Silver and Lead.

A very considerable item of the mineral wealth of the West, consists in the silver which is found to exist in lead. The mines of Dubuque and vicinity are understood to be particularly rich in this respect, some specimens furnishing as much as one hundred ounces of silver to the ton of lead, though it is estimated that five ounces to the ton will pay for the process of separating it.

The process of separation, as followed at the upper mines, we learn, is as follows:—A number of cast iron vessels, capable of holding five or six tons of lead each, are prepared. In these the metal is melted and suffered to cool slowly, being stirred constantly with an iron rod. As the liquid cools, a partical chrystalization takes place; this contains a large proportion of silver, and falls to the bottom; it is removed by means of perforated ladles, and subjected again to a similar process in other vessels, while the residue in the first set of vessels continues to be heated and stirred till it ceases to chrystalize. Finally, the richest parts separated by this process are placed in what is called a cupel. This is a shallow vessel, made of bone ashes, and very porous. The metal is subjected to a high degree of temperature, and then a stream of cold air from a bellows passed over it. Oxidation of the remaining portion of lead takes place, in the form of litharge, and the pure silver falls to the bottom. The litharage is valuable in commerce, and the lead which failed to chrystalize by the first process, is run into pigs, and is just as useful for ordinary purposes as though the separation had not been made.

At some of the manufactories the iron pots are entirely dispensed with. This is when it is intended that the entire portion of the lead shall be turned into litharge. A large earthen receiver is formed, under which is a furnace. Above the receiver is an arched covering, communicating with a bellows, and an aperture for the free egress of air. The mass of lead in the receiver is now kept at the melting point, while a current of air continually passes over it, faciliating the process of oxidation. As the oxide of lead, litharge—or what is commonly known as dross—is formed an aperture in the side of the receiver is cut below the level of the melted liquid, and the oxide thus escapes. This continued until the process of oxidation ceases, and nothing but the pure silver is left. Eventually the oxide of lead is either prepared for commerce as litharge or reconverted into a metallic state.—*St. Louis Republican.*

Age of Cattle by their Teeth.

A subscriber asks, can you give me any information concerning the telling the age of cattle by their teeth?—say yearlings, two-years olds, and from six months and upwards.

A calf at birth, in respect to its teeth, presents no uniform appearance? the state of these organs as in other animals, depending upon the maturity it has obtained.—Sometimes there will be no teeth? but usually it will have two incisors on the front of the lower-jaw. About the middle of the second week a tooth will be added on each side, making four; at the end of the third week there will be six, and in a month eight; which is the full complement of its temporary incisor teeth. At the end of the fourth month the two front ones will begin slowly to wear down on the edges, and to diminish in size, and assume a triangular shape till the end of the eighth month; these two will scarcely be one half the size of the others, which will be sensibly lessened. The dimunition now extends to the four central teeth, which at eleven months will be plainly separated from each other. At fifteen months the same will be true of the six central ones, at eighteen months the whole eight will be so diminished that it would seem difficult for him to procure his food.

The process of diminution is now a little retarded and continued to the two central teeth, which waste away to the size of crow quills.

At the age of two years two plump permanent teeth have come up in front, while the other six milk teeth remain.

A little before the commencement of the third year, the second pair of incisors will disappear, and in their place will come up two permanent teeth, the four outside milk teeth still remaining. These latter will now diminish very fast, but will not give way. At the age of four years there will be six permanent teeth, and appareutly no milk teeth but if the mouth is examined the tooth that should have disappeared, and milk tooth that is to remain, will be found huddled together behind the six permanent ones. At the commencement of the fifth year the eight permanent incisors will be up, but the outside one will be small. When the animal is six years old it will be full mouthed, that is, the incisors will be fully grown.—*Prov. Far.*