

Corning mill used to grind and size powder.



Damage to the wheelhouse after the explosion of 1898.

THE CALIFORNIA POWDER WORKS

by Al Cali

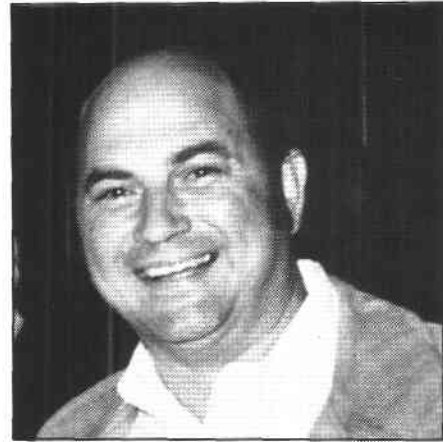
Located about 75 miles south of San Francisco on the Monterey Bay lies the town of Santa Cruz. For hundreds of years this area was known only to the Indians who fished in the clear running streams and hunted deer through the green forests. In the year 1769, a band of Spanish explorers came into the Santa Cruz area and camped at the mouth of the San Lorenzo River. One of these men, a Catholic priest named Father Crespi, wrote in his diary under the date of October 10, 1769, these words: "After going three miles over plains and extensive hills well covered with high trees of a red-colored wood, trees not known to us, we gave it the name of its color, "redwood" (Palo Colorado)."

Since Father Crespi speaks of walking three miles from the campsite at the mouth of the river and coming into the groves of redwood trees, we feel safe to assume that he was one of the first men ever to see what was to become the location of the California Powder Works.

Following the discovery of gold in California, powder was in great demand. California was growing rapidly and the Civil War was beginning. Mining operations demanded powder for blasting; so did the proposed construction of the transcontinental railroad. Up until the Civil War, blasting powder came to California, like so many other supplies, by sailing ships from East coast ports or from Europe. When military orders created a shortage, prices went up to \$13.00 per keg. Eventually, the United States government prohibited shipping powder by sea to prevent its falling into Confederate hands. The time-consuming sea voyage also impaired the strength of the powder. Because this retarded the development of local mines and discouraged public improvements, some gentlemen identified with the state, united under the lead of Captain John H. Baird of San Francisco to erect a powder works upon our own soil, to be operated in the interest of California. Such was the origin of the California Powder Works.

On December 28, 1861, with John H. Baird as its first president, the California Powder Works was incorporated. John Sime became a stockholder in the Powder Works and was entrusted with its construction. One million dollars was to be invested in the plant by the time it was fully equipped. Water, for power, was taken from the San Lorenzo River through a tunnel pierced in a spur of the mountain. The whole fall of two miles, amounting to 80 feet vertical, was utilized, and in the summer season all of the

Note: This is a "silent talk" prepared by Californian Al Cali some time ago and used now because of its relevance to the Civil War and post-Civil War era evoked by the Atlanta meeting.



water of the river was diverted through the tunnel.

This natural motor determined the site of the works and the San Lorenzo basin abounded with choice woods for charcoal, and with the timber for construction, fuel, and kegs. The equable climate offered an inestimable advantage in the manufacture of powder, the finest qualities of which cannot be made at a freezing temperature. There was also a good harbor at Santa Cruz that could be used for transportation and housing for some of the work force. The wisdom of this choice became more apparent every day, and all the Eastern powder magnates have pronounced "Powder Mill Flat" as the ideal situation in the country for its purpose.

The Powder Works provided jobs for 150 to 275 workmen and for 50 years was Santa Cruz's main industry. It also provided instant death for some of those workmen. Jobs at the Powder Works were always hazardous. The men knew it when they went there and every precaution was taken for safety. Workmen labored nine hours each day, six days a week, and earned \$2.00 per day.

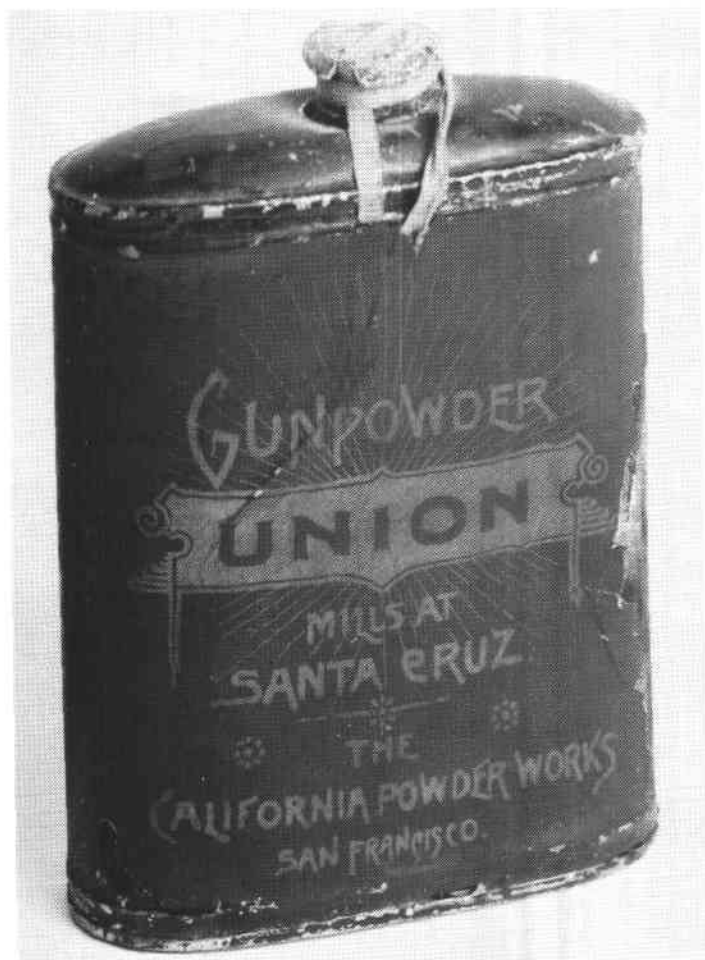
The worst explosion took place on April 26, 1898. It killed 13 men and injured 15 others. The blasts were heard and felt in Santa Cruz three miles away.

The California Powder Works was the first company to produce smokeless powder on the West Coast. Two large cannons were used to test the powder, which was in great demand during the Spanish American War. The local company was one of the two in the United States that made smokeless powder for the U.S. Government at that time.

The business of manufacturing blasting powder and fuse powder was simple. Ingredients consisted of charcoal, which was made on the spot by burning madrone and older trees, and sulphur and nitrate of potash shipped in to Santa

Cruz from the East Coast, South America or Europe. These ingredients were measured to proper amounts, then put into wheel houses for mixing. The houses were built of solid concrete on three sides, with a fourth wall and the roof of flimsy, light construction. When explosions occurred, the force of the blast was directed out through the temporary sections of the building. Eucalyptus trees were planted in thick groves around building to catch flying debris from explosions.

From the mixing process in the warehouses, the powder mixture was taken to the press house to be squeezed into slabs about 20 by 30 inches in size and 1 1/4 inches thick. The slabs were sent into the corning mill to be ground up into pellets the size of a pea. The pellets were glazed with graphite, then loaded into wooden kegs for shipment. At first, the Powder Works hauled its kegs by horse and wagon to the wharf the company built at Santa Cruz Beach, where sailing vessels could put in fairly close. When the railroad line went in between Oakland and Santa Cruz, the Powder Mill built a connection spur and began shipping powder by rail.



In 1898, Colonel Bernard Peyton came to the powder company as Superintendent. He and his son, W. C. Peyton, built huge homes on the hill east of the San Lorenzo River looking down on the powder operation in the valley below. The son married a member of the famed DuPont family.

In 1914, the Powder Mill moved out of Santa Cruz, part of it going to the Hercules Powder Plant in Contra Costa County, and part to the Hercules Plant at Bacchus, Utah. This happened partially because of the development and use of nitroglycerin, a far more powerful explosive that had first been discovered in 1846. The Swedish chemist, Alfred Nobel, used nitroglycerin and produced dynamite, patenting it in 1867. As it gained popularity, the demand for the old-time black powder declined. The Santa Cruz plant had become part of the DuPont empire; when the Sherman Anti-Trust Act declared the DuPont Company a monopoly, the Santa Cruz plant became part of the Hercules Powder Company, and workmen and equipment were moved to its two plants.

Manufacture of black powder continued in decreasing amounts until 1955, but dynamite was the main explosive produced. Hercules Powder Company continued to own the beautiful San Lorenzo River mill site until 1924, although all powder making had ceased in 1914 at the Santa Cruz plant. In 1924, the Masonic Lodge bought the tract for a summer home development for its members. Today, many of the homes are year-round dwellings. (A note of interest: some of the old concrete walls of wheel houses and powder magazines have been incorporated into modern homes. The Old Powder Mill site now is named Paradise Park.)

REFERENCES

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PHOTO CREDITS

University of California at Santa Cruz Special Collection
Santa Cruz City Museum
Greg Martin, San Francisco, California.



Looks like these two have been painting powder cans — with black powder?



Charcoal kilns as they appeared about 1870.