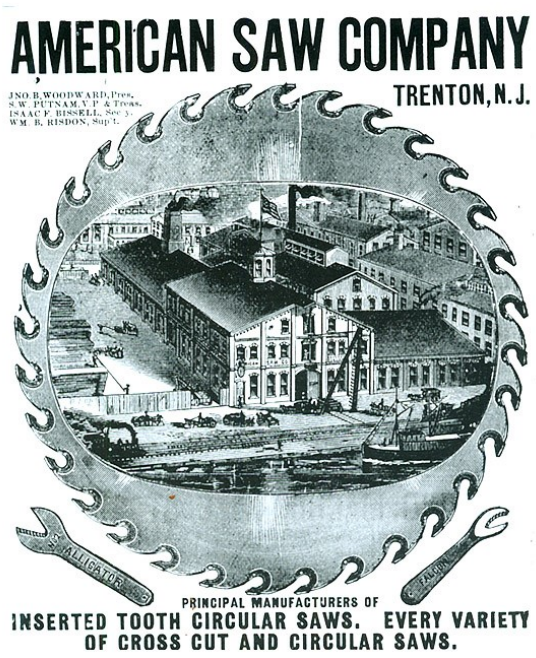
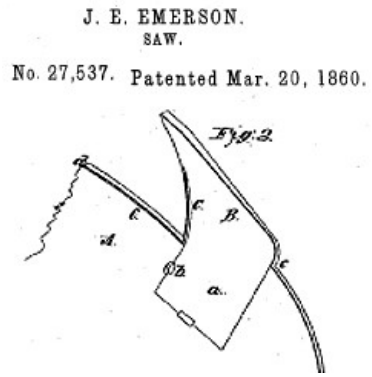
THE AMERICAN SAW COMPANY
By Bob Garay

The American Saw Company was one of the early innovators in circular saw blade design during the second half of the 19th century. They helped to put Trenton, New Jersey, on the map as an industrial city right along with other well known names such as Roebling, Lenox, and Fisher Anvil. The company was well known world wide for its top quality saws, applying new technologies in saw design and manufacturing processes. Yet the company had a relatively short run of only about thirty years. To tell the story of the American Saw Company it is important to trace the history of its chief founder, James E. Emerson. As the first superintendent of the saw factory he led the company to became one of the largest in the country.



He was born in 1823 and raised in Maine where he worked in saw mills and became a house carpenter. He started a business making woodworking machines. His first invention was a machine used in cotton factories, which performed the same work that had previously required three machines to execute. In 1852 the reports of opportunities presented to enterprising men in California proved alluring, and Mr. Emerson left Maine and sailed for California.

In San Francisco he became superintendent of a saw mill and then a proprietor of saw mills in various counties. During this time he was often frustrated by the down time and cost related to chipped and broken circular saw teeth when the blade would hit an iron spike embedded in a tree. This problem encouraged him to manufacture a circular saw blade with insertable teeth that could be replaced when broken. By 1859 he formed a company with Nathan Spaulding in Sacramento, California. He left the company shortly after, most likely due to a flaw in the patented design of his insertable tooth saw. (More on this later.)



Emerson's patented inserted tooth.

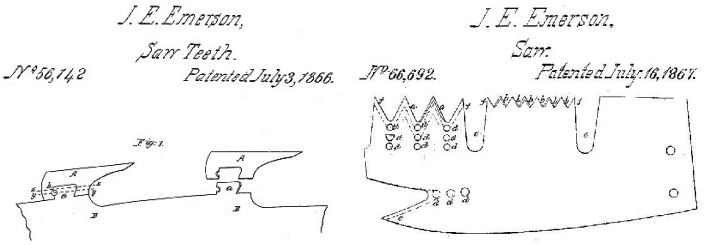
He left California in the early 1860s he returned to Trenton. Here he formed the company Emerson & Silver, which had a prolific, brief appearance fulfilling government contracts during the Civil War including swords and sabers for the military. During this endeavor he supplied over 27,000 Calvary sabers and 12,000 officers swords, all of the highest quality. Soon afterwards he became the superintendent of the American Saw Company. The company was organized under the laws of New York in January, 1866, with a capital of two hundred and fifty thousand dollars. The manufactory was located at the foot of Broad Street in Trenton, New Jersey, with a general office in New York City. Its factory location was very close to the Delaware River and had canal access next to the factory. (The advertisement artwork above shows a large ship in a river next to the factory, but that was advertising propaganda.) The factory did have the Delaware Railroad run right next to the factory for easy shipping. Also of importance was that the factory of J.A. Roebling & Sons was right next door .

Its officers, at the date of its organization, were James C. Wilson, president; Henry G. Ely, treasurer; Samuel W. Putman, secretary - all residents of Brooklyn, New York; and James E. Emerson, superintendent, of Trenton. No change in its officers occurred until January, 1869, when Mr. James E. Emerson resigned the position of superintendent, and was succeeded by William E. Brook.

James Emerson first patented the insertable saw tooth in 1866 and assigned it to the American Saw Company. He patented many more variations of the insertable tooth saw, which were assigned to the American Saw Company and to himself.

Another early invention by Mr. Emerson is the perforated saw blade. The perforations lessen the amount of filing and prevents expansion and

contraction of the rim by heat. They also prevent the blade from fracturing below the teeth, which invariably commences at a sharp corner made by the file. In case a fracture commences in this blade, it can only break through the bar between the aperture and throat of the tooth, and the aperture serves the same purpose of a round hole drilled at the end of a crack, which is the only means of repairing a fracture in any kind of blade. The aperture also serves as a per-



Above left is Emerson's 1866 patent for insertable teeth. Right is his first patent for perforated teeth. Below is a handsaw with similar perforated holes. It is etched "EMERSONS PATENT JULY 16, 1867. Below it is a close-up of the etch.

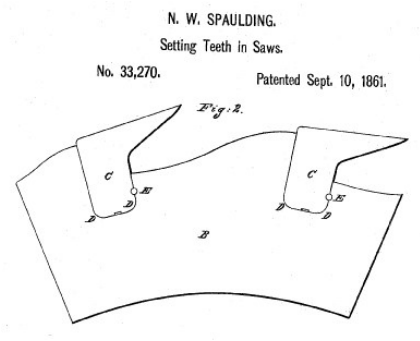
manent guide in filing, and enables the operator to keep the teeth all of uniform shape and equal distances apart.

The American Saw Company had become one of the more important business of Trenton, employing one hundred men, at an annual payroll of sixty thousand dollars. At the 1867 Universal Exposition in Paris they exhibited a saw eighty-eight inches in diameter, which is believed to be the largest circular saw ever made up to that time. It was prepared at a cost of two thousand dollars.

The above ad is from the June 20, 1868 Scientific American.

Circular saw blade with Emerson's patented perforations made by the American Saw Co.

The company was not without problems. In 1868 Mr. Emerson's former Sacramento business partner, Nathan W. Spaulding filed suit - Spaulding Vs./ Tucker & Putnam agents of the American Saw Company. Putnam and Tucker went to California to sell saws made by the American Saw Co. consisting of the Spaulding patented design. Mr. Spaulding patented his insertable tooth saw on Sept. 10, 1861 solving the problem with Emerson's earlier 1860 design. It was an expensive battle and the American Saw Company hired the best patent lawyer from New York City. Yet The American Saw Co. lost and had to pay Mr. Spaulding quite a bit for the patent infringement. Shorty after, in the 1869 records, Mr. Emerson is no longer listed as Superintendent of the company. Was there a falling out due to the patent problems? Emerson moved to Beaver Falls, Pennsylvania to start up his own saw manufacturing company. The area of Beaver Falls was well known for its fine iron manufacturing and here he partnered up with local businessman John P. Ford to form the saw making company Emerson , Ford & Co. Ford left and he took on a new partner, a Mr. Smith to become Emerson, Smith & Co. He retired during the later part of the 19th century and died in 1900 in Columbus Ohio. His legacy on saw design can be seen by a careful study of the book—Grimshaw on Saws, where Emerson's patented designs are often mentioned and displayed.



The above Spaulding patent included a curved radius at the base of the inserted tooth. This prevented strain and fracture at the base.

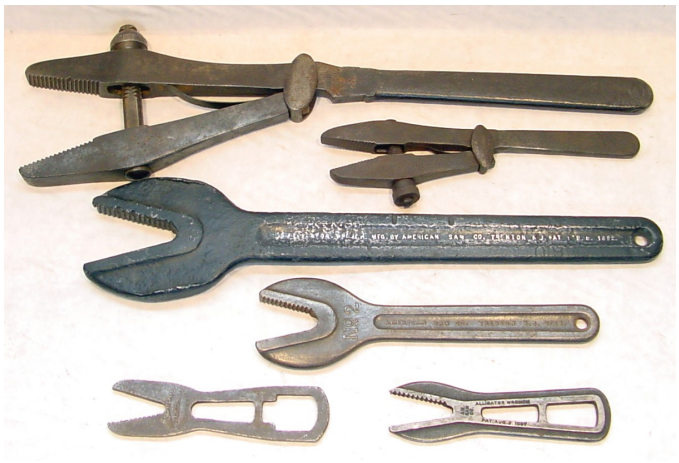
The American Saw Co. factory was destroyed by fire February 7, 1870, involving a loss of about one hundred and fifty thousand dollars. Within four weeks new buildings were erected and work resumed as usual.

Hoping to diversify and widen their product line during the mid 1870's the company manufactured different patented wrenches for sale. First they offered the G.W. Waitt patented small alligator wrench. It was an easy match for their current facilities as it was effortlessly produced with metal already being used for saws and it was a simple stamped forged design. This basic alligator design was patented earlier by others but the American Saw Company got a trademark on the "Alligator" brand name. They expanded this basic design to larger sizes and in 1897 & 1898 S.T. Freas patented

Butcher's saw made and stamped by the American Saw Co.

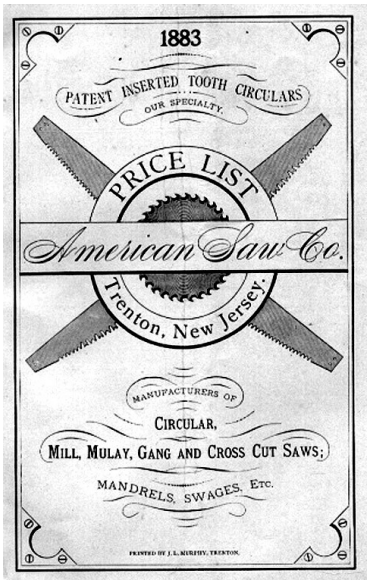
similar designs and assigned them to the company. They also offered an ingenious adjustable Alligator wrench patented in 1890 by A.J. Curtis, that could be used in pipe work. They manufactured other wrenches such as the Stevenson 1892 patented wrench and the 1892 Brooke patent for a bicycle wrench.

The New York times reported in their paper August 3, 1898 that due to the general depression and bad outlook of the building trade the American Saw Company of Trenton, N.J. had to shut down indefinitely. It was employing 100 people and had been in business for 32 years manufacturing saws. Soon after this was a lawsuit by the American Saw Company on November 17, 1897, charging their secretary Isaac F. Bissell with misappropriations of funds over a three year period from 1891 to 1894 for approximately $1700.



Some of the patented wrenches offered by the American Saw Co. Top is two Curtis pipe wrenches patented in 1890. Center is two alligator wrenches patented in 1898 by S.T. Freas. Bottom left is small stamp forged alligator wrench patented in 1875 by G.W. Waitt. Bottom right is later 1897 patented design by S.T.Freas.

The company sold its patent rights and saw business to Henry Disston & Sons in 1901. They closed their factory when they sold their patent rights and wrench business to their long-time neighbor, John A. Roebling Sons in the same year.



It was reported in the 1911 Obsolete American Securities and Corporations that in 1906 the American Saw Company Charter was void for nonpayment of taxes. This seems to log the ending of the American Saw Company of Trenton, NJ. Their contributions to the saw and wrench industries were impressive. Their work was carried on by two giants of industry—Disston & Roebling. Even though they were in business for just over thirty years finding tools made by this company is rare. Finding a saw is just about impossible. But that is what makes collecting tools so interesting—the hunt!