

of Woodworth, Wethered & Co., at North Beach. Gold ores, sulphurets and tailings are here treated by a new process, recently discovered, by means of which every particle of the precious metal is successfully extracted. It is an established fact, that under the old system of treating ores, now in use by the quartz miners of California, more than one-half the gold is unavoidably wasted. This large proportion is either carried off *in solution*, through the imperfect process of working, or is contained in *sulphurets* which prevent its amalgamation by the mercury. The new process, above referred to, completely overcomes these difficulties, and must, therefore, prove of inestimable value to the mining interests of our State.

The ores are first reduced to an impalpable powder, and are then put through the series of *arastras* and pans, which compose the "Patent Amalgamators." The ingenuity and simplicity of the mechanism connected with this branch of the process at once strike the observer, who can see at a glance the practical nature of its operation. "Wethered's Combined Steam" is one of the agents used in this new process. It is introduced into the pans and *arastras* through revolving, hollow shafts, invented by Mr. Selim E. Woodworth. "Howland's Patent Batteries" are used at this establishment for crushing the ores, and the whole machinery is put in operation by a steam engine of ten-horse power.

The proprietors of these works have recently made a contract with the "Ophir Silver Mining Co.," for the crushing of their ores from the celebrated "Comstock lead," and one of the batteries is now at work, day and night, performing that labor. At a visit which we made to the works a few days since, we had the pleasure of feasting our eyes on some fifty tons of this beautiful silver ore which had been thus operated upon, and which was then being packed in stout canvas bags for shipment, the value of which was somewhere about one hundred thousand dollars.

CHEMICALS.

The San Francisco Chemical Works are located near Mission Dolores; Shepard, Coon, Judson & Co. proprietors. These works have been successfully employed for the last three years in the manufacture of acids. The average number of persons employed is 14. These works supply the acids consumed at the U. S. Branch Mint in this city.

The Chemical Laboratory of J. Mosheimer &

Co., Bryant street, near South Park, is employed in the assaying of ores and minerals of every description.

CORDAGE AND OAKUM.

The San Francisco Cordage and Oakum Factory is located at the Potrero. This enterprise commenced in April, 1856, by Messrs. Flint, Peabody & Co., and Messrs. Tubbs & Co., since which time the operations of the company have been successful. The buildings connected with the works are of the most extensive and permanent character. The main structure, occupied as a rope-walk, is 1,000 feet in length, and the spinning factory is 100 by 40 feet in length. The consumption of raw material is about 4,000 pounds of hemp and 3,000 pounds of oakum per day, which is obtained from Manila, and arrangements have been completed for regular shipments thereof, until California shall be able to furnish the same from the products of her own soil. Office of these works, 139 Front. The enterprising proprietors of this establishment are now engaged in the manufacture of cordage from California-grown hemp. The specimens exhibited at the last Mechanics' Fair will favorably compare with the imported article. They have also made arrangements for the importation of seed, for the production in this State of a sufficient quantity of the raw material to supply the demands for home consumption.

THE REFINING OF SUGAR.

The San Francisco Sugar Refinery is owned by a company of San Francisco merchants organized by Act of the Legislature of the State. The works of the company are located at San Francisco, corner Price and Harrison; they are of the most extensive character, and of a capacity sufficient to supply the entire consumption of sugar in this State. The main building is 75 feet in width by 122 in length, and five stories high. Several small buildings are attached, for the prosecution of the different branches connected with the refinery. The entire premises cover an area of 412 by 275 feet. The raw material consumed at these works is obtained from Manila, Batavia, and other islands in the Pacific, and a line of clipper barks is now employed in maintaining a regular supply, to meet the requirements of the company. Over 400 tons of sugar and 20,000 gallons of syrup per month are manufactured at these works. The number of hands employed is 100. Cost of buildings and grounds, \$200,000.