## SOMETHING ABOUT ROCK-SALT AND GYPSUM. 305

vey, of which this was but one of the results, cost the state five thousand dollars. The discovery of brine in the Saginaw Valley has added two millions of dollars to the capital of the state.

The next conspicuous salt formation in ascending order is the Coal-measures. The reader who recalls the surface conditions under which the coal was formed will at once perceive that there must have been a great concentration of sea-water in the remote and somewhat isolated lagoons and marshes in which much of the materials of the coal formation were accumulated. It will be noticed, also, that the associated strata are here, as elsewhere, predominantly argillaceous. As the Coal-measures are universally underlaid by the great Conglomerate, this becomes the reservoir in which the saline solutions from the Coal-measures accumulate. The Conglomerate is the "salt-rock" of Ohio, West Virginia, and Northeastern Kentucky. It also underlies a large central area in the peninsula of Michigan, and thus constitutes the third great salt basin within the limits of that state, each underlying the same central area. The shallow wells at Bay City, Portsmouth, and the Lower Saginaw River generally, are supplied from the Conglom-The deeper ones at the same places are supplied erate. from the next basin below. The gypsum is generally dissolved out of the Coal-measures, but in Western Iowa it still exists in vast quantities.

In Southern Kentucky, and Northern and Central Tennessee, brine is obtained by boring into the "Silicious group"—a local name for certain members of the Mountain limestone. I will not attempt to decide whether this brine proceeds from the Coal-measures or the False Coalmeasures, or has had an independent origin.

In Texas, Colorado, and Kansas, salt and gypsum are supplied in vast quantities from formations of Mesozoic