

during the past year, has so largely increased this kind of work that, even running night and day, these establishments are unable to keep pace with the increasing demand, and their number will doubtless be augmented during the coming year. The number of establishments engaged in the working of metals is estimated at between three and four hundred, giving steady employment to over 2,000 hands.

IRON FOUNDRIES.

The number of Iron Foundries now in operation in this city is twelve, which gives employment to from seven hundred and fifty to nine hundred persons.

UNION FOUNDRY AND IRON WORKS.

Messrs. Donahue, Booth & Company, proprietors. This pioneer establishment, the oldest of its class in San Francisco, was put in successful operation in 1849 by the enterprising Donahue Brothers, since which time it has steadily increased in extent and importance, and has remained the foremost work of the kind in the city. In this establishment is to be found all the recent improvements and extensive machinery and appliances used in similar foundries in Eastern cities. The engines manufactured at these works have been thoroughly tested and bore away the palm of superiority. In addition to steam engines for navigating purposes, the Union has during the past year furnished a large amount of mining machinery, comprising twenty-five mills averaging fifteen-horse power each. The average number of hands employed is one hundred and forty-three, and not less than three tons of pig iron and two and a half of coal are used daily with an average of 3,000 tons of wrought iron every week. A large number of Varney's Amalgamating Pans have been manufactured here during the past few months, and they are now turned out at the rate of four per day.

PACIFIC FOUNDRY.

Goddard & Co. proprietors. Next to the Union, the Pacific is the oldest establishment of the kind in the city, the works having been established on their present site, First Street between Mission and Natoma, in September, 1850, by Messrs. Egery & Hinckley, whose interest was purchased in December, 1853, by the present proprietors, who erected the present spacious buildings and enlarged and increased the works. There has been manufactured at the Pacific during the past year, one eighty-horse power engine, six forty-five-horse power engines, and seven thirty, five twenty-five, two twelve, and two six; with forty-eight quartz mills, patent of Bryant's Battery, with an aggregate of two hundred and sixteen stamps; thirteen mills with wood frames, comprising one hundred and thirty stamps; eighty steam-chamber amalgamating pans; fourteen Howell's Centrifugal Quartz Crushers; five rock breakers; 1,392 stamp shoes; 1,110 dies, and eighteen steam boilers, ranging from ten to eighty-horse power.

In addition to the foregoing a large number of grist and saw mills, and castings for agricultural implements were turned out during the time. The average number of hands employed is about seventy; the amount of pig metal consumed is over 1,000 tons, with a proportionate amount of wrought iron.

FULTON FOUNDRY.

Hinckley & Co. proprietors, 45, 47, and 49 First Street. Established 1855. Men employed at present fifty-five. The machinery for a large number of steamboats has been manufactured during the past two years. Extensively engaged in the manu-

facture of saw-mill machinery. Many additions have been made to the stock of tools during the last year, and the facilities at the present time are equal to any shop for manufacture of all kinds of machinery for steamboats, quartz mills, saw mills, flouring mills, etc., etc.

There is now being constructed the machinery for a steamboat for the Sacramento River. The engines have poppet valves and the first that have been made in the State.

VULCAN IRON-WORKS COMPANY.

P. Torquet, manager; R. Ivers, C. R. Steiger, S. Aitken, proprietors. The Vulcan Iron Works, located on First Street 137-139, were established in August, 1851, by Geo. Gordon & Steen, for the manufacture of steam engines, boilers, and machinery. In January, 1855, they were incorporated as a joint-stock company, and in April, 1857, became the property of the present owners, who have been with the concern from its commencement. Steam engines and boilers of every variety are constantly turned out at these works, which have also supplied the machinery for a number of saw, flour, and quartz mills on this coast; all the hydraulic machinery for raising brick buildings in San Francisco was invented and made at these works, and the first locomotive built in this State was built there. Every class of mining, pumping, and hoisting machinery can be obtained from this firm, who take especial pride in keeping up with the vast improvements lately made in mining machinery. Hepburn & Peterson's Amalgamating Pan is manufactured here, as also their Separators. These works employ from one hundred to one hundred and fifty hands, about 1,000 to 1,200 tons of castings are made annually, and about three hundred and fifty tons of wrought iron used. The business averages \$450,000 per annum.

GOLDEN STATE IRON WORKS.

Palmer, Hanscom & Co., proprietors. This extensive establishment is located on the site formerly occupied by the Sutter Iron Works on First Street. In addition to the various descriptions of foundry and machine work, this establishment is extensively engaged in the manufacturing of grates of every style and pattern, stoves and other articles of domestic use. The operations of this concern have, owing to the unusual demand for mining machinery, been confined hitherto almost exclusively to that class of manufactures, in which the production of amalgamating machinery—Knox's Pan with Palmer's Improved Steam Chest and False Bottoms, now in general use, being turned out in large quantities. A number of quartz mills of various sizes have been manufactured here during the past year. The Golden State gives constant employment to forty men.

MINERS' FOUNDRY.

This establishment, which as its name imports, is devoted mainly to the furnishing mining machinery, of which, owing to the increased demand in this department during the past year, a large amount has been sent to the silver mines of Washoe, Esmeralda, and Mexico. During the past year, one hundred and twenty-five hands have been kept constantly employed at this establishment, and the business during that time has amounted to \$500,000. The business is conducted by Messrs. Howland, Angel, & King, practical mechanics, who are thoroughly posted in all the important improvements in mining machinery, which the present activity in that department is daily developing. The Miners' Foundry is located on First Street, between Howard and Polson.

CALIFORNIA FOUNDRY.

William Brodie & Co., proprietors. These works, located at 16 Fremont Street, employ a large number of workmen in the preparation of castings of