PUEBLO OF CHETTRO KETTLE.

In recent numbers we have referred to the Aztec ruins in New Mexico, and given engravings of the ruins of the ancient towns. We give in this issue another illustration, showing the ruins of the Pueblo of Chettro Kettle, or the Rain Pueblo. This is of the same pattern as the Pueblo of Hungo Pavie, and is the largest of the perfect rectangles. Its outside dimensions are 440 by 250 feet. A semi-circular wall connects the two side wings. There are seven distinctly-marked *estufas*, four near the center of the main building and three near the end of the west wing. The walls of the Pueblo at the northeast corner are fully 35 feet in hight, showing four floors plainly and with indications of a fifth.

In this ruin there was at one time a line of wall running around three sides of the building, 935 feet in length and about 40 feet in hight, giving 37,400 square feet of surface, and as an average of 50 pieces of stone appeared within the space of every square foot, this would give nearly 2,000,000 pieces for the outer surface of the outer wall alone; multiply this by the opposite surface, and also by the interior and transverse lines of masonry, and, supposing a symmetrical terracing, we will find that it will swell the total up into more than 30,000,000, embraced within about 315,000 cubic feet of masonry. These millions of pieces had to be quarried, dressed roughly to fit their places, and carefully adapted to it; the massive timbers had to be brought from a considerable distance, cut and fitted to their places in the wall and then covered with other courses; and then the other details of windows and roof making, plastering and construction of ladders, must have employed a large body of intelligent, well-organized, patient and industrious people, under thorough discipline for a very long time. The remains of the wall that inclosed the court show it to have been of stone and to have been divided into apartments.

THE ORIGIN OF BOG IRON ORE.

The roots of trees appear to have power to reduce the peroxide of iron, contained in sands with which they come in contact, to the soluble protoxide. When the water which dissolves this runs into low places, where branches, twigs and leaves of trees are slowly decaying, the protoxide becomes reoxized and is deposited in the interstices of the vegetable forms left by the decomposition of the woody fiber. Thus, parts of the trees are not petrified, but ferrified; the whole beds of iron ore consist of these roots of dead vegetation. Where the ferruginous waters do not encounter masses of decomposing wood, but merely lie at rest, as in swamps and ponds, the evaporation causes the ore to be deposited in lumps, from the size of a shot to 500 pounds weight. From the bottom of ponds these lumps can be raised with tongs, like oysters. In either form the large amount of vegetable matter which this ore contains makes the melted iron reduced from it exceedingly fluid, so that it runs into every nook and cranny of the casting mold, and reproduces it with sharp and precise outlines. When bog ores can be procured to mix with other iron ores, they produce a highly beneficial effect in the running of the furnace and quality of metal turned out; though, as a rule, they will not yield 40% of metal. The pig metal obtained from them is so brittle that it breaks to pieces on being dropped on hard ground. Its weakness is in part due to its containing phosphorus, arsenic, etc. When taken from swamps, the workmen often throw into the cavities loose earth, leaves, bushes, etc., which, often within eight years, leave behind them fresh deposits of ore. The most noted places of supply for bog ore in this country are: Monmouth county, New Jersey. Piscataquis county, Main and Snowhill, on the eastern shore of Maryland. In the early part of the century much was obtained from the ponds of Plymouth county, Mass., and from Egg Harbor, New Jersey.

A Simple Form of Audiphone.—A gentleman formerly connected with the Philadelphia *Ledger* is reported to have discovered a simple form of audiphone, which he has tried with satisfactory results, although he is very hard of hearing. A few days ago he was explaining the principle of the audiphone to some friends, and to illustrate his remarks, put a folded newspaper between his teeth, bending it over in the form of the audiphone. To his surprise he found that he could hear as well with the newspaper as with the audiphone. He subsequently attended an auction sale, and putting the catalogue between his teeth, and bending it down with one hand, heard all that was said, although without some such contrivance he could hear nothing. The experiment is a very simple one, well worth trying by all who are hard of hearing. Newspapers, pamphlets, card boards, even sheets of writing paper seem to serve the purpose as well as the hard rubber audiphone.

Calomel in Tomatoes.—An old subscriber and friend writes us that a celebrated French chemist and physician, who has analyzed tomatoes declares that they contain all the elements of calomel, and he has known them to salivate persons. She wishes our opinion on this subject, and we have only to say that this idea has been going the rounds of the press for more than 30 years. It is a falsehood from beginning to end. The idea that they produce salivation may possibly have originated from the fact that, eaten in large quantities by some persons, the acid of the fruit seems to irritate those parts of the mouth with which it comes in contact. The idea that tomatoes cause cancer, is another superstition, the outgrowth of the former notion that tomatoes were unfit to eat. They cause neither cancer nor salivation, and may be eaten with impunity by most persons, and often with great benefit.—*Herald of Health.*

PUEBLO CHETTRO-KETTLE,
Chaco Cañon,
N. M.