

Associations—Protective, Literary, Etc.

For a description of the different associations, the reader is referred to the Appendix, pages 871-881, in which will be found the officers and operations of each during the past year. The progress made by many of these associations reflects credit upon the members thereof, and is worthy of the liberality so generously extended in their support.

Manufactures.

The earth supplies and man uses, and as he uses the products a bounteous nature offers, does he rank above his fellows in comfort, wealth and enlightenment. Agriculture and mining are the first occupations of mankind advancing from barbarism, and manufactures and commerce lead to the highest civilization. The unparalleled wealth with which the soil and rocks of California abound, assures a manufacturing supremacy of the same degree. The products of a limited and but partly developed section of our State now demand the energies of our merchants and the full capacity of our inland transportation to market, while a continuous stream of mammoth ships bear them away to the consumers in a foreign land. The chief exports are in raw material, grain, wool, metal, lumber, while manufactured goods constitute the imports. That such should be the case is because of the youth of our State, and her abounding wealth in soil, forest and mines. The great success of established manufactures leads to the establishing of others, and the grand opportunities offered, give assurance that at no distant day the manufactures of California will exceed those of other sections, as now do her products of raw material. The coal and iron of England, in the hands of intelligent enterprise, have made that little kingdom the richest of the earth, and the same forces are building at Philadelphia the second city in America. The manufactures of San Francisco will not wait for these essential minerals, for the country of the Pacific Coast can supply them in abundance. Cotton and silk will soon be added to our staple products, giving them the material for the most extended system of manufactures. The precipitous mountain ranges, threaded with streams from the overlasting snows, furnish the finest water-power mill sites in the world, and to an extent and capacity exceeding any State in the Union.

But these are not of San Francisco, to which the present notice chiefly relates. The power to drive machinery must be derived from steam, and for this the coal from the many mines of our northern coast is available, and, though rather costly at present, it is probable that in a short time it will be furnished as cheaply as the coal supplied to the manufactures of the East. With this grand desideratum accomplished, the manufactures of this city will advance without obstacle to the full rank of their capacity. The cheapness of food, the mild climate, the advantages of commerce, and the abundant and varied supply of material, all peculiarly favor the industrious artisan and invite the investment of capital. With enlightened enterprise this city and State may take the lead in manufactures, and, instead of seeking, may command the markets of the world.

Already this branch of industry has attained high rank and is progressing rapidly in importance. The simple works of the shop, as the shoemaker, tailor, blacksmith, etc., were the first to be established, but these do not resound in the world as the great foundries, woolen mills, factories and the like.

The iron works lead in importance among the industrial interests of San Francisco. The destructive operations of the miner have created a demand for iron fabrics, and called into existence the extensive system of foundries, the principal of which are the Union, Miners', Fulton, Vulcan, Etna, Pacific, Golden State, Phoenix, Pioneer, Portland, California, Eureka, Occidental, Columbia, Risdon Boiler Works and the Pacific Rolling Mill Company.

These establishments are large and complete, possessing all the requisite appliances for the production of the several specialties to which they are devoted. The aggregate value of castings turned out annually exceed \$3,000,000, and this amount has been steadily increasing under the pressure of augmented foreign, as well as domestic, requirement. The total number of hands employed is about thirteen hundred, subject to temporary modifications. Japan and China

have been added to the list of our customers in this line of trade, and although their demands as yet are comparatively small, there is reason to hope that they will achieve signal proportions at no distant date. The onward strides recently made by Japan necessitates the use of improved machinery and agricultural implements, while the geographical position and superior facilities possessed by San Francisco, point to her as being the natural market of supplies.

It has become proverbial that machinery of nearly all kinds—especially for mining purposes, agricultural implements and mechanics' tools—are made in San Francisco of a better quality and more serviceable character than anywhere else in the Union. A knowledge of this important fact, as ascertained by actual use and comparison, is driving foreign and Eastern fabrics of this kind from all our domestic markets, as well as those of distant interior points such as Utah, Idaho, Montana, Arizona and even New Mexico. Fanning machines, corn shellers, and other simple implements of kindred character, and of San Francisco manufacture, are now frequently seen among the Pimo, Maricopa and Papago Indians, to whom they prove invaluable assistants.

Of notable importance are the Selby Silver and Lead Smelting and Reduction Works, covering a vast expanse and fitted with every appliance for conducting these operations on a grand scale. They are the most extensive and complete in the Union, and are susceptible of being greatly enlarged. This establishment is most advantageously located at the very edge of deep water, where the heaviest ships can load with facility and dispatch. The works are now capable of consuming one thousand two hundred tons of lead and silver ore per month, for refining, and one thousand tons per month for smelting and reduction. On several occasions one thousand tons of pig lead per month have been landed in New York, and a regular monthly supply of from four hundred to five hundred tons is maintained for exportation to the East, besides the large quantities required for interior and domestic consumption. The superiority of our lead is now universally admitted, while the quality of the sheet lead, lead pipe and shot turned out at the Shot Tower—which is an auxiliary to the Smelting and Refining Works—is not equaled by the like fabrics of other places. Two sets of hands are employed, night and day, and number collectively over one hundred and thirty men, many of them having families which are comfortably and independently supported through the agency of this great industry. In addition to the lead obtained from the ores by these works, large quantities of gold and silver ore are also extracted.

Our wooden fabrics are diversified and important, although for some of the materials employed we are dependent upon Eastern supplies. This is especially the case in the manufacture of wagons, buggies, carriages, and other articles requiring the use of hickory, white oak and walnut. We are fairly furnished with saw-mills; sash, door and blind factories; cooperages; furniture manufacturers; billiard-table constructors; piano makers; wooden ware and broom manufacturers; boat builders and other similar concerns, numbering one hundred and twenty-two, turning out an aggregate annual value of millions of dollars of perfected articles.

A. S. Halliday is proprietor of the only wire and rope works on the coast. The establishment went into operation in 1857, and has met with a large measure of success, the demand being somewhat urgent and steady. This gentleman has recently invented a cheap and ready mode for the conveyance of ores to mill, by means of buckets or cars suspended on wire ropes, which traverse mountainous ridges inaccessible to ordinary modes of transportation. The works are capable of supplying from twelve hundred to fourteen hundred tons of wire rope per annum, besides manufacturing largely in the way of screens, sieves, wire cloth, cables for suspension bridges, and other like articles.

The Woolen Mills of San Francisco have earned a world-wide celebrity for the admitted superiority of the goods manufactured by them, and the extent to which their operations have reached. In 1858 the Pioneer Woolen Mills were erected at Black Point, but did not go into active operation until the year subsequent. Its productive power admits of the annual consumption of three million pounds of wool,

AETNA INSURANCE COMPANY, OF HARTFORD, has been established over 53 years and has paid over \$36,000,000 losses.