

## CHAPTER XXXVII.

Cincinnati to Pittsburg.—Improved Machinery of Steamer.—Indian Mound.—Gravel Terraces.—Pittsburg Fire.—Journey to Greensburg.—Scenery like England.—Oregon War Question.—Fossil Foot-prints of Air-breathing Reptile in Coal Strata.—Casts of Mud-cracks.—Foot-prints of Birds and Dogs sculptured by Indians.—Theories respecting the Geological Antiquity of highly organized Vertebrata.—Prejudices opposed to the Reception of Geological Truths.—Popular Education the only Means of preventing a Collision of Opinion between the Multitude and the Learned.

*April 13, 1846.*—FROM Cincinnati we embarked in the Clipper steamer for Pittsburg, a distance of no less than 450 miles ; so magnificent is the scale of the navigation of this mere tributary of the Mississippi ! Yet there are other large steamers also plying above Pittsburg, on the tributaries of the Ohio. We observe more punctuality than in 1842, in the starting of the steamers. The Clipper made ten miles an hour against the current, including stoppages. We fell in with some large artificial rafts of wood stretching more than half across the river, and met a steamer, which had run foul of one of them, still entangled, and, though bound for Pittsburg, floating down the stream with the raft. Our steamer only draws  $3\frac{1}{2}$  feet water, and her engines are of a very peculiar construction, hitherto used in sea-boats only, with the exception of one on Lake Erie. The inventor of this improvement is Thomas K. Litch. There are two cylinders, one twice the size of the other, and the steam escapes from the smaller into the larger, instead of issuing into the open air, so that its heat is not lost. The economy of fuel arising from this contrivance is great, and the vibrations and noise much less than in other boats on the same high-pressure principle. In place of the usual bell, signals are made by a wild and harsh scream, produced by the escape of steam, as in locomotive engines ; a fearful sound in the night, and which, it is to be hoped, some machinist who has an ear for music will find means to modulate