

Wednesday, April 25, 1877.

CHAS. J. JONES, F. BRVARD McDOWELL, Editors & Proprietors

"Free from the dotting scripples that fetter our free-born reason."

INFLEXIBLE RULES.

Communications for publication, must be accompanied by the name and address of the writer, and a guarantee of good faith.

We surrender our editorial space this morning to a valuable article on the subject of mining, which will doubtless prove interesting to many of our readers who are engaged in this business.

SUCCESS.

The Problem of Cheap Ore Reduction Solved.

Mrs Willard's Works at Jamestown, Boulder County.

FROM THE DENVER (Col.) TRIBUNE

It has been known among mining men for several months that Mr. Z. A. Willard, of Boston, was engaged in conducting experiments in ore reduction at Jamestown in Boulder county, but what those experiments were, was not known.

The writer has watched the multitude of process failures of late years, and was a firm believer that there was nothing new under the sun in the way of ore reduction, which possessed any virtue that new and revolutionary discoveries would not be made in a science that has engaged the entire attention of the ablest minds of every age for the past eighteen hundred years.

we were courteously received by Mr. Willard, who freely showed everything connected with his process, and gave every opportunity to make any tests that we desired.

The process consists simply in roasting the ore cheaply and perfectly. This is all that is necessary for a cheap and successful reduction, for when the ore is in a proper condition there are different methods by which the precious metals may be extracted, out of which a choice can be made.

Mr. Willard's method is as follows: After the ore is crushed in a Blake crusher, pulverized in a ball pulverizer and screened to eighty, it is drawn out on a mixing floor where the first stage of the process begins.

The furnaces, which are only experimental ones, are four feet in diameter, circular in form, and sixteen inches deep, with a capacity of seven hundred pounds. The cover is sheet iron, loosely fitting, and opening by a hinge.

The furnace being hot enough, a thin layer of saw dust, straw or any convenient carbonaceous material is drawn over the bottom, and the mixed ore is charged in till it is filled to the top. The air compressor is set in motion, the air admitted through suitably arranged valves into the bottom, and the action begins immediately.

from below. The silver is not affected by the oxygen, but remains a chloride of silver, while the gold is rendered bright and free. The gases in passing through the mass of wet ore are almost cold when they issue from the top of the furnace, and may be condensed in a chamber if desired.

When tests show that there is no more gold coming from the ore, it is, without further treatment, leached with hypsulphide of soda, which extracts the silver, which is precipitated in a vat separate from the gold.

In the first mixture, Mr Willard states that any carbonaceous material, such as chaff, coal screenings, the waste of farm yards, etc, but sawdust, especially pitch pine sawdust, is best, as it is a waste product, and is in the exact condition for use.

The furnaces hereafter built will hold two and one tons of ore, and Mr Willard estimates will occupy eight hours in roasting a charge. He has one furnace holding five tons, which he says does the work equal as well as all the small ones, and with scarcely any increase in the amount of wood used.

The novel features in this process are roasting the ore mixed with a carbonaceous material, and the application of salt in a liquid form. Several years ago, in Black Hawk, Prof. Kent mixed powdered ore with straw, pressed it in the form of bricks, and roasted it as bricks are burned.

Mr Willard says that without the use of water all attempts at roasting have been utter failures. We can readily understand that sulphurous acid would not be formed without the use of water, but what other chemical action it has, if any, we can only surmise.

The advantage supposed to be gained by the application of the salt in a liquid form, is that it thus comes in contact with every particle of the ore, which could not be the case if it were applied in the usual dry way.

First—The perfection of its work. Second—Its automatic, uniform action and certain results. Third—Its cheapness, caused by the shortness of time required in roasting, small amount of fuel needed, by dispensing with skilled labor, and by the cheapness and durability of the furnaces.

Fourth—There is no mechanical loss by drift. Fifth—It places both gold and silver in a condition to be saved by chlorination. Sixth—There is nothing about it injurious to the health of the workmen.

Seventh—These gases leave the furnace almost cold, so that they can be condensed, if desired, without the use of expensive coolers and long pipes. THEORIES AND FACTS.

We have given as the probable chemical action that takes place, we are well aware is open to criticism, and may not be correct. We know these things to be true; the ore is perfectly dried roasted, and after leaching, shows the lightest possible trace of gold.

Hill, are iron and copper pyrites ore. Two tons from the Main, at Salina, a decomposed telluride ore. A few hundred pounds from the Columbia lode, at Ward, a heavy iron and copper pyrites ore. Ten tons from the Wau-bau, at Jamestown, an iron pyrites ore.

Mr Willard became interested in ore reduction about twelve years ago, by investing money in a famous Colorado mine, which was not a success.

In 1870 he built his present mill at Jamestown, expending thereupon about \$100,000, for the purpose of testing a method of reducing ore by a hydro carbon flame.

Card from Mrs Jackson.

My DEAR SIR:—About two weeks ago, an article appeared in the Atlanta Constitution, giving an account of an interview with a reporter of the Philadelphia Times; and the Times itself published a description of the same interview, which was quite different, being considerably modified, and in better taste; but both articles were written in a way that was exceedingly mortifying to me and were full of misrepresentations.

The Times reporter came unexpectedly to me, sought an interview, and being a Southern man of kind and pleasant manners, and professing to have come for the purpose of enclosing and assisting me in the selection of popular items, I was incautiously led into answering too freely the multitude of questions with which I was pelted.

The discussion in the article, of my private affairs, reveals an intimacy that is too painful for me to dwell upon, but I would fain throw the veil of charity over the whole publication, which was clothed in language entirely different from my own, believing the reporter's zeal in the interest of the Times, carried him beyond his own discretion, and even betrayed him to publish without my knowledge or consent a letter to my young daughter, which was shown him simply as a specimen of the impertinences of the kind to which we had been subjected.

I respectfully request that all those newspapers, which copied the reporter's account of his interview with me, will do me the justice to publish mine. Yours truly, Z. A. WILLARD.

Palatable and Digestible. If you desire your food to be enjoyable and digestible, use Dr Price's Cream Baking Powder, which is not only free from adulteration, but wholesome. The standard by which all baking powders are judged is Dr. Price's Cream Baking Powder in their own families.

THE FINEST AND MOST COMPLETELY PERFECTED PORCELAIN SHADES FOR REMOVING WRITING FROM PAPER AND CLOTHING OF ALL KINDS FROM CLOTHING OF THE FINEST FABRIC WITHOUT INJURY.

SPECIAL NOTICES.

Good Advice. Now is the time of year for Pneumonia, Lung Fever, &c. Every family should have a bottle of Boschee's German Syrup.

Prompt Relief. Those who suffer from NEURALGIA, SCIATICA, or MUSCULAR SPASMS, can have prompt and permanent relief, by using NEURALGIA SPECIFIC, it is an internal remedy, and cures these painful affections, by correcting the fluids of the body, a disorder of which produces the disease.

NERVOUS DEBILITY. Vital weakness or depression; a weak stomach; feeling no energy or courage; the result of mental over-work; depression or excesses, or some drain upon the system, is always cured by HUMPHREY'S HOMEOPATHIC SPECIFIC.

FAIRBANKS' STANDARD SCALES!! LATEST & MOST VALUABLE IMPROVEMENTS. THE WORLD'S STANDARD. RECEIVED HIGHEST MEDALS AT World's Fair, London, 1873.



COFFEE AND SPICE MILLS, TEA AND COFFEE GRINDERS, STORE TRUCKS, &c. Agents for Miles' Alarm Money Drawer. FAIRBANKS & CO., 311 Broadway, N. Y.

150. BUSHNELL Robeson County Sweet Potatoes on consignment, at 24-25 SPENCER & ALLEN'S.

Try Blue Glass. CHIMNEYS in your Lamp. T. C. SMITH, D. District.

THEY HAVE COME. C. S. HOLTON'S. THOSE CRACKERS. Raisins, Golden Butter, Cud Fish, Orange, Lemons, Canned Goods, Macaroni, Jellies, Sardines, Bologna Sausage, Cheese, French Candies, Nuts, Apples.

Porcelain Shades. AND Paper Shades for Lamps, at T. C. SMITH'S, Drug Store.

Established 1812.



GEORGE A. CLARK, Sole Agent. A Complete assortment of this popular brand of Spool Cotton can be had at Wholesale of Messrs Elias, Cohen & Rosler and Wittkowsky & Bintel, and a full assortment at Retail by all the leading merchants in Charlotte.

OBSTACLE TO MARRIAGE REMOVED. HAPPY RELIEF TO YOUNG MEN from the effects of Errors and Abuses in early life. 'Manhood Restored.'

A. W. LOYNS. SPECIAL NOTICE. LADIES DESIRING TO SAVE MONEY CAN DO SO BY BUYING THE NORTH CAROLINA HAND MADE SHOES, MANUFACTURED EXPRESSLY FOR SOUTHERN LADIES.

T. L. FILLETTE HAS JUST RECEIVED A FRESH LOT OF BIB COLLARS FOR LADIES BIB COLLARS FOR CHILDREN.

SILK AND LACE TIES, SCARFS, FIGH'S COLLARETTES, COLLARS, RUCHINGS IN EVERY STYLE, LADIES' UNDER WEAR, SILK HANDKERCHIEFS, KID GLOVES, BLACK ENGLISH CRAPE.

ILLUSIONS, &c. A small lot of Trimmed and Untrimmed Bonnets and Hats.

SAMPLE & WETMORE. MERCHANTS, FARMERS, MECHANICS, AND THE REST OF MANKIND, WILL SAVE AT LEAST 25 PER CENT. OF THEIR INVESTMENT BY USING ONLY THE N. C. SHOES.

EARLY ROSE POTATOES, \$5 PER BARREL. Peerless Potatoes, \$5 a Barrel. GOODRICH AND PINK EYE, \$5 PER BARREL.

New Goods!! FLOUR. CORN, OATS, PEAS, TIMOTHY AND N. C. HAY, FODDER, SHUCKS, INDIAN ROCK LIME, ROSENDALE CEMENT, CALCEINED PLASTER, LAND PLASTER, SHINGLES AND LATHS.

W. W. WARD'S, CORNER COLLEGE AND FOURTH STS. HEAD QUARTERS. IS THE PLACE TO BUY YOUR 5 cent Cigars. Try the 'Memento' it is Havana Filled, and costs only 5 cents.

BEST & VANDEGRIFT. FIRE ASSURANCE AGENCY. IN addition to other Fire Companies, I am also the Agent of the BRITISH AMERICAN ASSURANCE COMPANY, Toronto, Canada.

ERIE CITY IRON WORKS, Charlotte, N. C., April 7th, 77. WE hereby notify our many friends and the public generally that the management of the Charlotte Branch of the Erie City Iron Works is now in the hands of Capt John Wilkes, of this city, who is prepared to fill orders for our well known Engines and Saw Mills on the shortest notice, and at the most reasonable prices.

For Sale or Rent. A comfortable six room Cottage, with basement, well of water in the yard, barn and other necessary outbuildings, with fifteen acres of land, lying in the suburbs of the town of Statesville. Apply to CHAS. E. JONES, At this Office. Lamps and Lanterns. NOW offered at very low prices to meet the views of customers. T. C. SMITH, Druggist. Fine Soaps. ENGLISH, FRENCH and AMERICAN. Just received, at ROBER & CO'S Drug Store.