating the fresh from the salt waters. These plugs were driven in with great force, and can only be withdrawn with the aid of a series of poles and other appliances, such as were used in boring, which will be rather