

for circular saws being in great demand among mill men, orders being received from all parts of California, Nevada, Oregon, Washington Territory, and even from Central America. Miller's patent saw tooth is a comparatively new invention, and so far has not been extensively manufactured. Both teeth are of California invention, and are said to be better adapted to the purpose required than any made in the Atlantic States.

SAWS.—The only manufactory of saws on the Pacific Coast is that of the Pacific Saw Manufacturing Company, located on Fremont Street near Market, in this city. This establishment manufactures all kinds of saws used on the Pacific Coast, and although only established in the summer of 1867, has already achieved a very high reputation for their goods in this market. All kinds of saws are made by this Company, their works being very complete, and having a capacity equal to the entire wants of the Pacific Coast. With the exception of steel plates, which are imported from England, the saws made are entirely of California production. At the late Mechanics' Fair in this city this company made a remarkably fine exhibit of their work, which, for its great merit, was awarded a silver medal. The manufacture of saws by this Company is already so extensive as to injuriously affect importations from the Atlantic States and Europe.

GLUE AND NEATSFOOT OIL.—These articles are manufactured by Dana & Codrington, whose establishment (the only one in this city) is located near the Lagoon. Large quantities of both glue and neatsfoot oil are produced at these works, the latter being of especial fine quality. Almost the entire product of both of these articles is shipped to the Atlantic States for a market.

MIRRORS.—The only establishment for manufacturing silvered mirrors on the Pacific Coast is that of Whittier, Fuller & Co., located on the corner of Pine and Front Streets, in this city. These works were commenced by Cameron, Whittier & Co., in 1863, with one silvering and two polishing tables. Since then the superiority of home-made silvered mirrors over all others imported has been so decided that the works have been enlarged four-fold, and have completely put a stop to importations from the Atlantic States. The tables of Whittier, Fuller & Co. are about the largest in the United States, they being able to silver mirrors 110 by 144 inches. For their excellent quality the mirrors made by this firm were awarded a silver medal at the late Mechanics' Fair.

PIANO FORTES AND OTHER MUSICAL INSTRUMENTS.—There are two manufactories on the Pacific Coast, both of which are located in this city. The pioneer pianoforte maker was Jacob Zech, who commenced manufacturing in 1857, and still continues in the business, notwithstanding strong competition from importers, and at times severe rivalry by other domestic manufacturers. The establishment of Mr. Zech is located on Ninth Street near Folsom, and has a capacity to produce one piano per week. The instruments made by this party have been celebrated for their excellent quality of tone as well as fineness of finish. Four instruments from this manufactory were exhibited at the late Mechanics' Fair, viz., two upright and two horizontal pianos—the former taking the highest prize, a gold medal, over all other competitors. The manufacture of pianos by this firm is about to be merged into a joint stock association, with \$150,000 capital, under the name of the Zech Piano Forte Manufacturing Company. With this accession of capital it is believed that a very vigorous competition will be carried on against importers, which ultimately will drive the latter from our market.

The other piano forte manufactory is that of G.

Rudolph on Post Street, who exhibited two fine upright pianos of his own make at the late Mechanics' Fair, which obtained a second premium.

Flutes manufactured by John G. Dawes, of this city, were exhibited at the Mechanics' Fair, of superior tone and finish, and were awarded a diploma.

Accordeons, Flutinas and Concertinas of good quality made by C. C. Keeue, Montgomery street, were also exhibited.

ORGANS.—The pioneer and only organ manufactory on the Pacific Coast is that of John Mayer in this city. Several of the largest instruments made by him are in use in San Francisco, the principal one being in the Unitarian Church on Geary Street.

GLASS.—The only glass works on the Pacific Coast are those of the Pacific and the San Francisco Glass Works, both located in this city. The Pacific Glass Works were the pioneers, and were erected in 1863 at the Potrero. They confine their manufactures to colored glass, the furnace being what is known as a seven pot open furnace, and only suited to make one kind of glass. The works are now leased to Bennett & Co., who employ about forty-five men and boys, making, when in full work, about \$2,000 assorted glass per week. The works have been enlarged during the past year so as to increase their capacity about twenty-five per cent. John Taylor & Co., Washington Street, are the agents.

The San Francisco Glass Works, located on Townsend, near Third Street, were partially destroyed by fire in July, 1868, and up to the time of writing, have not been rebuilt. These works contained an eight-pot covered furnace, and produced all kinds of white flint and colored glass, at the rate of \$1,800 value weekly. They employed an average of forty men and boys, constantly, and using a patent glass smelting pot, invented by the proprietor, Carlton Newman, were enabled to make all kinds of glass in the same furnace. At the time of their partial destruction by fire, engagements for druggists' and other white glass had been made ahead sufficient to tax the producing capacity of the works for between four and five months. Efforts are now being made by Mr. Newman to erect a new establishment of increased capacity, and more suitable, to meet the entire wants of the Pacific Coast. With exception of a peculiar clay used for making smelting pots, which is imported from Great Britain and Germany, and soda ash from the former country, all the materials for making glass are to be had, produced in this State. By the use of the patent pot the demand for soda-ash is much reduced, as the refuse of nitrate of soda, known as salt-cake, produced by the local chemical works, can be used in making any variety of colored glass. The exhibit of glass made by these works obtained the gold medal at the Mechanics' Fair. A silver medal was also awarded for the patent pot.

IRON FOUNDRIES AND BOILER SHOPS.—The iron manufactures of San Francisco are among the most prominent of her industries. The peculiar favorable climate of the city, and its position as the only port of entry of importance in the entire State, causes a centralization of industry in this branch of mechanics. As a consequence, iron foundries and boiler shops of extent suitable for the requirements of the whole Pacific Coast have been erected, which employ in the aggregate nearly 2,000 men. These manufacture all kinds of machinery needed, not only for the home demand, but also largely for export to the Sandwich Islands, Mexico, and other foreign places. The requirements of this varied trade are very large, and give quite a cosmopolitan character to our machine shops, in some of which at