times to be employed for building stones. 2. A similar case occurs on the coast of Karamania, and other parts of Asia Minor. 3. In the United States it is common to find the sand and gravel of the drift and tertiary strata more or less consolidated by the hydrated peroxide of iron.

Silica dissolved in water appears to have been, in former times, an important agent in consolidating rocks; but at the present day it seems to be limited chiefly to deposits from thermal waters, since it is only water in this condition that will dissolve silica in much quantity.

Heat is an important agent in the consolidation of rocks, the most so when it produces complete fusion; yet this is not necessary to the production of a good degree of solidification.

In many of the cases that have been described, great pressure assists in the work of consolidation. Indeed, it is sometimes sufficient of itself to bring the particles within the sphere of cohesive attraction.

GENERAL INFERENCE.

From the facts detailed in this section, it appears that all the stratified fossiliferous rocks of any importance may have resulted from causes now in operation.

PROOF AND EXAMPLES.—1. Beds of clay need only to be consolidated to become clay slate, or shale. 2. The same is true of fine mud. 3. Sand, consolidated by carbonate of lime, will produce calcareous sandstone; by iron, ferruginous sandstone. 4. Drift, in like manner, will form conglomerates of every age, according to variations in the agents of consolidation. 5. Marls need only to be consolidated to form argillaceous limestones; and if sand be mixed with marl, the limestone will be silicious. 6. Coral reefs and deposits of travertin, subjected to strong heat under pressure, will produce those secondary limestones that are more or less crystalline—but more of this under the sixth section. 7. We have already seen how beds of lignite and coal may be produced from peat and drift wood. 8. The formation of such extensive beds of rock salt and gypsum as occur in the secondary and tertiary rocks is more difficult to explain by any cause now in operation. And yet, in respect to the former, it is said that the lake of Indersk, twenty leagues in circumference, on the steppes of Siberia, has a crust of salt on its bottom more than six inches thick, hard as stone, and perfectly white. The lake of Penon Blanco, in Mexico, yearly dries up, and leaves a deposit of salt sufficient to supply the country. We have also described a somewhat similar case at the lake of Ooroomiah, in Persia. According to Dr. Daubeny, thick beds of rock salt exist at the bottom of Lake Elton, and of several other lakes adjoining the Caspian Sea.