

8 ADOLPH SCHOENINGER

THE HENRY FORD OF THE BICYCLE INDUSTRY?

HANS-ERHARD LESSING

Henry Ford is generally credited with the first use of assembly-line production, enabling his workers to buy their own car. This is a first look at Chicago industrialist Adolph Schoeninger, who made the bicycle affordable for the American worker two decades earlier by applying sheet-metal stamping techniques in its manufacture.

One has often wondered who indeed was responsible for the bicycle becoming such a cheap product in the 20th century, in spite of it having been a very

Below: Fig. Lessing 1. Three posters for Schoeninger's American Crescent brand bicycles. (Courtesy Pryor Dodge)



prestigious item before. After all, the bicycle was the “automobile” of the 19th century at a cost of half a piano or more. One theory considered the component manufacturers to be the culprits, since the availability of components that are difficult to produce, like hubs and gears, lowered the skills required for assembling bicycles from frames and components. When everybody could produce bicycles, competition between those assemblers would drive price and quality down. It was David Hounshell’s book on American mass-production¹ that led to the Western Wheel Works in Chicago and its founder Adolph Schoeninger, a German immigrant (Fig. 1). Since Glen Norcliffe introduced the term

“Popeism”² besides Fordism, there should be room now for a third term, “Schoeningerism.”

SHEET METAL STAMPING

There was indeed a revolution in bicycle production in the 1890ies. The gunsmith methods used thus far involved turning threads on the tubes and screwing them into

cast or drop forged lugs carefully bored out and provided with threads. This whole armsmaking practice turned out obsolete, when those Westerners or Chicagoans started their sheet stamping and drawing methods. For instance, the crank hanger could now be produced in several quick steps under a press using two hand-held dowels in no time, see Fig. 2.

Hounshell states that the beginnings of this stamping technology are obscure. Horace L. Arnold aka Hugh Dolnar states in the sector magazine American Machinist that the Western Wheel Works (WWW) got their stamped parts initially from Germany and then since 1890 from the A. H. Matthews Stamping Works³ in Seymour, Connecticut, wherefrom they later got the stamping machines for their own production, too (Fig. 3). A conflicting year, 1895, given for WWW’s entry into sheet metal stamping appears improbable⁴.

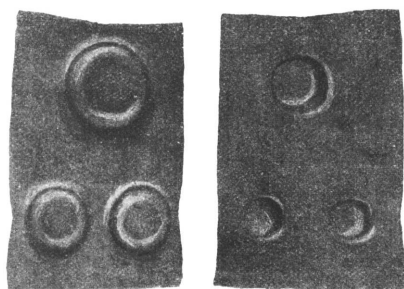
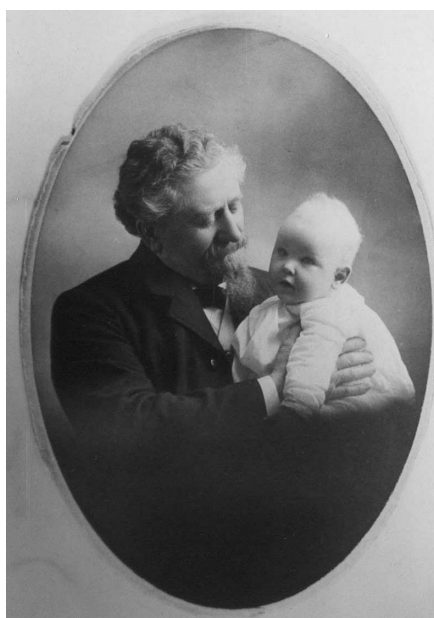


Fig. 26.

Fig. 27.

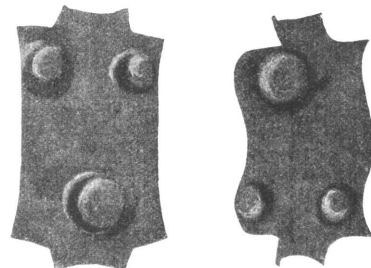


Fig. 28.

Fig. 29.

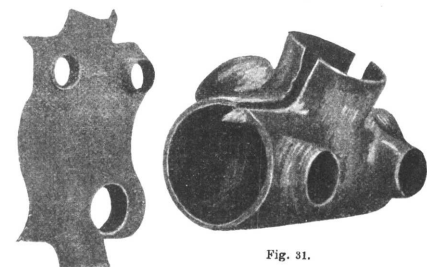


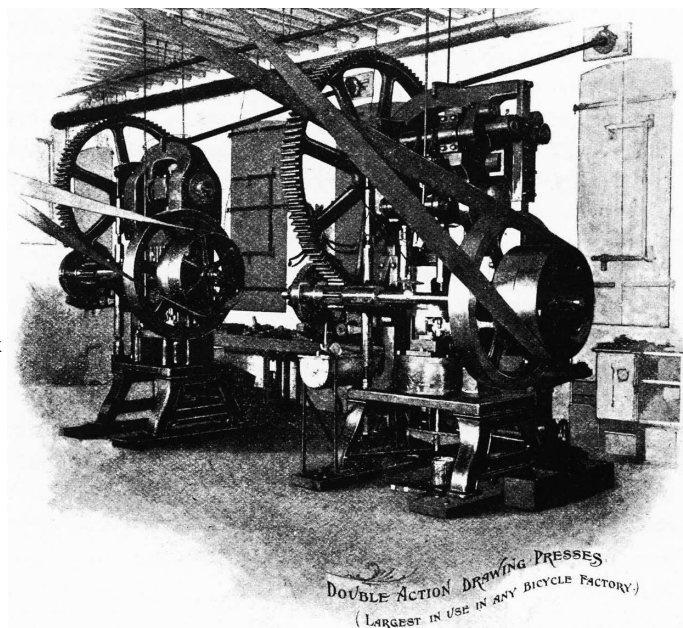
Fig. 30.

Fig. 31.

Above: Fig. Lessing-2. Adolph Schoeninger with son Louis (Courtesy of Richard Schoeninger)

Left: Fig. Lessing-3. Stamping steps for a crank hanger from sheet metal (Dinglers Polytechnisches Journal 304 (1897) 268)

Right: Fig. Lessing-4. Double-action drawing presses at Western Wheel Works (WWW catalog 1897)



WWW were not the only promoters of stamping methods. Crosby & Mayer Co. of Buffalo, New York, is also reported⁵ to have developed the manufacture of hollow bicycle parts stamped from sheet metal in 1893. Mayer, the second name, sounds German. The whole gamut of stamped sheet-metal bicycle parts can be seen on a page (Fig. 4) from a 1900 catalog of E. W. Bliss Company in Brooklyn NY, producer of all kind of presses. Of course, other bicycle producers adopted the new production methods soon, e.g. main competitor Alexander Pope introduced⁶ stamped bottom brackets in the winter of 1896–97.

The hints to a German origin are substantiated by an earlier article⁷ by Arnold in the American Machinist speaking of a “German locksmith spirit” at the WWW. An as yet unproven thesis would seek the origins at the tin plate toy maker industry. Incidentally,

the German company Schuler in Göppingen has started producing stamping presses in 1852 and still does.

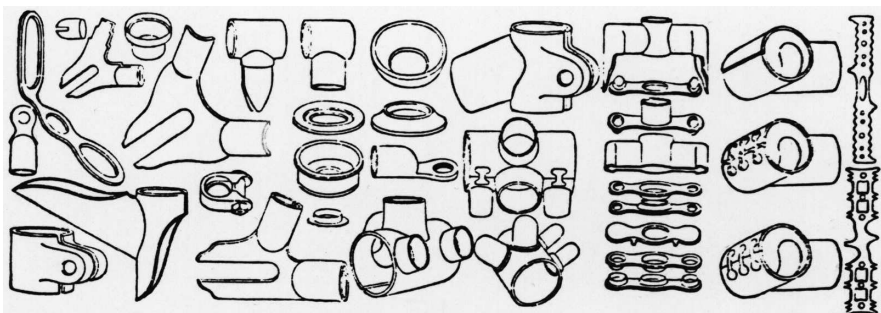
SCHOENINGER, A GERMAN IMMIGRANT

While it turned out difficult to collect more data on the company⁸ from a distance, some biographical data on the founder could be assembled. Adolph Schoeninger was born in the small town Weilderstadt near Stuttgart in 1833. He became a trader, but left Germany as a democrat in the aftermath of the defeated revolution of 1848–49.

In Philadelphia he worked in a tobacco store, then as a partner in a paper box business, finally he started a grocery business. Married in 1857 to Augusta Riehmann—one year his junior—he joined the Civil War as a captain under Colonel Von Bohlen in

1861, only to find his business down when he came home in 1863. He moved westward penniless to Chicago and found employment in the chinaware business with Albert Pick. Then he started a small furniture factory with partner C. Stale, destroyed by fire a year later. In 1866 he then took charge, on his own account with \$10,000 and employing 38 hands, of a factory for toys, baby carriages etc. previously run by Vergho, Ruhling & Co. He called it Western Toy Company (ref. 8 tells that he formed a partnership with F. Westerman).

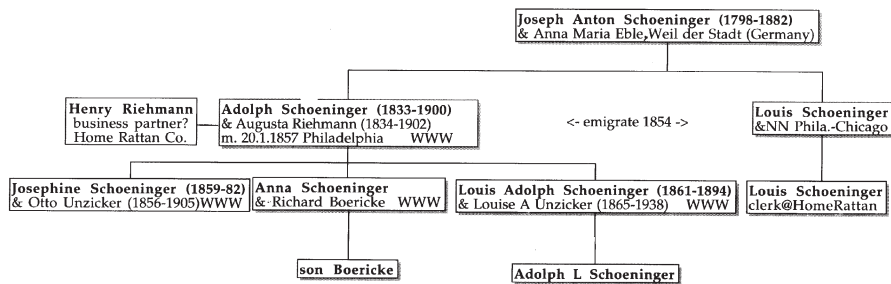
The great Chicago fire destroyed the new building in 1871. Schoeninger didn’t get insurance paid, since the Chicagoan insurance companies all went broke. With the help of a European bank he started anew on a capital of \$20,000 building baby carriages,



Above: Fig. Lessing-7. Bicycle Parts Stamped out of Sheet Steel (E. W. Bliss Company catalog 1900)

Upper right: Fig. Lessing-6. Patent Office model of Otto Unzicker’s 1878 tricycle, equipped with ladies’ sidesaddle (from Wheels and Wheeling, Smithsonian 1974)

Lower right: Fig. Lessing-5. The Schoeninger family tree.



1865 Charles Stale&Co 7/2/01@HELessing
 1869 Western Toy Co. brands OTTO and PETITE
 1890? Western Wheel Works brand CRESCENT
 1893 Home Rattan Co. brands HERO and HOME

sleds, and the like. He was the first licensee of Colonel Pope in 1879 building bicycles for boys and girls under the brands OTTO and PETITE initially from wood. This had nothing to do with Edward Carl Friedrich Otto of dicycle fame. Rather Schoeninger's son-in-law Otto Unzicker was the Master Mechanic of the company with a dozen patents (Fig. 5). His first name became the brand name. Schoeninger himself had a dozen patents, but mostly on baby carriages and the like (Fig. 6).

THE WESTERN WHEEL WORKS (WWW)

It is not quite clear, when Western Toy Company turned into Western Wheel Works with a capital increase to \$ 50,000,

presumably in 1889 (Pope's Lallement patent expired in 1889 and WWW was no longer a licensee). Its 1892 capital of \$500,000 was divided equally between the five officers of the concern employing 800 hands: Adolph Schoeninger, his son Louis (who died in 1894), sons-in-law Otto Unzicker and Richard Boericke, and Superintendent Joseph Schlichter (Fig. 7).

After the early death of his son in 1894 Schoeninger transferred his share into WWW to his sons-in-law and retired from WWW. In 1893 he had started with associate Henry Henneberg a new manufacture of baby carriages, chairs, toy furniture under the company name Home Rattan Co. It was so successful, that he produced again juvenile bicycles under the brands Hero and Home. Schoeninger died at age 67 in Los Angeles in 1900.

Enter Reuben Lindsay Coleman, born in Albemarle, Virginia in 1852. Having been a sales clerk, later associated with his brother in New York collecting orders as a representative of WWW in the East at the

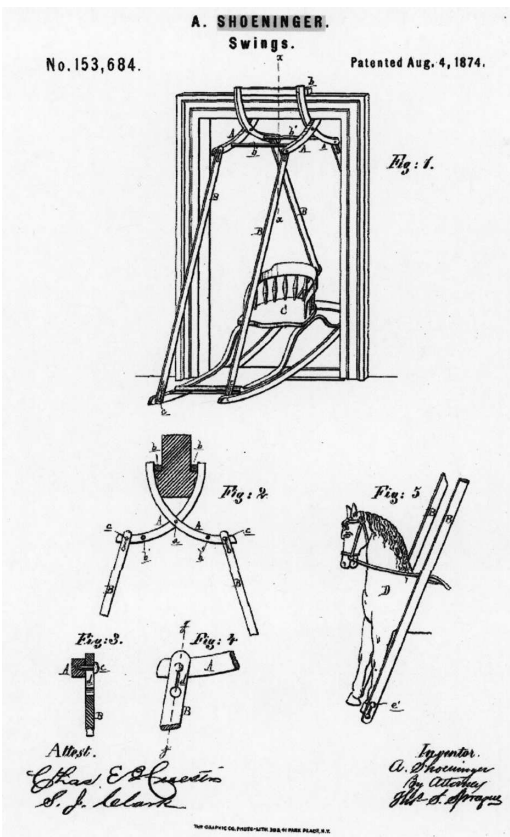
beginning bicycle boom, he stepped in as president and part-owner of the WWW in 1894.

With their cheaper Crescent bicycles, WWW won the price war over Pope's Columbia ones. The American worker finally could afford a bicycle. The performance wasn't that inferior and in the end WWW produced chainless bicycles with two-speed hubs. In 1895 WWW became the largest bicycle factory of the world (Fig. 8). Initially Crescent was just one model, besides Rob Roy and other names, but after 1894 the whole line was called Crescent and posters were ordered from French artists (Fig. 9). The German globe cirler Heinrich Horstmann, aged 21, stopped by and switched to a Crescent No. 2 in 1895 (all model designations were merely numbers then). Back in Germany, he became a representative for WWW.

The further story,⁹ after the bicycle slump of 1897 in the United States, has still to be detailed. WWW joined the American Cycle Manufacturing

Left: Fig. Lessing-8. Schoeninger's 1874 patent for room swings.

Above: Fig. Lessing-10. Western Wheel Works in Chicago (from 1899 catalog).



WHERE CRESCENT BICYCLES ARE MADE

<p>Chronological History</p> <p>We were manufacturing</p> <ul style="list-style-type: none"> Two-wheeled Velocipedes - in 1872 "Ordinary" Bicycles - in 1877 Adult Tricycles in 1885 Crescent "Safety" Bicycles - in 1886 Crescent Pneumatic "Fire Safety" Bicycles - in 1892 Bevel Gear Chainless Bicycles - in 1897 		<p>Annual Sales of Crescents</p> <ul style="list-style-type: none"> 1894, over 51,000 1895, over 57,000 1896, over 70,000 1897, over 83,000 1898, over 100,000
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The plant of the Western Wheel Works is the largest in the world devoted exclusively to the manufacture of bicycles. It is centrally located in the City of Chicago, Illinois, U. S. A., thus enabling shipments to be made to all parts of the world with the greatest possible dispatch. The buildings, as in the above cut, all of which are used entirely for making Crescents, occupy a ground space of nearly an entire block. The extent to which the business has increased is clearly shown by a comparison of the present factory with the factory used in 1872 shown in the upper left-hand corner of the above picture. (The original factory was destroyed in the Chicago Fire.) The plant is fully equipped with the most perfect bevel gear cutting machinery, a complete outfit of stamping presses for making sheet steel stampings, labor-saving machinery for making our own chains, a large number of automatic machines capable of finishing over 325,000 small parts daily, ample equipment for enameling and nickel plating, together with lathes, milling machines, planers, etc., making our facilities such that with a full working force we are able to complete 1,000 bicycles in a working day of ten hours. A magnificently equipped steam and electric plant combined furnishes the power required for this large output, and over 5,000 persons are employed in the various departments. The steam plant consists of 1,600 h. p. boilers and engines, and electric generators and motors of a capacity of 1,200 h. p. distribute light and power over the entire factory.

combination with Pope and others in 1899. After 1903 Coleman's name disappears, and WWW must have discontinued production in 1905. Yet the Swedish importers took over the brand and continued to produce Crescent bicycles themselves. Even after a merger in 1931 the Crescent brand name continued until the merger with the Monark brand, Varberg (Sweden), in 1963.

The factory buildings in Chicago on Well's and Schiller streets were used by Dr. Scholl's shoe factory. Today the building houses a condominium complex.

HENRY FORD BUYS A BICYCLE FACTORY

Carl Burgwardt, in his book "Buffalo's Bicycles," has described Buffalo, near the Niagara Falls with its cheap electricity, as the hotbed of cycling in the 1890s (see Ref. 5). One of the many bike businesses there was the

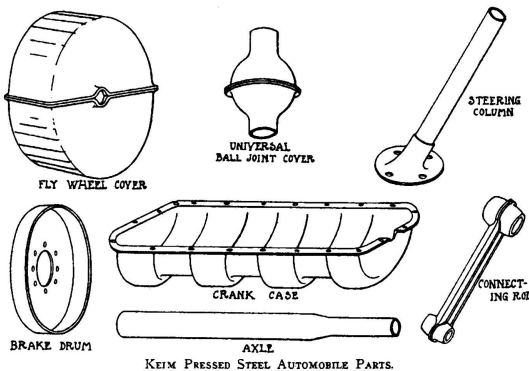
Keim company, known since 1899. John R. Keim was a jeweler in New York, who let his money work in Buffalo and obviously supplied department stores like Sears, Roebuck & Co.

With the bicycle business going down and with their innovative sheet stamping and drawing methods its managers soon collected orders (Fig. 11) from the Ford Motor Company in Highland Park, founded in 1905. For instance, the differential housing was initially cast, de-burred, and carefully bored out which took its time. The Keim people made a sheet-metal part of it¹⁰ that was stamped and drawn—wham-bam—in several quick steps much cheaper. Finally Ford bought the

Keim Company in 1912 and moved it to his site. So the true Ford heavily relied on the methods of the bicycle's Ford to make his model T easier and cheaper to produce.

ACKNOWLEDGMENTS

I want to thank Carl Burgwardt, Bruce Epperson, and Carey Williams for all their support and advice.



Above: Fig. Lessing 10. Automobile parts stamped from sheet metal and poster of the Keim bicycle factory in Buffalo that was bought by Henry Ford in 1912 (Ref. 10 and courtesy of Carl Burgwardt)

Right: Fig. Lessing 11. Hard-to find entry on Schoeninger in *Unrivaled Chicago*, 1896

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BIOGRAPHICAL SKETCHES.

ADOLPH SCHOENINGER.

Adolph Schoeninger, President of the Home Rattan Company and formerly President of the Western Wheel Works, may be taken as a fair type of the self-made man of Chicago. He was born at Wiel, one of the old free cities of Schwaben, on January 20, 1833. He received a liberal education in his native country, passing through the high schools, from science he entered a large dry-goods house conducted by his uncle, David Gall, of Rastadt, Baden. Here he was entered as an apprentice, but proving his worth by his work, he rapidly rose to the position of head salesman. Here he was enabled to obtain an insight into business correspondence, bookkeeping, and other branches of mercantile life. Of all this he availed himself eagerly; and when, after seven years of service, he resigned his position, he considered himself thoroughly proficient in all branches of mercantile affairs. During Mr. Schoeninger's residence in Baden, Brentano was named Dictator, and our young merchant witnessed the court-martial and execution by the Prussians, after they had taken possession of a number of men innocent of any crime save their failure to free their people of the oppressors. This produced such an impression upon his mind that he determined to emigrate to America. In 1854, in company with a younger brother, Mr. Schoeninger set out. He came to Philadelphia, where he found employment in various business houses until 1857, when he started in business for himself. In this he was prosperous, which gave him entrée into many of the German societies of both social and benevolent character, where he soon became prominent. At the breaking out of the late Civil War, he was offered command of a company in the Seventy-fifth Regiment of Pennsylvania Volunteers, which he accepted. Here he rendered gallant service until 1864, when he returned to Philadelphia, only to find himself penniless. He now decided to locate in the West, and came to Chicago, and obtained employment with Albert Pick, in the china-ware business, where he remained for one year. He then started a small furniture factory on Desplaines street; but this was destroyed by fire a year later. In the fall of 1866, Mr. Schoeninger took charge, on his own account, of a factory previously run by Vergho, Ruhlring & Co., for the manufacture of toys, baby carriages, etc. Under his management it steadily increased until the great fire of 1871, which laid everything in ashes, including a new factory which had just been completed. As his insurance had all been placed in home companies, he lost all, because the magnitude of the fire was enough to destroy them all. Mr. Schoeninger again faced disaster, as he had so often done before, with an undaunted courage. He had made for himself a reputation for honesty and integrity which was now of value. A banking firm in Europe, knowing his reputation, offered him financial assistance, with which he rebuilt his factories and had his engines running again January 1, 1872, in less than three months. The following February he made his first shipment. Since then his success has been phenomenal. Within three years he had repaid his creditors from before the fire, and within ten years he had repaid every dollar borrowed for the rebuilding of his works. He had also made extensive enlargements, which have gone on since, until the Western Wheel Works has come to be the largest wheel manufacturing factory in the United States. It employs 1,500 men, mostly in the manufacture of bicycles, of which it turns out 350 per day. It recently made one shipment of one solid trainload of fifteen cars, loaded solely with bicycles, from the Western Wheel Works to its general store in New York, the shipment representing over \$100,000 in value. Mr. Schoeninger has now transferred his interests in the Western Wheel Works to his sons-in-law, and has built up. In 1893, Mr. Schoeninger established the Home Rattan Co., for the manufacture of baby carriages, toys, furniture, and other read-and-rattle goods. This has also met with the usual success that has attended Mr. Schoeninger's other ventures. He has since added the manufacture of juvenile bicycles, which now makes such a demand

ADOLPH SCHOENINGER.

APPENDIX

Extant Pricelists and Catalogs of WWW (source)

- ❑ The Otto Bicycle (reprint W.W.Stale catalog, Boston 1886).
 - ❑ Western Wheel Works No.26 1892, 25 pp. (Carey Williams).
- ❑ Crescent Bicycles 1895, 16 pp. (Carey Williams).
 - ❑ Crescent Bicycles 1897, 48 pp. (reprint The Vestal Press).
 - ❑ Western Wheel Works London Depot 1897, 30 pp. (Williams).
 - ❑ Crescent Bicycles 1899, 22 pp. (Carey Williams).
- ❑ Cycles Crescent 1900, 26 pp. French (Carey Williams).
 - ❑ Crescent Bicycles 1903, 24 pp. (Carey Williams).

ENDNOTES

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| <p>1 David A. Hounshell, <i>From the American System to Mass Production 1800–1932</i> (Baltimore MD: John Hopkins University Press, 1984), Chapter 5.</p> | <p>4 Bruce F. Epperson, personal communication.</p> | <p>8 Royal L. <i>LaTouche and John H. Potter, Chicago and Its Resources Twenty Years After 1871–1891</i> (Chicago IL: The Chicago Times Company, 1892).</p> |
| <p>2 Glen Norcliffe, “Popeism and Fordism: Examining the Roots of Mass Production,” <i>Regional Studies</i> 31.3(1997) 267–280.</p> | <p>5 Carl F. Burgwardt, <i>Buffalo’s Bicycles</i> (Orchard NY: Pedaling History Bicycle Museum 2001) p. 107.</p> | <p>9 Bruce F. Epperson: “Failed Colossus—Strategic Error at the Pope Manufacturing Company 1878–1900.” <i>Technology and Culture</i> 41 (2000) 300–320.</p> |
| <p>3 Horace L. Arnold, “Cycle Stampings,” <i>American Machinist</i> 19 (1896) 1163–1167.</p> | <p>7 Horace L. Arnold, “Bicycle Tools I,” <i>American Machinist</i> 19(1896) 781–782.</p> | <p>10 “Pressed Steel Automobile Parts” <i>The Horseless Age</i> 24 (1909) 264.</p> |