

uent, peroxyd of iron, first precipitates. This is separated in the tanks before the brine is introduced into the kettles. Next, after the boiling begins, the gypsum is deposited, forming a crust upon the inside of the kettle. Next in order, common salt begins to fall down. After most of this has been crystallized out, there still remain chloride of calcium and sulphate of magnesia (Epsom salts), constituting the "bitterns" of the salt manufacturer. Further evaporation would separate the Epsom salts next in order. These several substances are arranged in the same order in natural brine-formations. At the bottom we find red clays, colored, of course, by a deposit of peroxyd of iron. Next above are clays containing gypsum. In many instances the sea-water was so clear that the gypsum was deposited in pure crystallized beds, from ten to thirty feet in thickness. Above the gypsum, in formations that have not been leached by surface waters, we find the great mass of rock-salt. Still higher are shales and limestones, containing impressions, at least, of the needle-shaped crystals of Epsom salts which were once there, but have been dissolved out by the waters which have since saturated the strata. 4. The very discontinuity of the gypsum beds in certain formations, as the Salina group in New York, is accompanied by such phenomena as to prove that the gypsum was once continuous, and is being gradually dissolved out. The overlying and underlying clayey beds assume the place of the dissolved portions of the gypsum. The remaining lenticular masses of gypsum become thus inclosed by tortuous layers of clay and shale, which look as if they had been primarily deposited about these masses, and adjusted to them. If the overlying clay be most yielding, the vacated space is mostly filled by an inflection from above. If the underlying clay be most yielding, the inflection is from below. Thus abrupt loops of clay or shale