Für meinen Lieben Neffen
Ludwig mit herzlichste grüssen
von Onkel Ignaz.

Aug. 8, '47

Fifty Years

OF

SCHWINN-BUILT BICYCLES

The Story of the Bicycle and Its Contributions to Our Way of Life

1895 *1945*

ARNOLD, SCHWINN & COMPANY

CHICAGO

TO MY FATHER

with sincere gratitude and deep affection,

this book is respectfully dedicated.

FRANK W. SCHWINN

FOREWORD

THIS BOOK, commemorating the Fiftieth Anniversary of Arnold, Schwinn & Company, is a tribute to Ignaz Schwinn, who with unerring good judgment and unusual courage has guided his company through good times and bad, wars and depressions, without loss in any single year.

As we go to press, Ignaz Schwinn, at the age of eighty-five, is the leader of the American Bicycle Industry, still the active head of Arnold, Schwinn & Company, the largest volume cycle producing factory in the United States.

Schwinn-Built Bicycles enjoy the enviable reputation of being the finest bicycles manufactured in our country and are second to none in the world.

For valuable advice and assistance, grateful acknowledgement is made to Hugo Arnold, Gideon Haynes, A. D. Kennedy, Gus Horn, W. T. Farwell, H. P. 'Jack' Hansen, Charles 'Mile-a-Minute' Murphy, James B. Bowler, Herman Van Herik, E. C. Bald, and Alfred Letourner.

Ignaz Schwinn

IGNAZ SCHWINN

IGNAZ SCHWINN was born on the first of April, 1860, in the little town of Hardheim in the province of Baden, Germany. His father, the owner of a prosperous small organ and piano factory, died when Ignaz Schwinn was eleven years old, leaving a family of seven children of whom Ignaz Schwinn was next to the eldest.

There was money enough to give him a primary and vocational school education, but no more. After that, he served his apprenticeship as a machinist and, at an early age, started work. It was difficult for a young man to find work in those days, and he was forced to seek employment wherever it could be found. Because, like most young men of his time, he was intensely interested in that 'wonder of the age', the high wheel bicycle, he trudged from town to town working on bicycles and bicycle parts whenever he could find the opportunity. In bicycle factories in the North of Germany he learned about the new bicycle, the 'Safety', which had been invented by a man named Starley in England. He saw some of the early experimental types and quickly recognized their advantages. By this time he had had a very considerable experience with cycle building, which, together with a great natural talent for mechanics, started him on his career as a cycle designer and builder.

The 'Safety' was new, and people were

conservative in those days. His enthusiasm and ideas were listened to respectfully, but rejected in favor of the older type, which was a tried and proven thing.

That new, pneumatic tire—another British invention—much discussed in cycle factories, was generally dismissed as an interesting but impractical novelty; yet Ignaz Schwinn was convinced that his ideas were right, and a few competent cycle men agreed with him and encouraged him in his ideas.

While working at Frankfurt-on-the-Main, he purchased a drawing board and instruments; and in his little room, high up under the gabled roof of a house in picturesque Frankfurt-old-town, he worked night after night on his plans for an improved 'Safety' bicycle.

The machine shop for which he was working manufactured, among other items, high-wheel bicycle parts for Heinrich Kleyer, who at that time was making and selling bicycles in a small way. In the course of this work he became acquainted with Mr. Kleyer and showed him his designs for the new bicycle. Kleyer was impressed, employed him and he soon became designer and works manager for the Kleyer factory making *some of the very first 'Safety' bicycles* produced in Germany. The business prospered, and about 1889 he helped plan and supervise the construction and the equipping of a new factory for

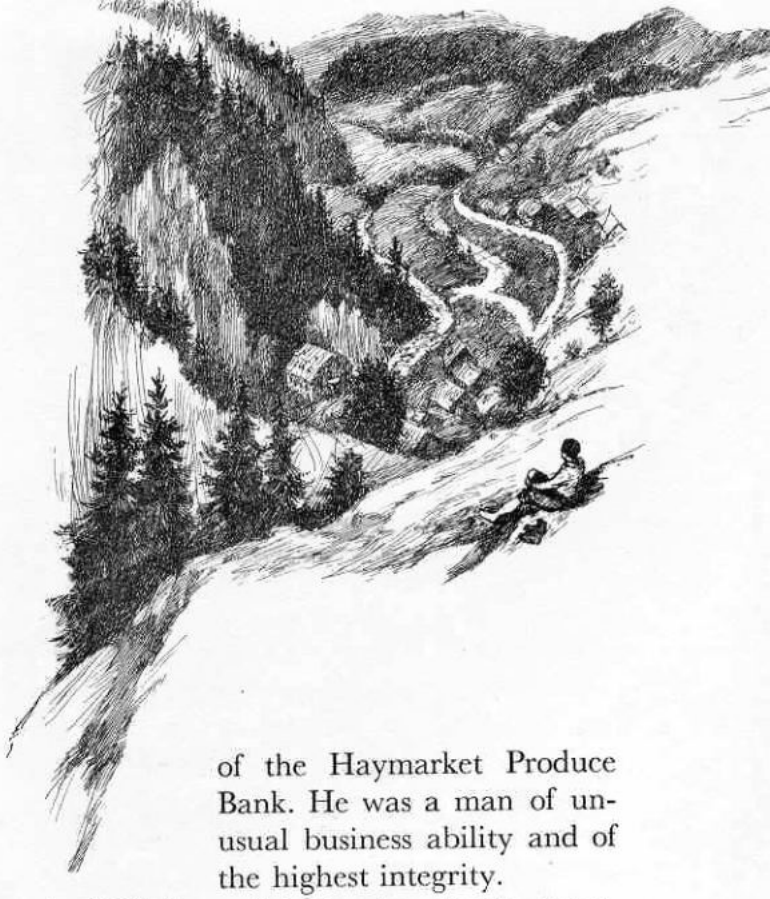
Kleyer, which subsequently grew to become the great 'Adler Works' of Germany.

In 1891, desirous of participating in the prosperity of that great new land, America, he came to the City of Chicago, in the United States, attracted by its central location and the great World's Fair, where he would have the opportunity of studying the technical advances of the time.

He worked for a short time for the firm of Hill & Moffat, makers of the Fowler bicycle, and later designed the bicycles and planned and installed the bicycle factory of the International Manufacturing Company.

The enterprise was not managed to his liking, and in 1894 he severed his connection with the International Company. In 1895, together with Adolf Arnold, he incorporated Arnold, Schwinn & Company. Again he designed the product and the tools to make it, selected machinery and equipment, engaged the personnel, and set up a bicycle factory.

Now he was free to realize his ambition to produce the finest bicycles, and the success of the enterprise attests to the soundness of his ideas and methods. In his partner, Adolph Arnold, he was very fortunate. Adolf Arnold was at that time president of Arnold Brothers, a meat packing establishment, and president



of the Haymarket Produce Bank. He was a man of unusual business ability and of the highest integrity.

In 1908 Ignaz Schwinn bought the interests of his partner and became the sole owner of Arnold, Schwinn & Company. From that time on he alone guided the destiny of his company, always improving the product, and enlarging the factory from time to time to meet the increasing demand for his Schwinn-Built Bicycles. When World War II burst upon his beloved, adopted country, he laid aside his plans for a second time in a generation, and as in 1917 devoted all of his time, energy and resources to an all-out effort for the production of war materials for our Army, Navy and Air Corps. Arnold, Schwinn & Company was awarded the Army and Navy 'E' for excellence of its war production performance.

As this book goes to press, Ignaz Schwinn, at the age of eighty-five, still comes to his factory every day, an inspiration to all who work for him and know him. Devoted, as always, to his life's work, the production of fine bicycles, to his country and to the city of Chicago of which he is so proud and which he too helped to build.

THE INVENTION *of the bicycle, and more particularly the earlier stages of its development, made perhaps the greatest contributions to our age of mechanization and mechanical transportation.*

Ignaz Schwinn and Arnold, Schwinn & Company played an important part in the perfection of the bicycle. In commemorating the Fiftieth Anniversary of Arnold, Schwinn & Company, it is deemed fitting and proper to demonstrate the importance of the bicycle in the development of mechanization; and, for better understanding, something of the history of the bicycle, its contributions to our way of life and the changes fifty years have wrought.

THE INVENTION AND DEVELOPMENT OF THE BICYCLE

1816–1895

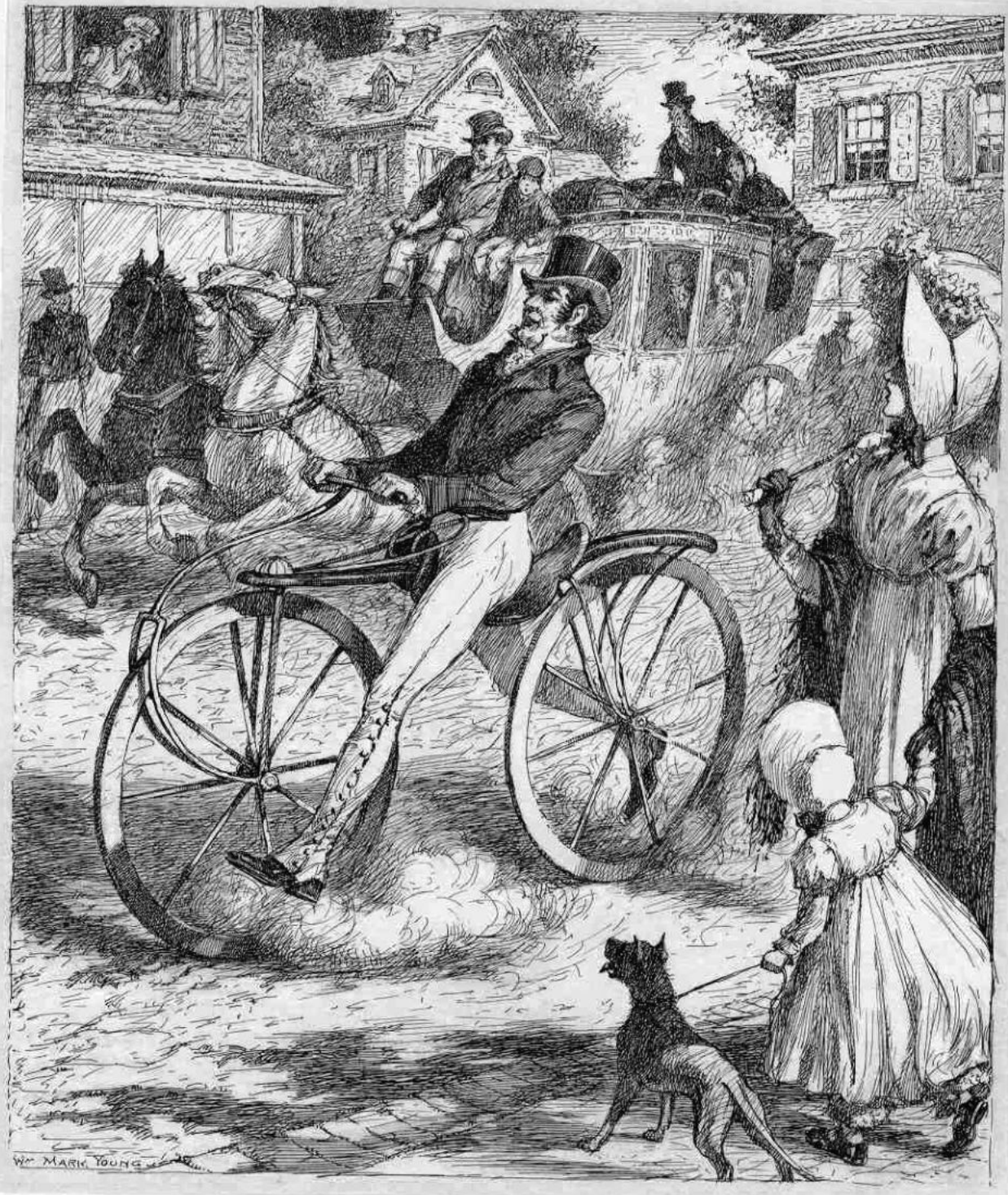
THERE has always been some controversy over where and by whom the first two-wheeled machine, designed to carry and be propelled by a human being, was invented. As the bicycle became popular and important as a means for transportation, several European countries claimed the distinction for one of their citizens. France claims the honor for the Chevalier de Sivrac, who is said to have invented such a machine in about 1769, but it seems to have died aborning and it remained for Baron Drais of Mannheim, Germany, to invent, in about 1816, a really practical machine which aroused a great deal of interest in the principal countries of Europe and particularly in England.

The 'Draisienne' or 'Hobby Horse' invented by Baron Drais was a crude affair, little more than two wheels attached to a wooden bar, which the rider straddled. He propelled himself forward by thrusting his feet backwards against the ground. In the ensuing 78 years, the development of the bicycle brought many changes, and numerous and strange were the ideas and machines which contributed to the evolution; but four distinct types, each embodying the most practical ideas of its time, mark the transition from the crude 'Hobby Horse' of Baron Drais, to the final and fourth type. In the order of their appearance they were known as the 'Draisienne' or 'Hobby Horse', the 'Velocipede' or 'Boneshaker' the 'Ordinary' or 'High Wheel' and 'The Safety'.

About 1840 MacMillan of Scotland fitted cranks to the rear wheel axle of a 'Hobby Horse' and connected them with rods to foot-treadles. Nothing much seems to have come of the idea, but when about 1862, either Lallement, or Michaux of France, or Kech of Germany (all claimed the invention) fitted cranks and foot pedals to the front wheel axle, the second principal type, the 'Velocipede' was born. This machine became very popular in all of the civilized countries of the world and laid the foundation of a great industry. The size of the wheels of the velocipede required the rider to pedal too fast to attain anything in the way of speed, but, as the crude machinery and tools of the day were improved, strong, light wheels of large diameter were developed. The front wheels became larger, and, to keep the machines light, the rear wheels became smaller.

By about 1872 the third type, the 'Ordinary' or 'High Wheel', had reached a high state of development and interest in bicycles and cycling increased.

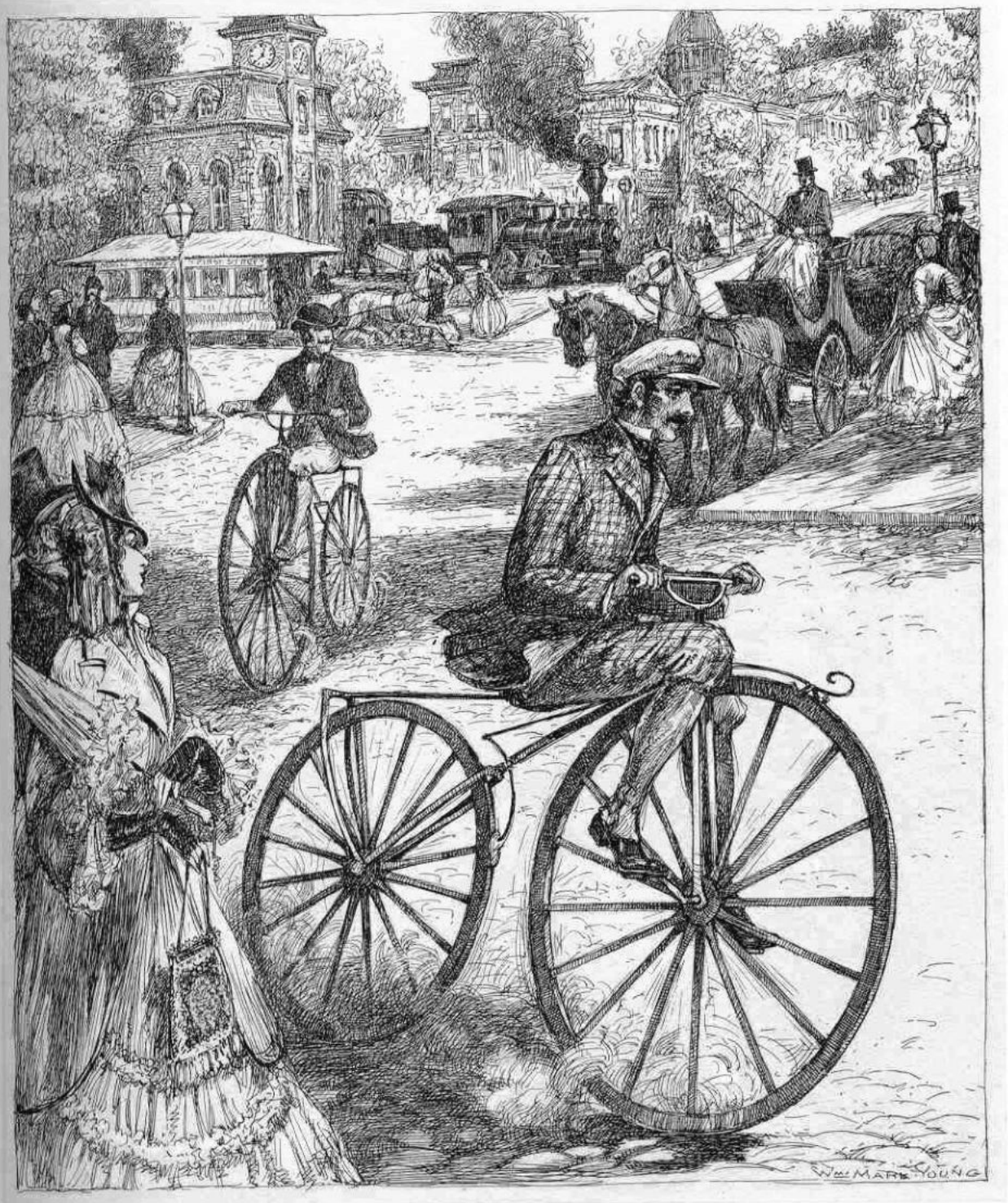
The rider sat almost directly over the very high wheel of the 'Ordinary' and this was not conducive to safety. A fall from that high perch was no laughing matter and because roads were poor and rough, falls were frequent. A number of experiments were made with smaller wheels, having arrangements of chains and gears interposed between the pedal crank axle and the wheel proper, to cause the wheel to turn faster than the pedal crank; but none of these seems to have been successful. About 1884 Starley in England



DRAISIENNE OR HOBBY HORSE

Invented by Baron Drais, of Germany, about 1816

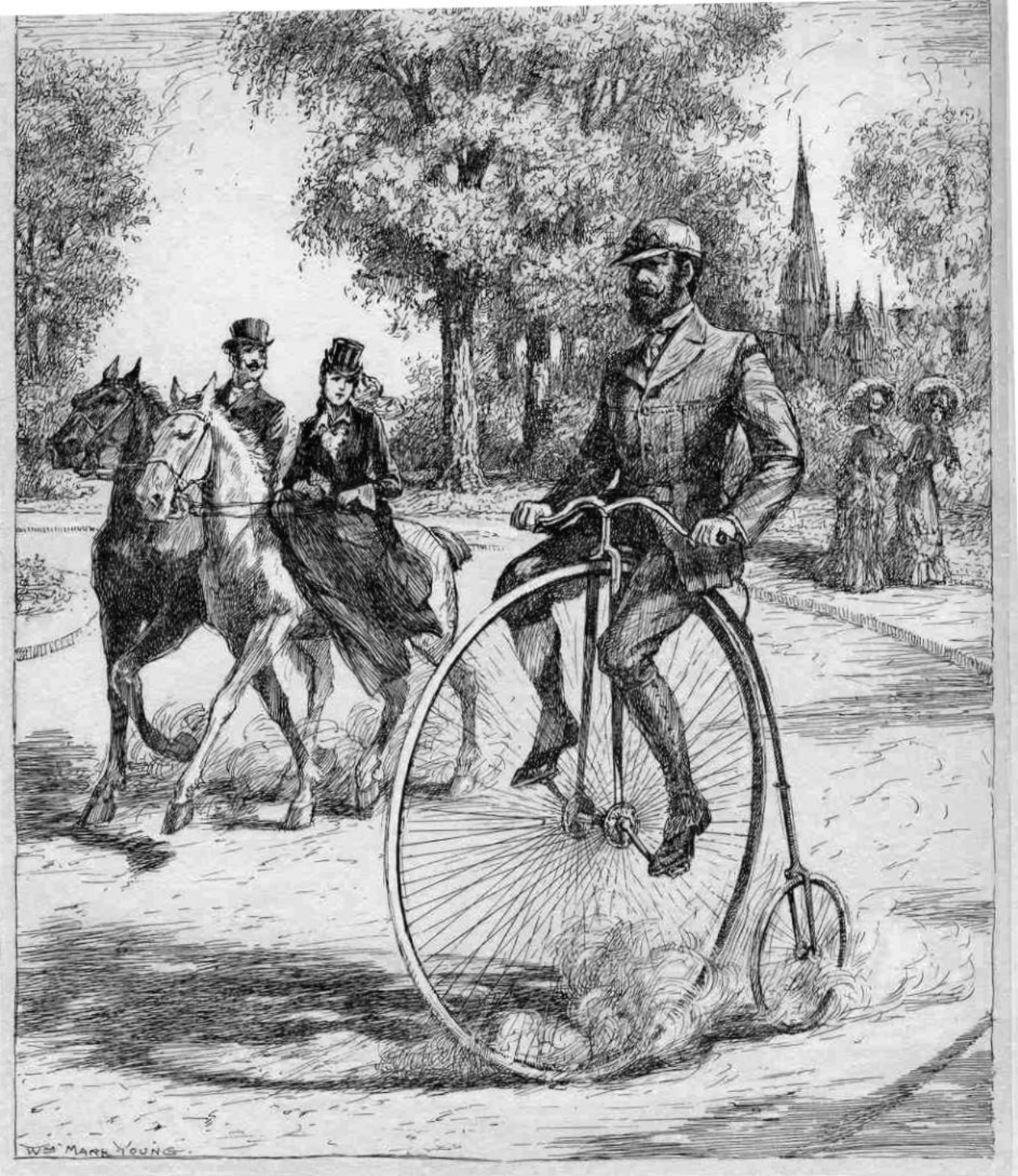
devised a practical machine which, while differing in appearance, was basically the same as our present bicycle. The cranks and pedals were placed between the front and



VELOCIPEDE OR BONESHAKER

Generally attributed to Lallement of Paris, about 1862–64

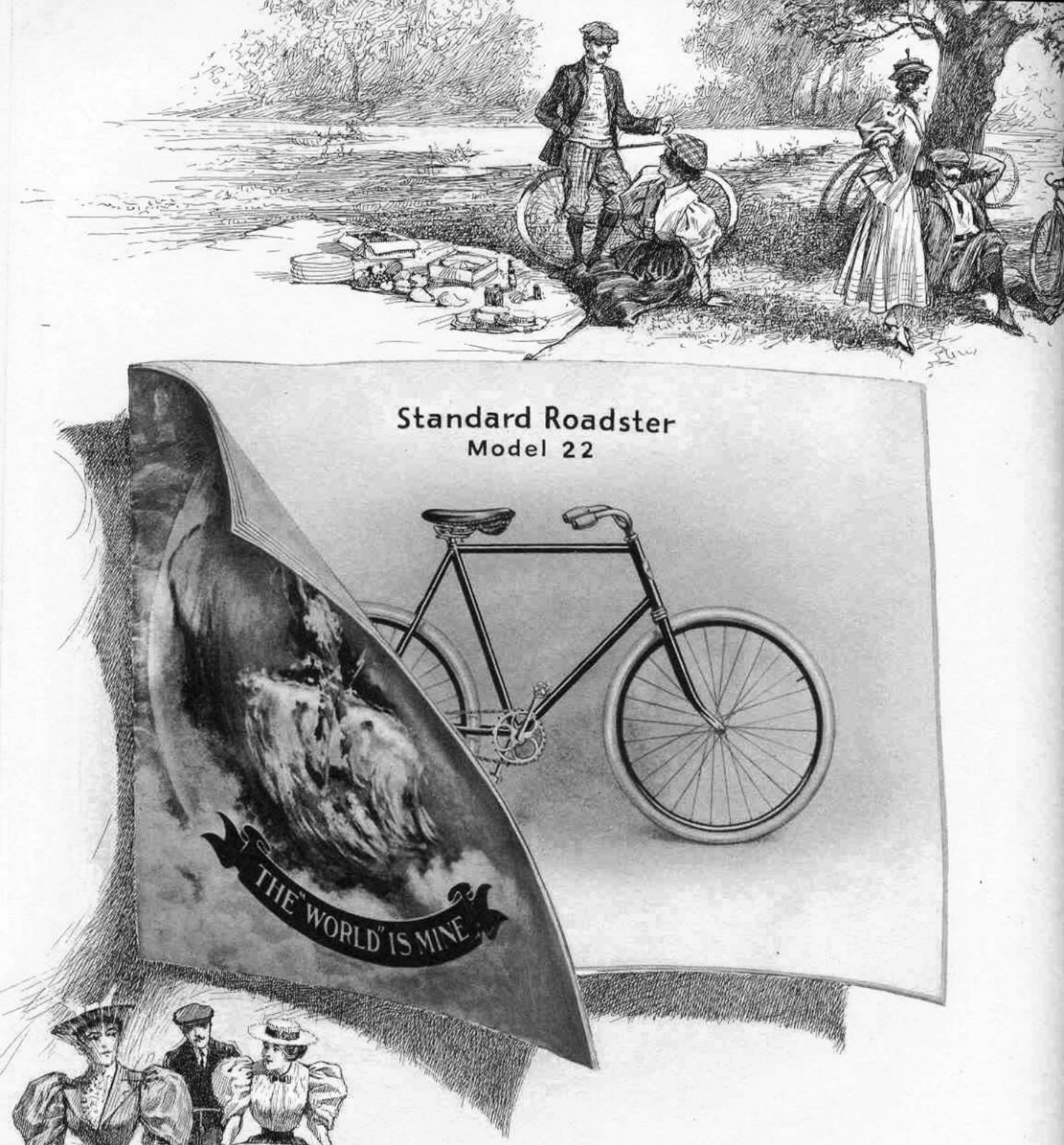
rear wheels on a frame and a chain drive was used to transmit the rider's effort to the rear wheel. The wheels were smaller and more nearly of the same diameter. The front wheel



ORDINARY OR HIGH WHEEL

The first type to embody ball bearings, wire wheels, rubber tires, 1872–1892

was used for steering only, and this, together with the much lower position of the rider, made the machine much safer to ride. These machines were called 'Safety' bicycles, the



THE FIRST CATALOG OF ARNOLD, SCHWINN & COMPANY
ILLUSTRATING A SCHWINN-BUILT BICYCLE OF 1895

By 1895 the bicycle had reached a high state of perfection and, except for minor modifications and improvements, little change has taken place since that time.

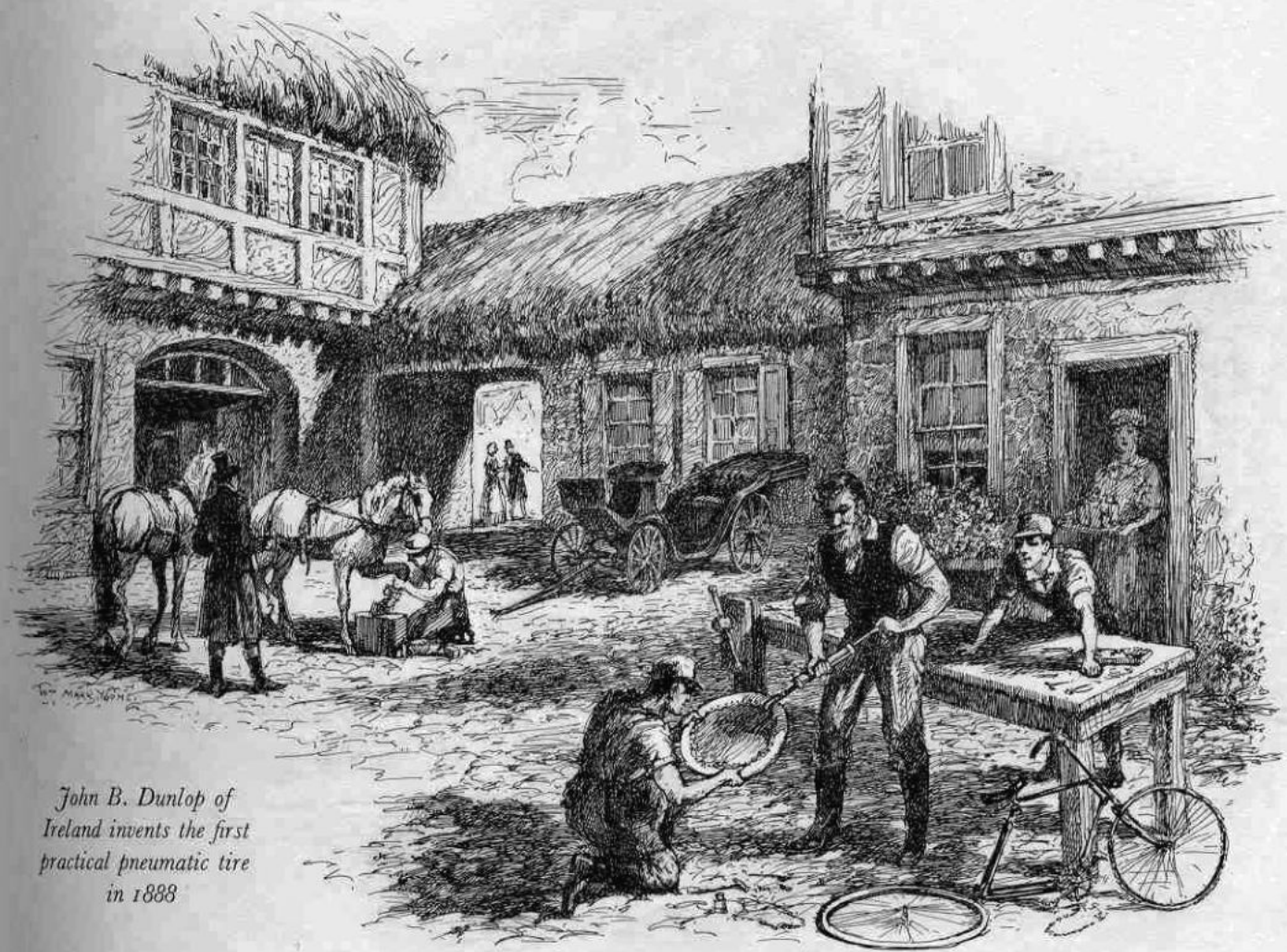
THE BICYCLE AND THE AGE OF MECHANIZATION

TODAY few know how much the development of the bicycle accelerated the coming of the age of mechanization, which has changed our way of life so much and quickened the tempo of our living. Although nearly a century was required to perfect the bicycle, it is significant that the motor car became a dominant factor in our economy in less than twenty years.

In 1816, when Baron Drais invented the first bicycle, civilization had comparatively little in the way of tools and machinery, and what it had was rudimentary. Men who were skilled in the simple mechanical trades of the day were few.

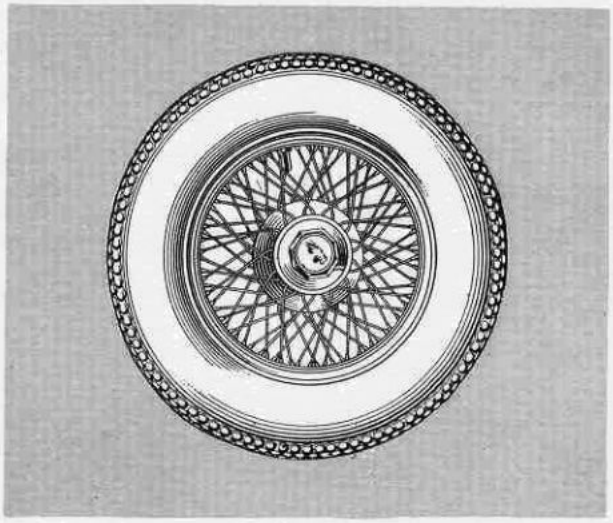
The men who developed the bicycle had to invent and improve tools and machinery and create new materials and devices with which to work. In the 90's, the 'Safety' or modern bicycle caught the public's fancy and took the world by storm. The large volume of bicycle production which resulted gave added impetus to the development of better steels and rubber compounds and further accelerated and stimulated the invention and improvement of machinery, tools, and manufacturing processes.

The invention of devices and the advances in techniques for the processing of metals and rubber for the bicycle contributed much to the development of the many mechanical devices we enjoy today, and laid the founda-

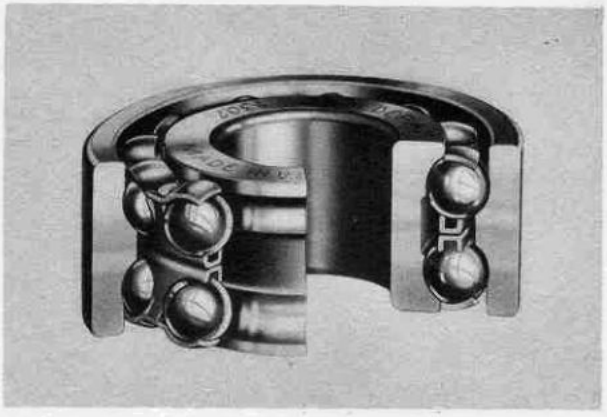


John B. Dunlop of Ireland invents the first practical pneumatic tire in 1888

The cycle industry perfected the wire wheel by 1885



Automobile Wire Wheel



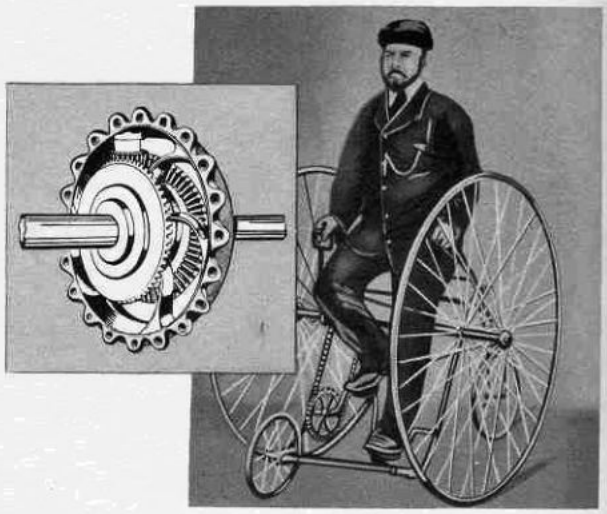
Modern Ball Bearing, a development of the cycle industry

tion for the development of the motor car. The popularity of the bicycle in the 90's brought public clamor for better roads and started the movement for construction of hard roads so essential to the motor car.

The advances brought by the bicycle also played a part in the invention and development of the airplane. The Wright Brothers and Glenn Curtiss were bicycle men.

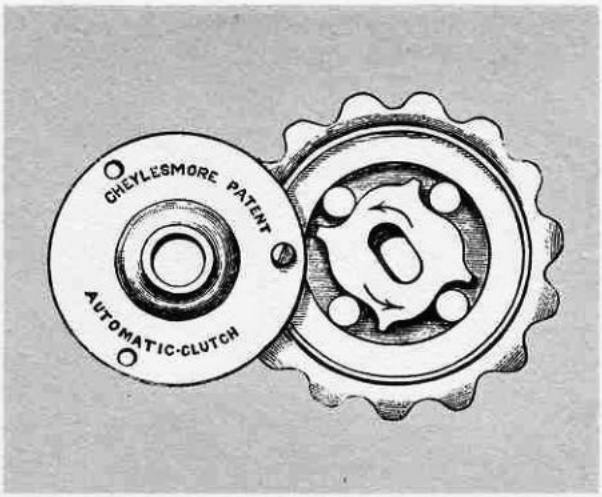
Among the many contributions of the bicycle, perhaps the most important to our economy and to modern motor transportation, was the pneumatic tire. Although there had been previous experiments, it remained for John B. Dunlop of Belfast, Ireland, to invent the first practical pneumatic tire in 1888. In 1892 Palmer perfected the cotton cord tire which, with structural changes and improvements, is the tire now in universal use on our motor cars.

The huge demand for tires by the bicycle industry during the last decade of the 19th Century encouraged the development of new sources for raw rubber and accelerated the perfection of new techniques for improvement in quality. The wire wheel, which played a large part in the early development of the motor car, had been brought to a high state of perfection by the bicycle industry of the 90's.



Differential Gear invented by a cycle maker in 1878

Individually sprung, steerably mounted wheel, the forerunner of modern Knee Action

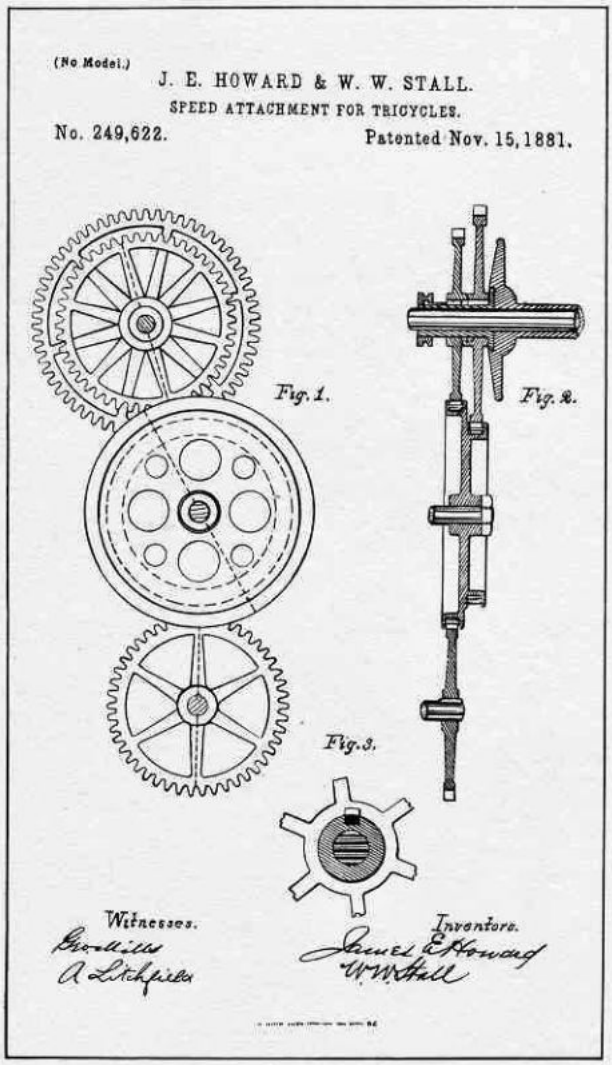


Free-wheeling, a cycle invention of the late 70's

The improvement of the wheel and the introduction of the High Wheel or Ordinary bicycle began the real development of ball and roller bearings. The study of metallurgy was accelerated, and steels, methods, and devices for hardening steels were greatly improved. By 1895 these techniques had reached a high state of practicability and the early motor car designers found a vital element of the motor car ready for use. In 1878 James Starley invented the differential axle which was used on the popular tricycles of the day. Without this invention, your motor car would not be possible.

The poor roads of the 80's inspired bicycle designers to invent and develop the individually sprung wheel. With modifications incidental to adaptation it is the knee-action of your modern motor car.

The first free-wheeling devices appeared on bicycles in the 1870's. This device, with minor modifications, is the free-wheeling incorporated in motor cars in recent years. Another vital contribution to the motor car industry was the variable speed transmission. One of the earliest American patents for cycle transmission appeared in 1881. In the ensuing years there were many improvements and refinements in bicycle gears, and


(No Model.)

J. E. HOWARD & W. W. STALL.

SPEED ATTACHMENT FOR TRICYCLES.

No. 249,622. Patented Nov. 15, 1881.

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses.

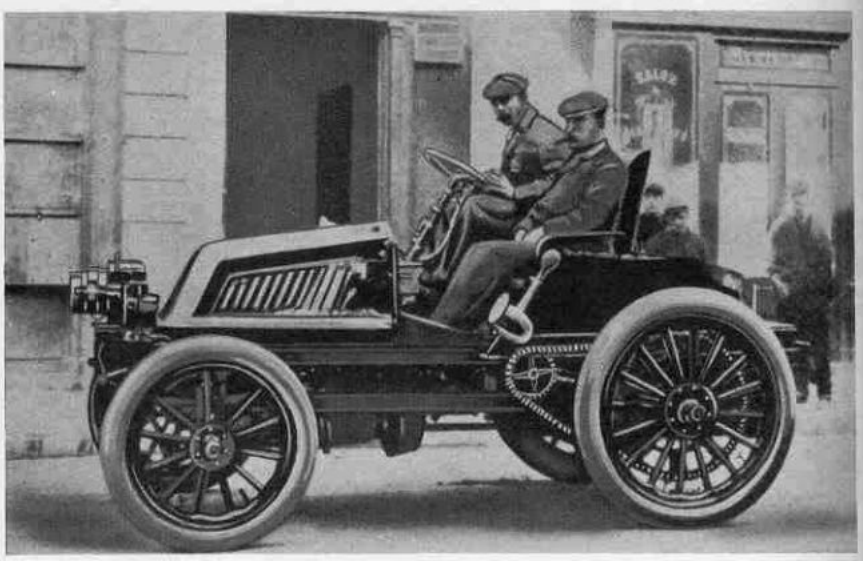
Inventors.

The modern motorcar transmission derives from a cycle development of the early 80's

these laid the foundation for the device you know as the gears you shift on your car.

When the 'Safety' bicycle was invented, only very crude chains were available. The bicycle engineers of the 80's designed and developed fine, low-friction-loss chains and the technique for manufacturing them. Here the early motor car designers found another necessary element ready for application.

In the 90's bicycle designers developed and adapted to the bicycle another device which is a basic element of the motor car—the Shaft Drive. When the early automobile designers found the chain drive impractical for the constantly increasing speed of the motor cars, they adopted the shaft drive, combined it with the tricycle differential gear, and adapted it to the motor car. The combination has since about 1905 been the standard drive of the motor car.

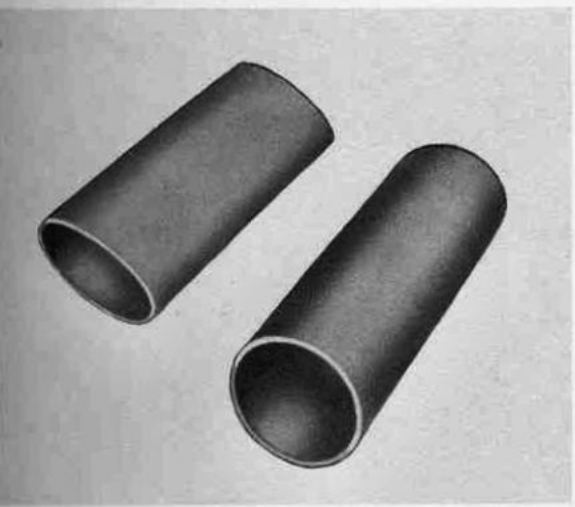


Early motor cars used the chain drive which had been developed to a high state of practicability by the bicycle industry of the early 90's

1895 Bicycle Shaft Drive, later adapted to the motor car

As early as 1902, Bowden, of England, had given the world the famous Bowden cable brake control. In this device the steel cable operates in a flexible, coiled wire casing and it is effective even though laid around corners. Modifications of this device are found on modern motor cars and it has played an important part in the control devices of the airplane.

Bicycles in the early days were heavy and cumbersome, but about 1872 designers were able to reduce the weight by the introduction of the steel tube. By 1885 the bicycle industry's persistent clamor for stronger and lighter tubing, together with a growing volume of business accelerated the development and perfection of seamless drawn tubing. Steel tubing is an important factor in motor cars and airplanes.

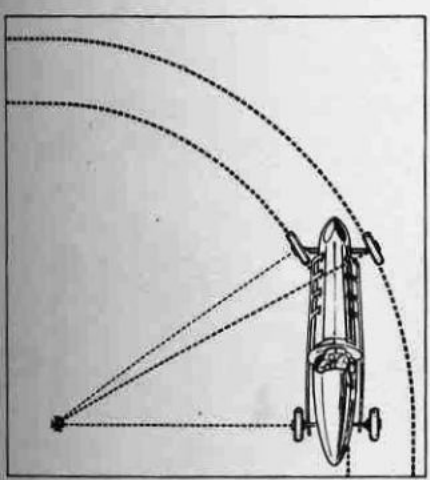


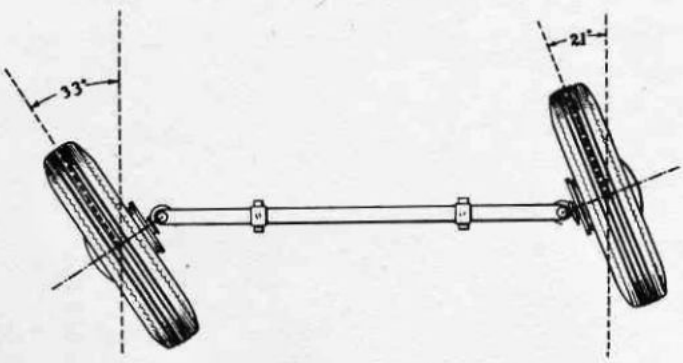
The bicycle industry brought about the early development of light, strong steel tubing

Cable control as developed for use on cycle brakes

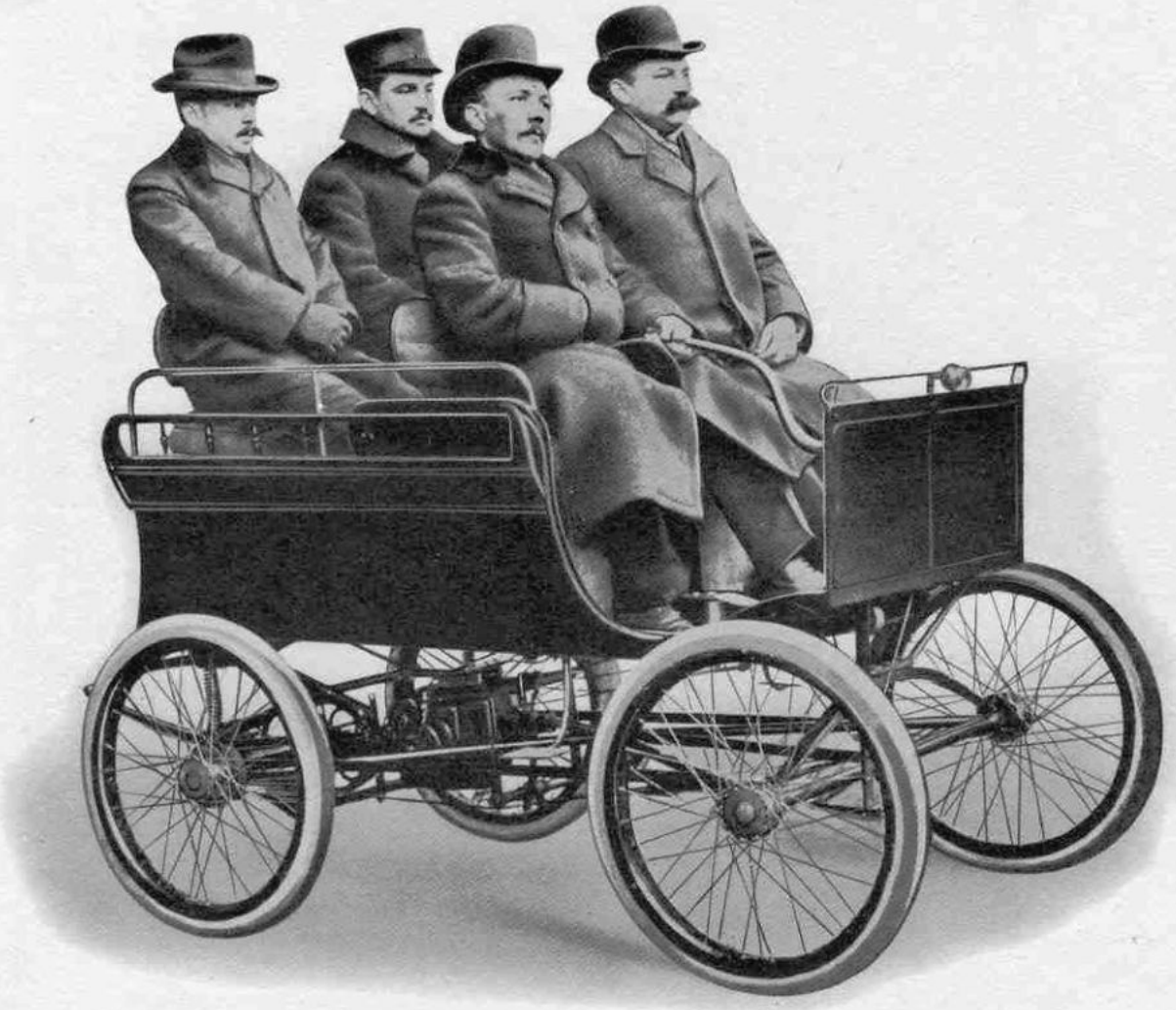
A very important contribution to the development of the automobile is attributed to Sterling Elliott, cycle manufacturer and inventor of the addressing machine, who perfected the differential method of steering and applied it to his pedal driven quadricycle in 1887. Although this method was devised for use on front steering tricycles—in a more or less crude way—as early as 1876, it was Elliott who worked out the correct angles at which the wheels must turn in relation to each other in order to prevent skidding.

These are but a few of the devices which the bicycle industry contributed to the development of the motor car and the airplane. Equally important are the many improvements it brought to metals, machine tools, production methods and engineering techniques. It was the men of the bicycle industry, and the training and facilities which the bicycle industry brought them, who designed and built our first motor cars and launched this giant among industries. Charles E. Duryea, Alexander Winton, Elwood Haynes, the Apperson Brothers, Col. Albert A. Pope, Thomas B. Jeffrey, H. A. Lozier, George N. Pierce, E. C. Stearns, and others, bicycle men all, built our first motor cars and laid the foundation of our great automobile industry.





The inner wheel of a car turning a corner describes an arc of smaller radius than the outer wheel. Therefore, in turning, the inner wheel must turn more sharply than the outer wheel

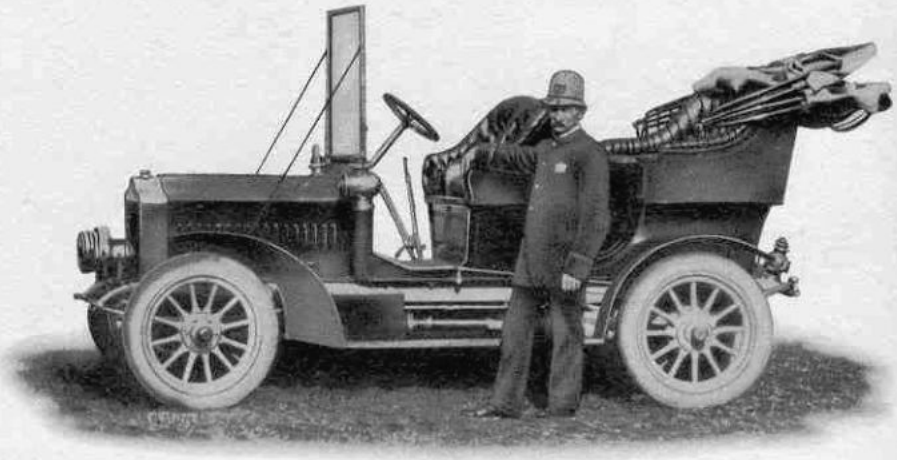


Ignaz Schwinn and his partner, Adolph Arnold in front seat of his first car

EXPERIMENTAL AUTOMOBILES of the 90's

THE automobile illustrated above was designed by Ignaz Schwinn and built by Arnold, Schwinn & Company in 1896. Ignaz Schwinn subsequently designed and built four motor cars. The last one, below, was completed in 1905 and boasted such advanced features as a four cylinder, water cooled, four cycle engine with force-feed lubrication, cone clutch, sliding gear transmission and shaft drive, and was still a modern car in 1910.

The automobile has changed the lives of the American people and brought profound

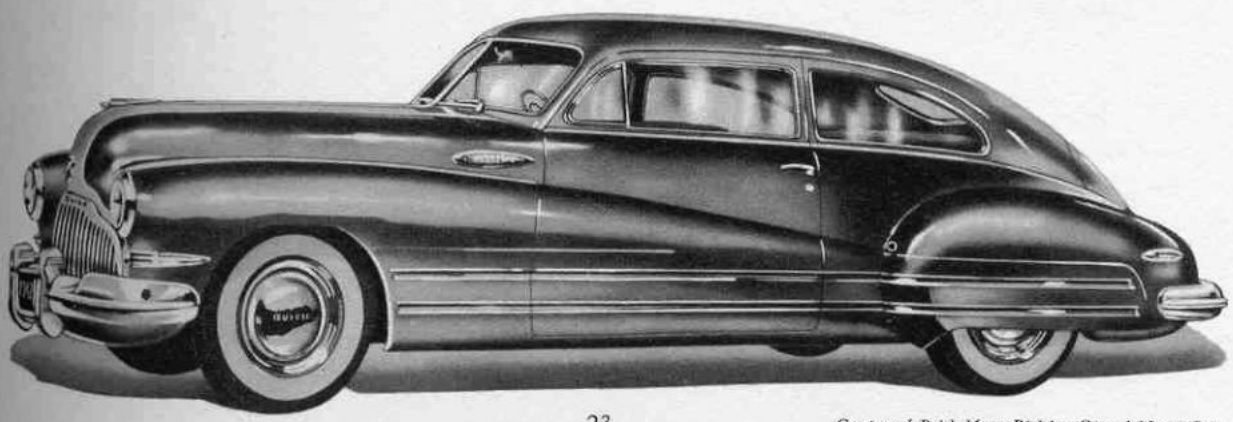


Four cylinder car built by Ignaz Schwinn in 1905

Illustrating
Fifty Years of Progress
in the Automotive Industry

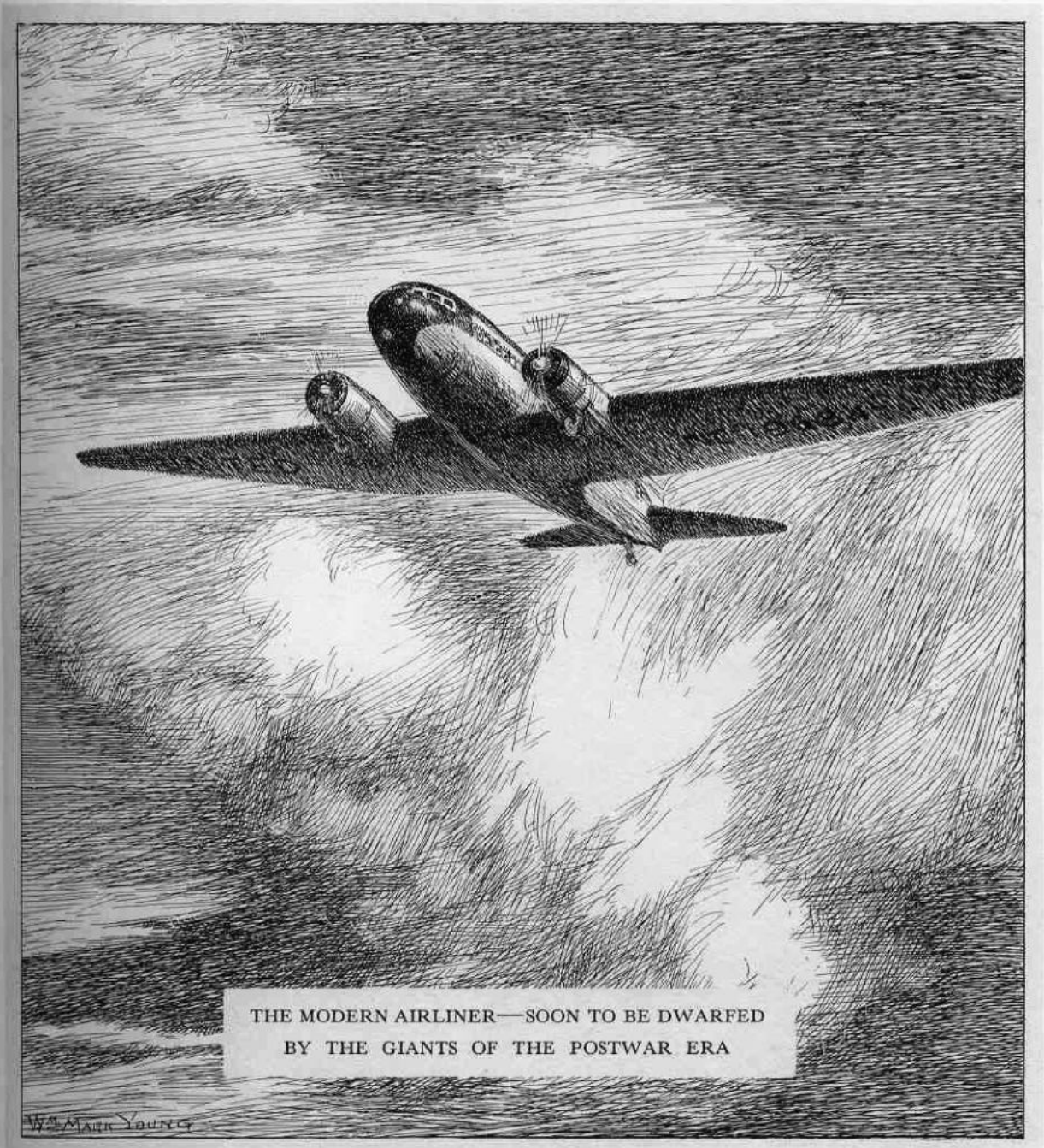
. . . AND THE MOTOR CAR OF TODAY

changes in the economy of the leading nations of the world. Today millions of people in the United States depend upon the production and servicing of the motor car for their employment. Not only the motor car and the airplane, but the development of nearly every device which makes our time the age of mechanization, was accelerated and benefited by the pioneering of the bicycle industry (1816–1900).



Courtesy of Buick Motor Division, General Motors Corp.

At 1127 West Third Street, in Dayton, Ohio, two brothers, Wilbur and Orville Wright conducted a bicycle business. They made fine, custom-built bicycles to order, and sold and repaired standard makes. They devoted much of their spare time to experimenting with flying machines, and in December, 1903 they made the first successful flight in a heavier-than-air machine. From their bicycle experience they knew the strength of light tube structures and with their unusual knowledge of aerodynamics, they gave the world the flying machine. Glenn Curtiss, pioneer bicycle and motorcycle manufacturer, made many contributions to the airplane and to airplane engine design.



THE MODERN AIRLINER—SOON TO BE DWARFED BY THE GIANTS OF THE POSTWAR ERA

It's a far cry from the bicycle to the modern airliners, but the fact remains that the bicycle industry was the father of the motor car and the grandfather of aviation. The bicycle was the first machine for the transportation of an individual free from time table restrictions, and the limitations and bother of the horse. It caught the public fancy, and by 1895 its popularity knew no bounds. That the bicycle designers invented and developed many of the mechanical devices vital to the motor car and important to the airplane, is irrefutable. It schooled the minds of designers and engineers. It trained craftsmen and mechanics and contributed much to the development and improvement of materials.

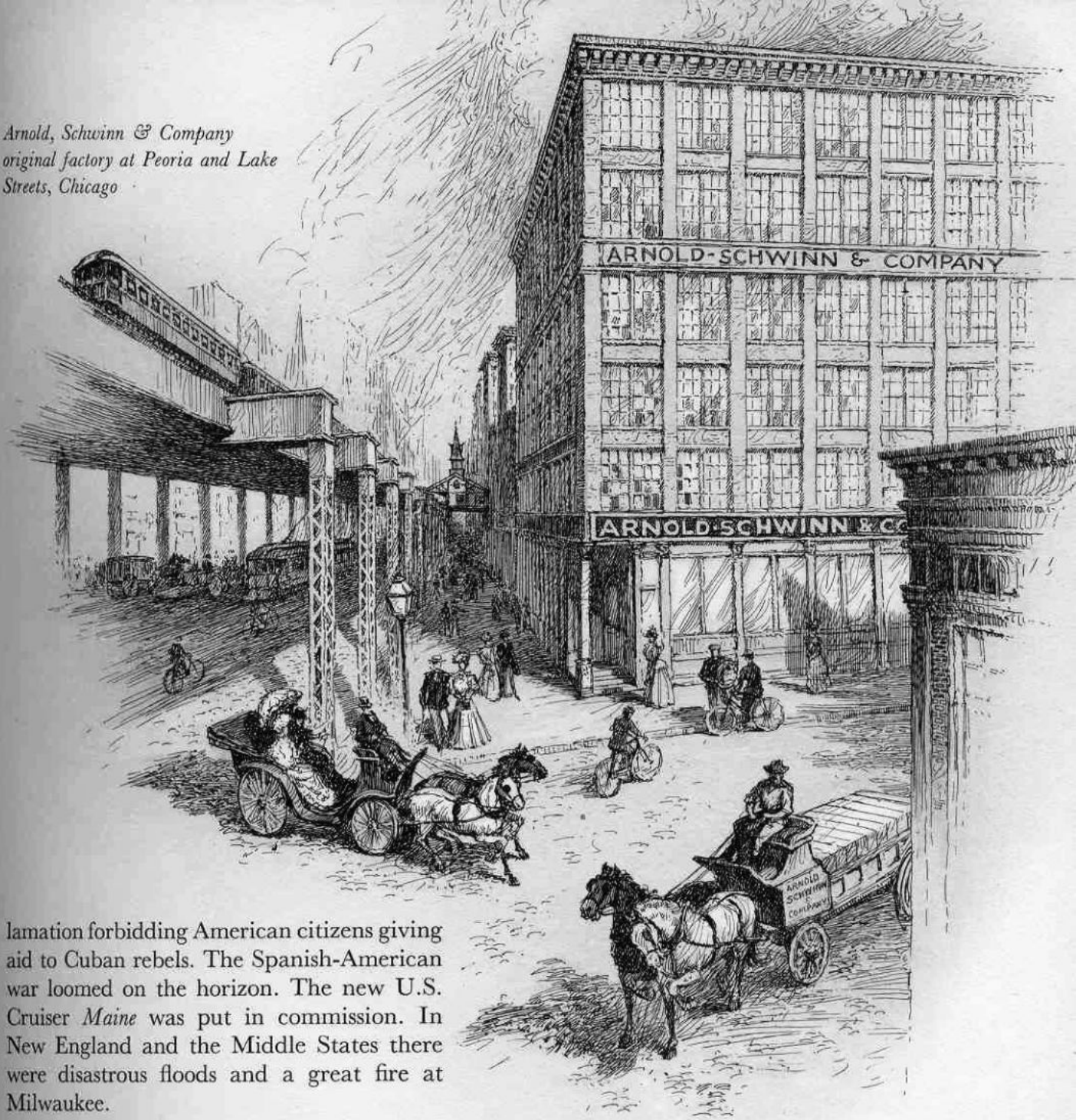
1895

Officers and Directors, 1895

ARNOLD, SCHWINN & COMPANY

1895 was a troubled year. The country was slowly coming out of the severe financial panic of the preceding two years. Hard times had brought much unrest and labor trouble. There were 5900 strikes in 28,000 establishments and 955,250 employees out. Eugene V. Debs and other officers of the American Railway Union were sentenced to jail for strike disturbances. The Illinois Supreme Court declared the so-called eight-hour sweat-shop law unconstitutional. The Michigan militia was ordered to the scene of strike riots at Ishpeming, and there were race riots in the Illinois coal fields.

There was much sympathy for the Cuban insurgents. President Cleveland issued a proc-



Arnold, Schwinn & Company original factory at Peoria and Lake Streets, Chicago

lamation forbidding American citizens giving aid to Cuban rebels. The Spanish-American war loomed on the horizon. The new U.S. Cruiser *Maine* was put in commission. In New England and the Middle States there were disastrous floods and a great fire at Milwaukee.

But, there was also much that was encouraging and interesting. The first hydro-electric power was delivered from Niagara Falls to the Pittsburgh Reduction Company—one mile distant. The Canada Soo Canal opened and the new Harlem Ship Canal divided Manhattan from Bronx. The steamer *Portia* sailed to relieve the Peary Arctic Expedition. Railroads were competing with each other in faster transportation. A train on the New York Central made the New York to East Buffalo run at an average speed of 63.66 miles per hour and a train on the Lake Shore Railroad broke the world record by running from Chicago to Buffalo—510 miles in 8 hours 1 minute and 47 seconds. The Chicago *Herald* promoted the first automobile road race ever run in America, from Chicago to Libertyville, Illinois.

In spite of the Panic and its aftermath of depression, the bicycle business of the country was unusually prosperous. In 1895 there

Ignaz Schwinn's Office, 1895

were 300 bicycle factories in the United States and perhaps an equal number of small assembling shops. The bicycle industry was accounted one of the largest in the country, if not *the* largest at that time.

The bicycle business was attractive even during these times. A boom in bicycles was on. The popularity of the bicycle was growing by leaps and bounds. The demand was tremendous. Purchasers waited months for their cycles, and ladies' bicycles were becoming very popular. In Chicago, Ignaz Schwinn and his partner, Adolph Arnold, incorporated Arnold, Schwinn & Company.

The corporate charter granted Ignaz Schwinn and Adolph Arnold by the State of Illinois in 1895 sets forth that the company was formed to manufacture, buy, sell and deal in bicycles, sulkies, wagons, carriages, vehicles, and parts for the same. The motor car was in its early, experimental stages at that time and generally considered an impractical novelty. Perhaps the word 'vehicles' was included to cover motor cars, without disclosing the fact that one of the incorporators was interested in anything so impractical. A year later Ignaz Schwinn built an electrically powered motor car, one of the very first built in Chicago.

Ignaz Schwinn and Adolph Arnold had been busy since the fall of 1894 making plans to build bicycles. Into these bicycles was to go a wealth of experience in cycle designing and building gained in Europe and America. Space had been rented in a building on the northwest corner of Lake and Peoria Streets,

Chicago; machinery had been installed, tools, jigs, dies and fixtures provided, and personnel engaged. A good product and a boom in bicycles brought immediate success. Four years later the great cycle boom collapsed. Just what brought about the collapse is hard to determine—no one thing, surely. Continued hard times aggravated by the disrupting effect of the Spanish-American war were a factor, also the rapid expansion of urban and interurban public transportation, a growing interest in the motor car, which, while still a 'rich man's toy' had captured the public fancy and given the people a new interest. The over-expansion and over-production of the cycle industry played a very large part. The demand for bicycles dropped sharply; cycle factories all over the country failed and closed their doors, a few that had been carefully and conservatively managed survived the crash—among them Arnold, Schwinn & Company.

At the turn of the century in a badly depressed market for bicycles, Arnold, Schwinn & Company bought the March-Davis Bicycle Company at a receiver's sale, and moved Arnold, Schwinn & Company to the factory building this company had occupied. This building was located far out in the western limits of the City of Chicago. A year later, a new factory was built on an adjacent site, and there Arnold, Schwinn & Company has remained to this day. The factory has grown with the years and the present plant is built around and over the original building erected in 1900. It houses the very best in machinery, equipment and tools for the building of fine bicycles, the latest in precision laboratory instruments and a cycle engineering department second to none in the world. The character of its product, and the leadership of Arnold, Schwinn & Company in design and quality, reflect the excellence of the factory and its personnel.

Ignaz Schwinn, Mrs. Schwinn and son Frank on a Schwinn-Built family tandem of 1896

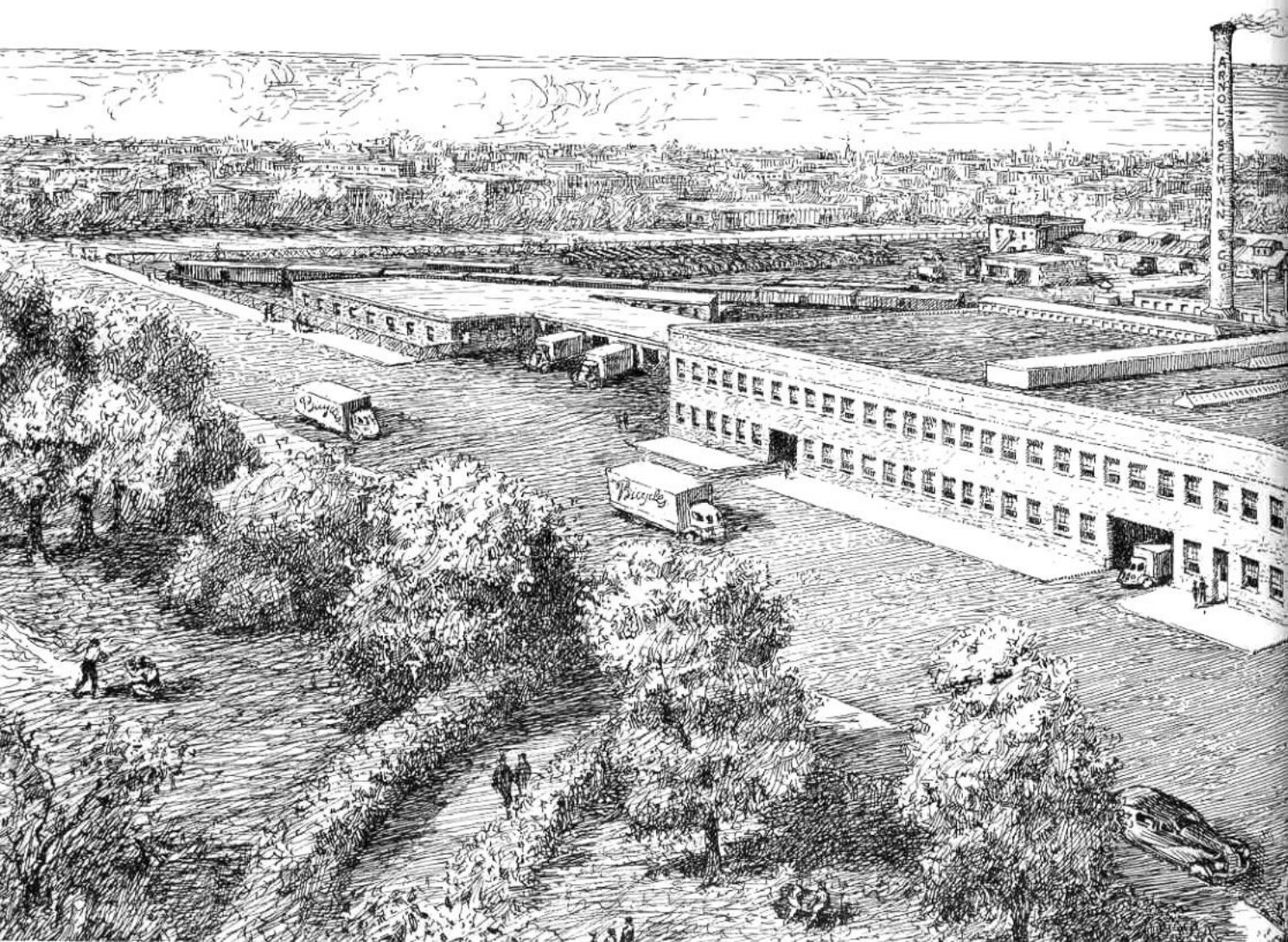
OFFICERS AND DIRECTORS, AND PLANT, 1945

Ignaz Schwinn, President

Three Generations of the Same Family Actively Engaged in Management

Frank W. Schwinn, Vice-President

IN THE 90's a modest number of workers made Schwinn Bicycles. Before World War II the number had increased to a total of more than 1200 at peak production. Many more will be required in the considerably expanded plant and production facilities to supply the demand in the postwar era.

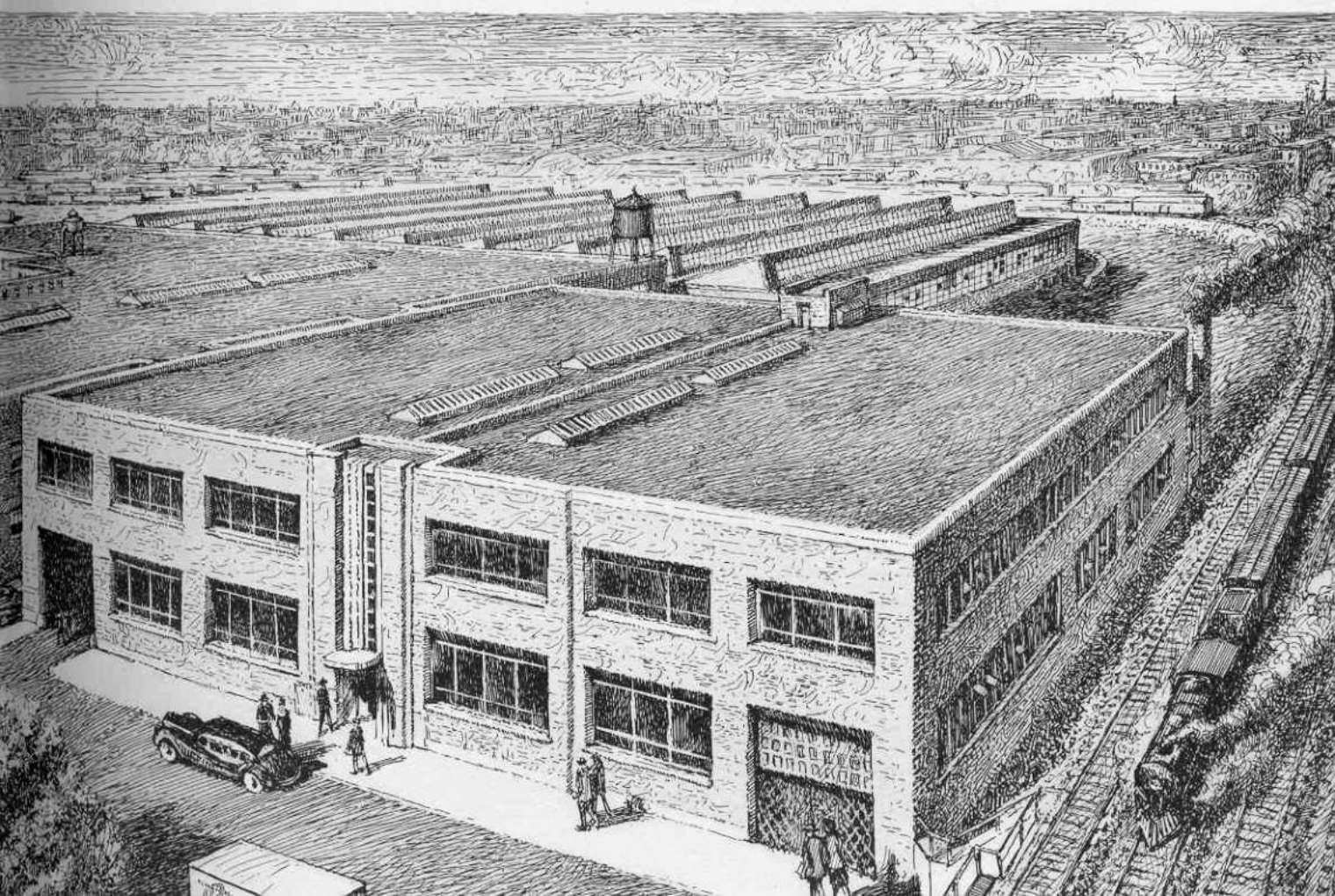


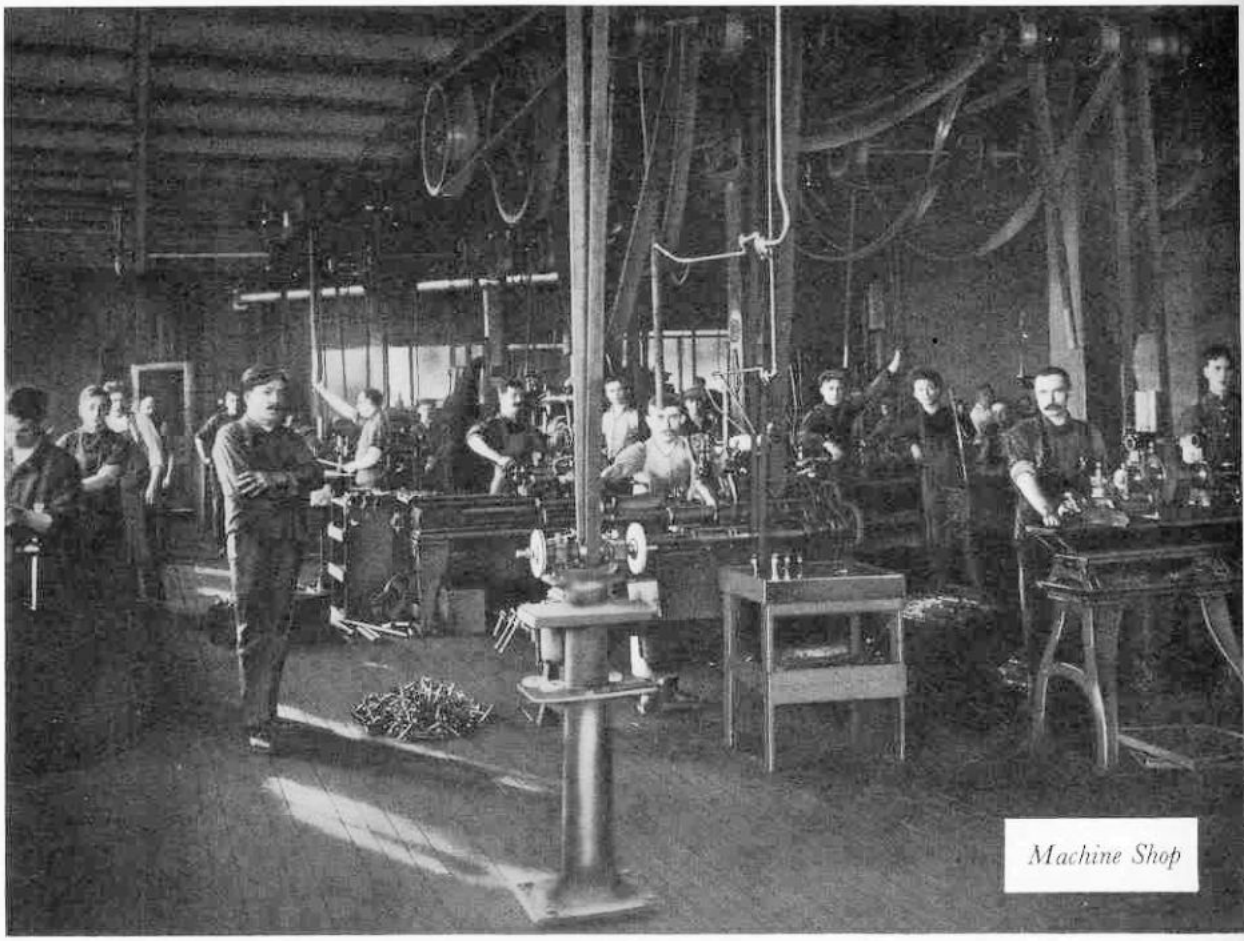
Frank V. Schwinn
Vice-President and Treasurer

William Stoeffhaas
Secretary

Edward R. Schwinn
Vice-President

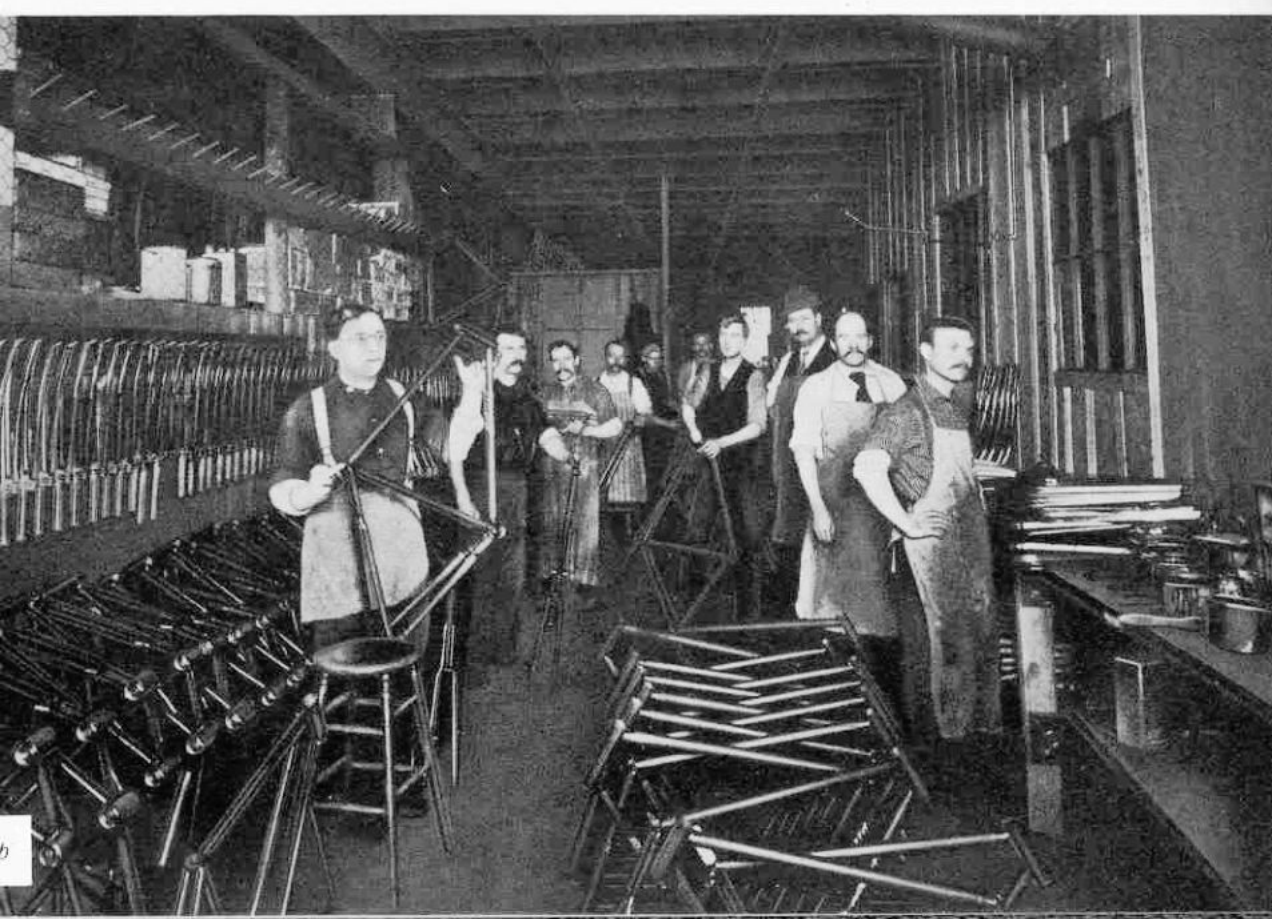
The years have brought many changes in machinery and tools, and always Arnold, Schwinn & Company has pioneered new methods and processes. Mass production methods, conveyors and other devices to implement them have replaced much of the laborious work of earlier years, resulting always in better bicycles at little if any increase in cost to the consumer. The pictures of some of the departments in the original factory of Arnold, Schwinn & Company, compared with those of similar departments in the modern plant, illustrate changes in production methods in the past fifty years.





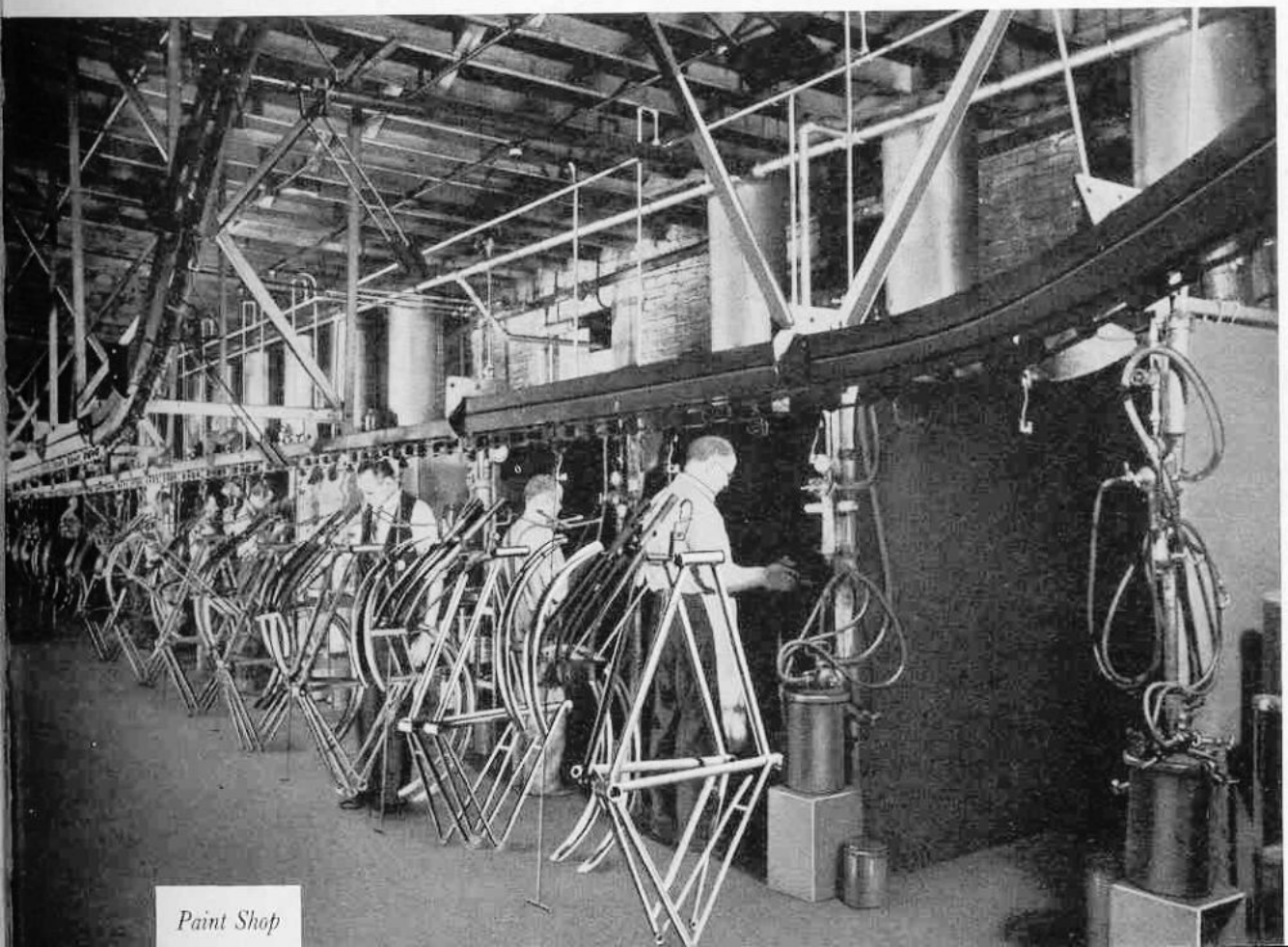
Machine Shop

THE FACTORY · 1895

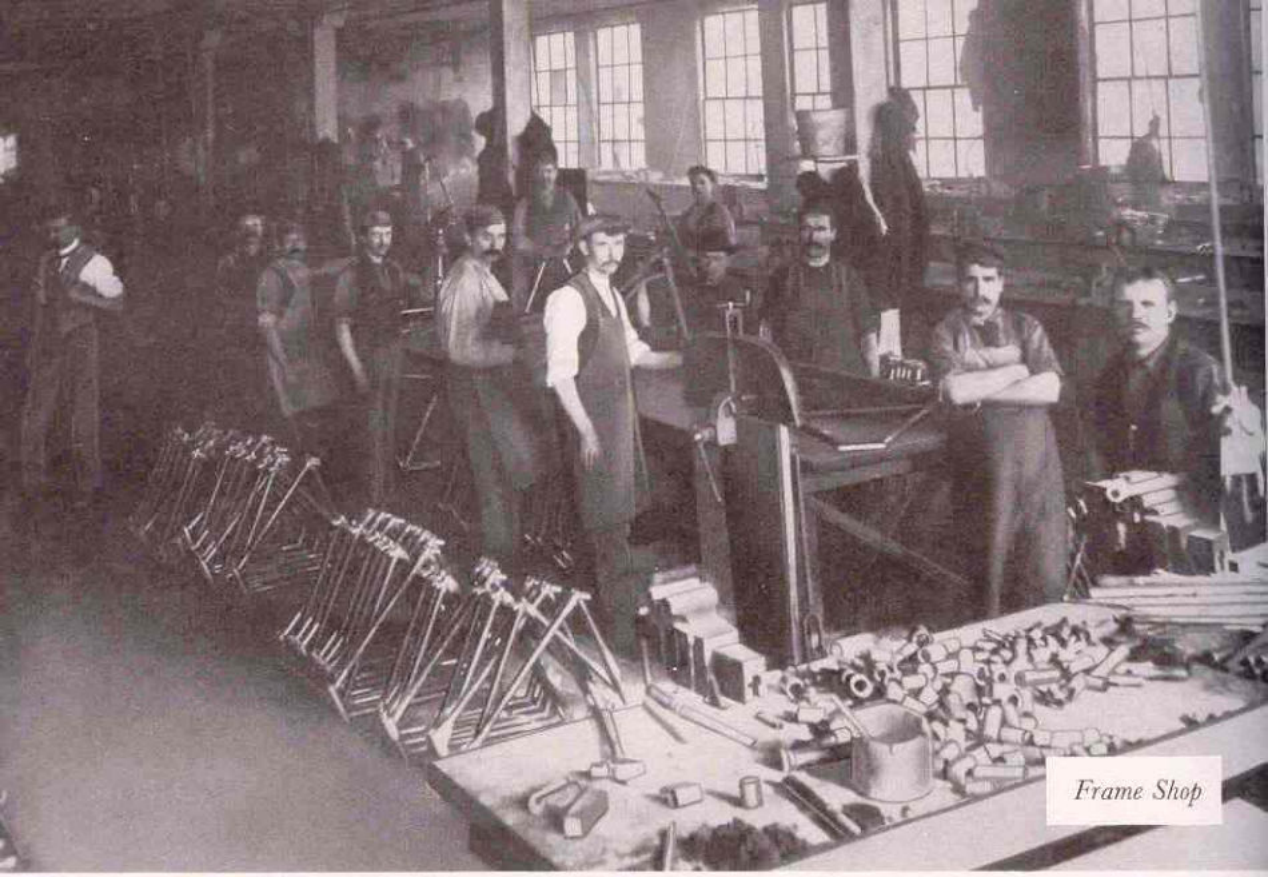


Machine Shop

THE FACTORY · 1945



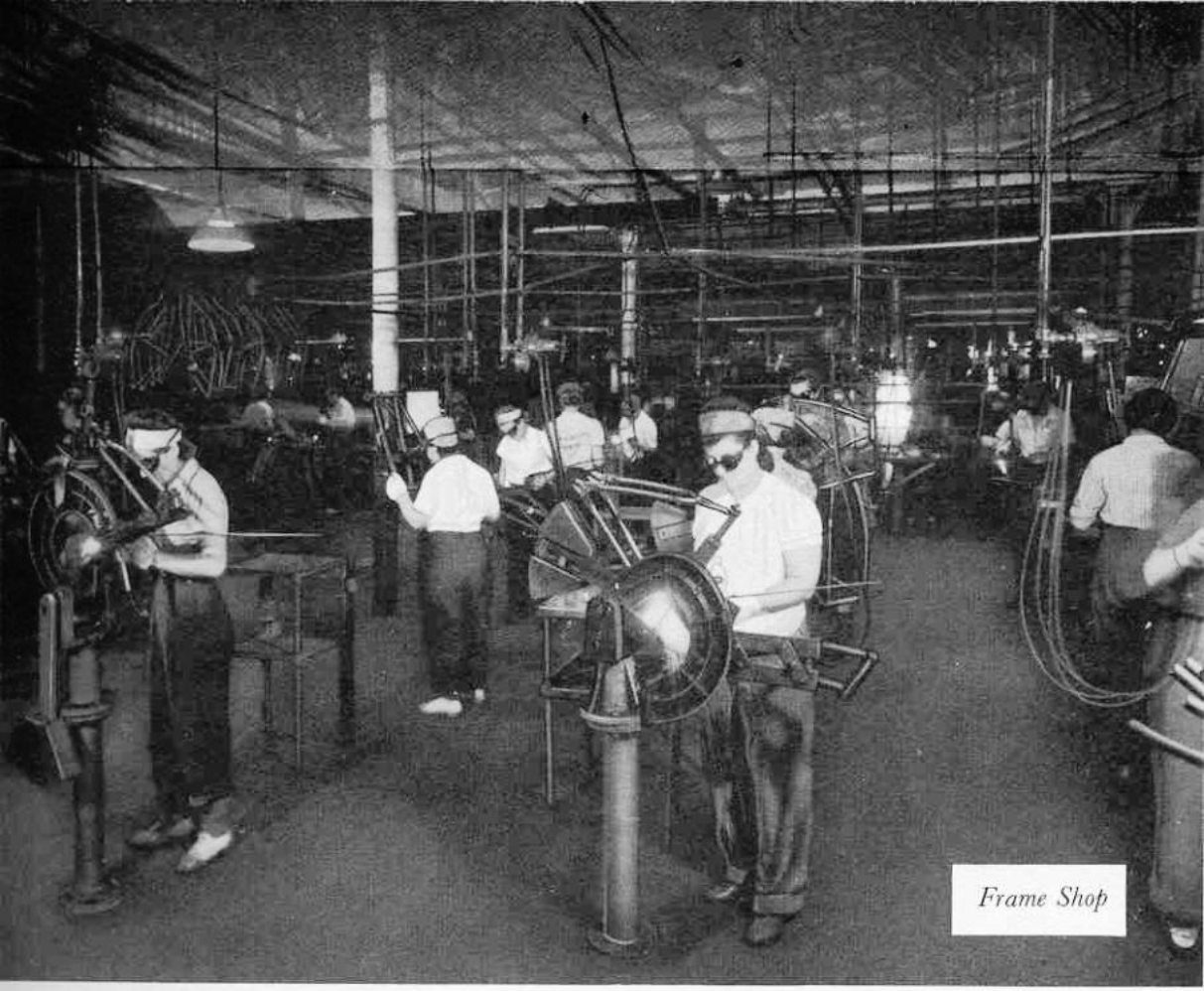
Paint Shop



Frame Shop

THE FACTORY · 1895

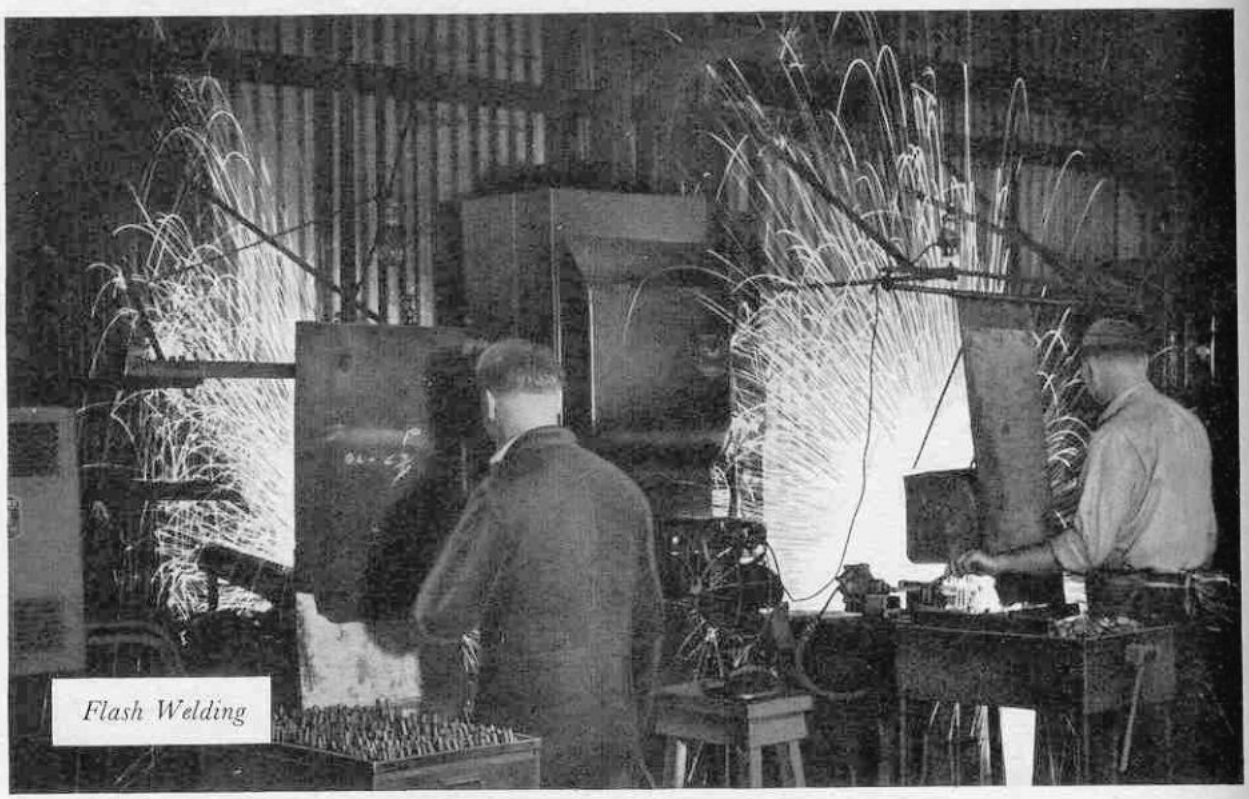
Assembly Shop



Frame Shop

THE FACTORY · 1945

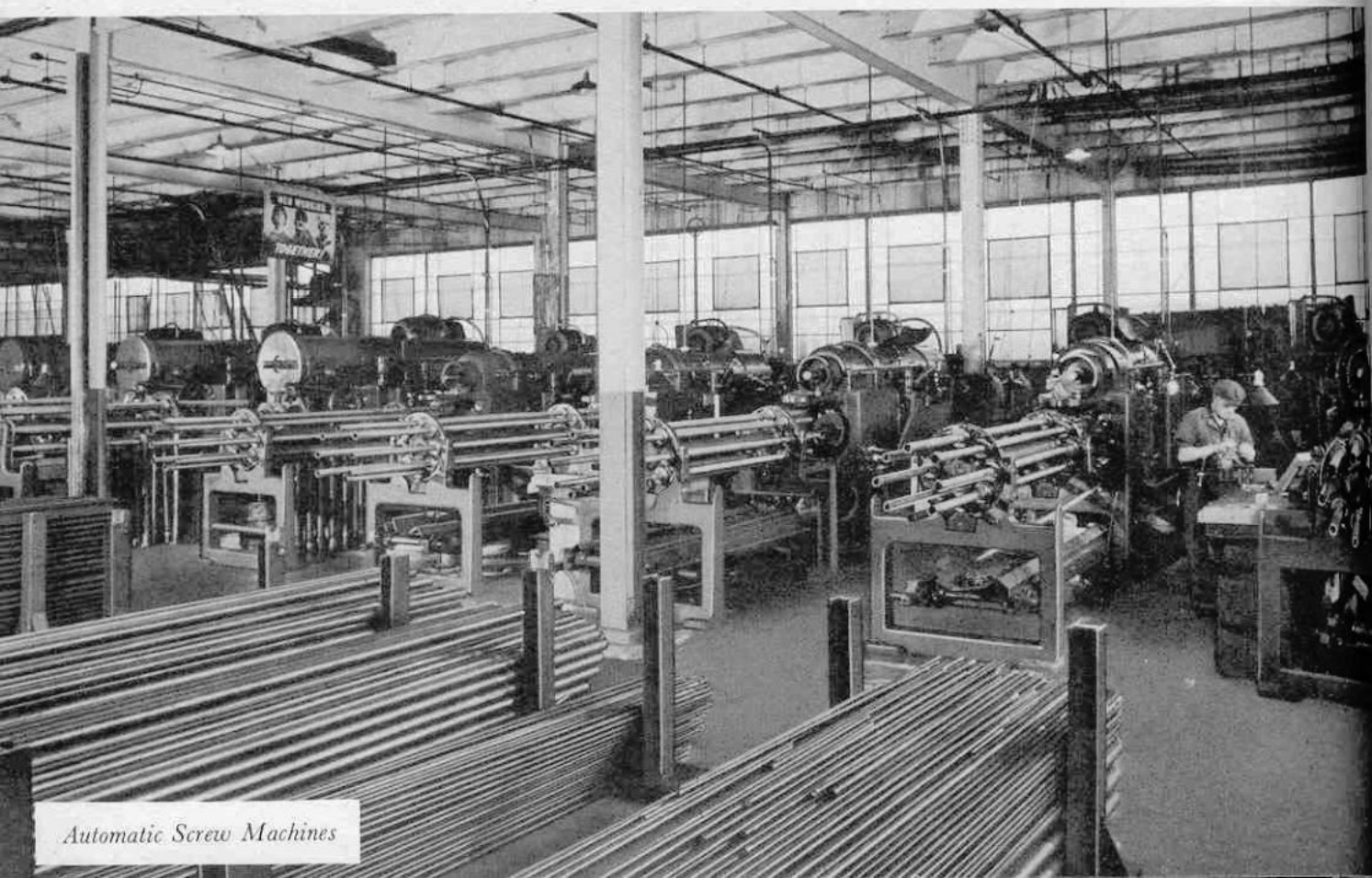
Assembly Shop



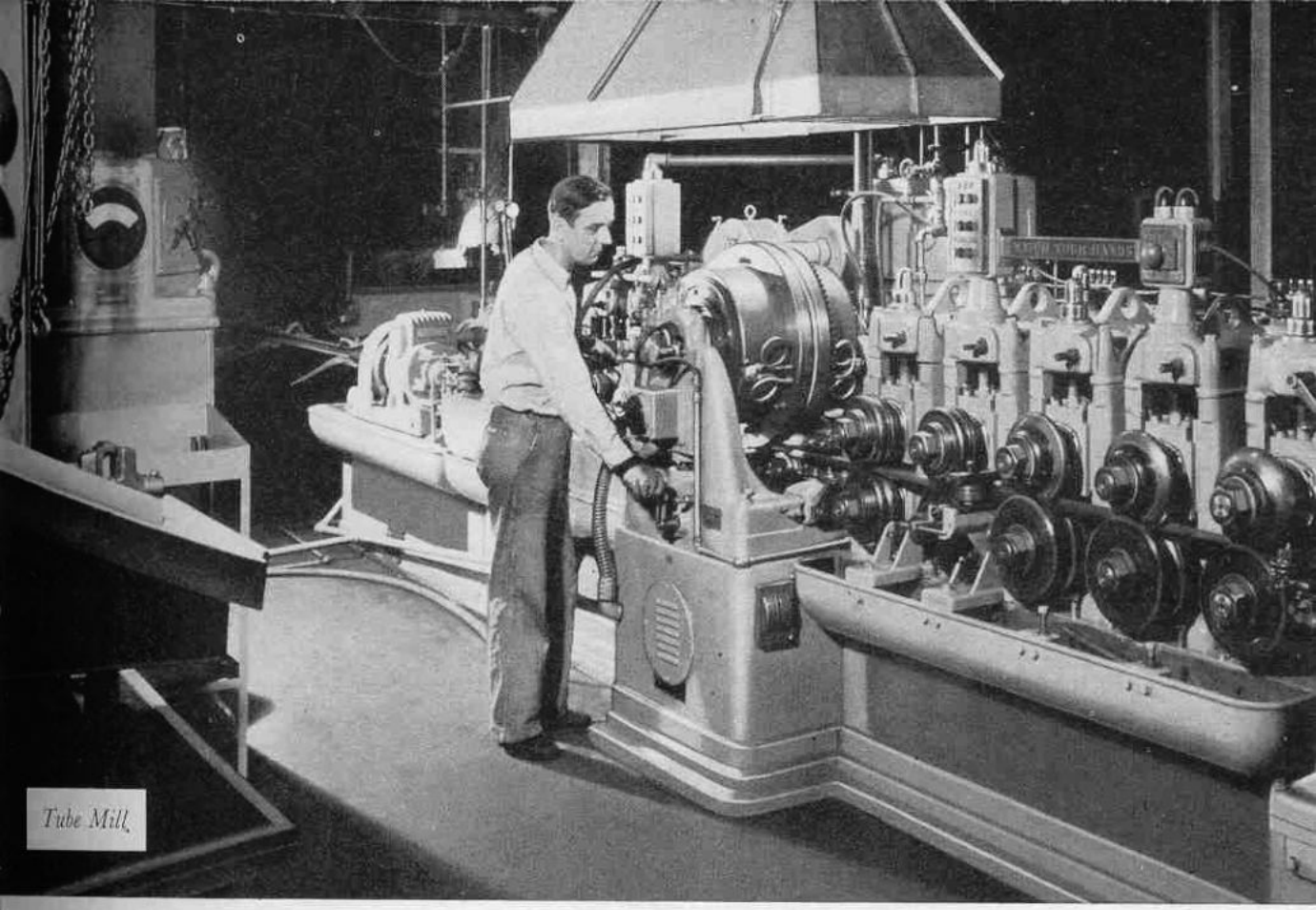
Flash Welding

SOME ADDITIONAL VIEWS OF

Illustrating the very latest in equipment



Automatic Screw Machines

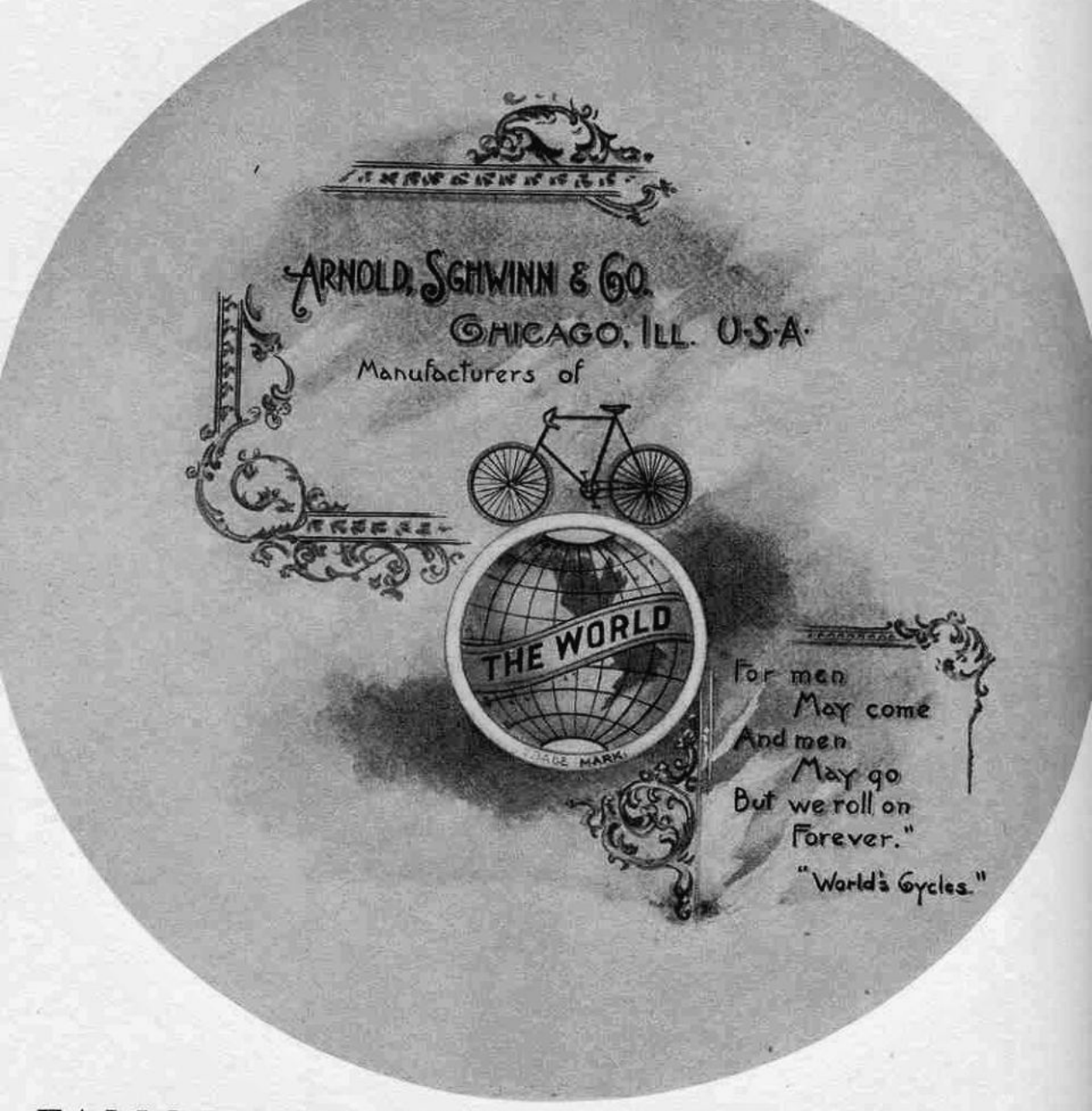


Tube Mill

THE MODERN SCHWINN FACTORY

for making bicycles and their parts

Heat Treating

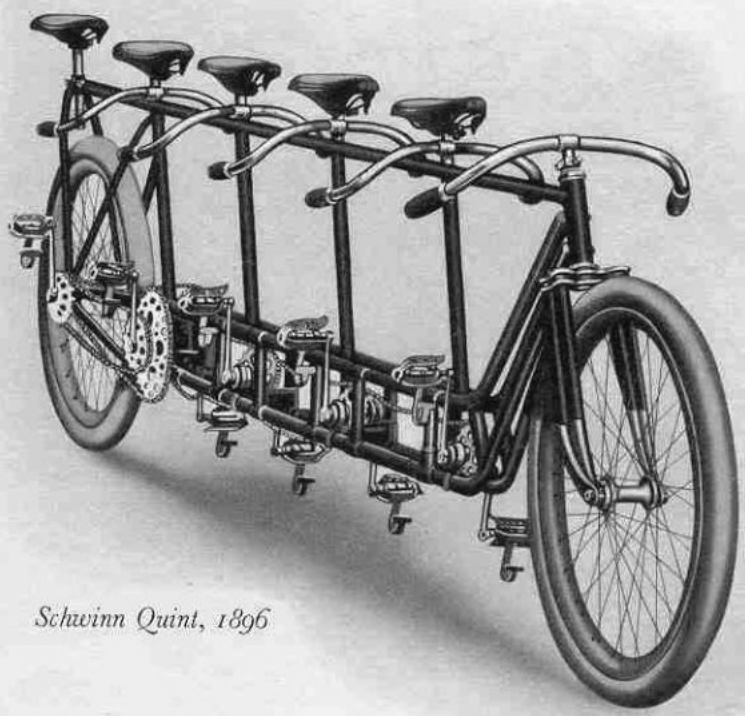


FAMOUS SCHWINN-BUILT BICYCLES OF THE 90's AND TODAY

THE POEM on this old catalog page is surely prophetic of bicycles and cycling. Since 1933 there has been a steady increase in the demand for bicycles and their popularity continues to grow. The bicycle will always remain man's cheapest and simplest means of individual, mechanical transportation, and its value for health and recreation in a world of altogether too much sedentary living is beginning to be better understood and appreciated. The production of bicycles in the United States in 1941 equalled, if not exceeded, the peak production of the boom years of the 90's.

Michigan Avenue, 1895

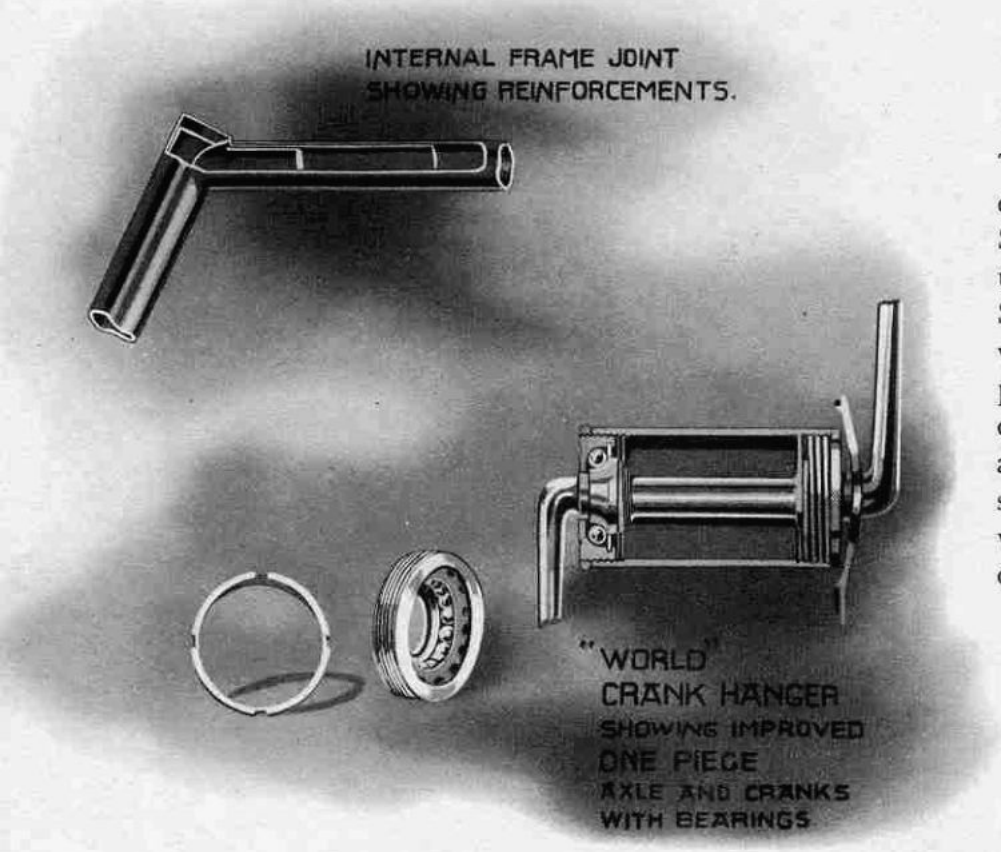
Comparisons, particularly when they illustrate the changes and developments of fifty years, are always interesting. Schwinn-Built Bicycles were leaders in quality in the 90's—they are America's finest bicycles today. The Bicycles and parts illustrated on the pages immediately following, are fine, light, adult models, which had but little attention in this country from the turn of the century until they were introduced by Arnold, Schwinn & Company in 1937.



Schwinn Quint, 1896

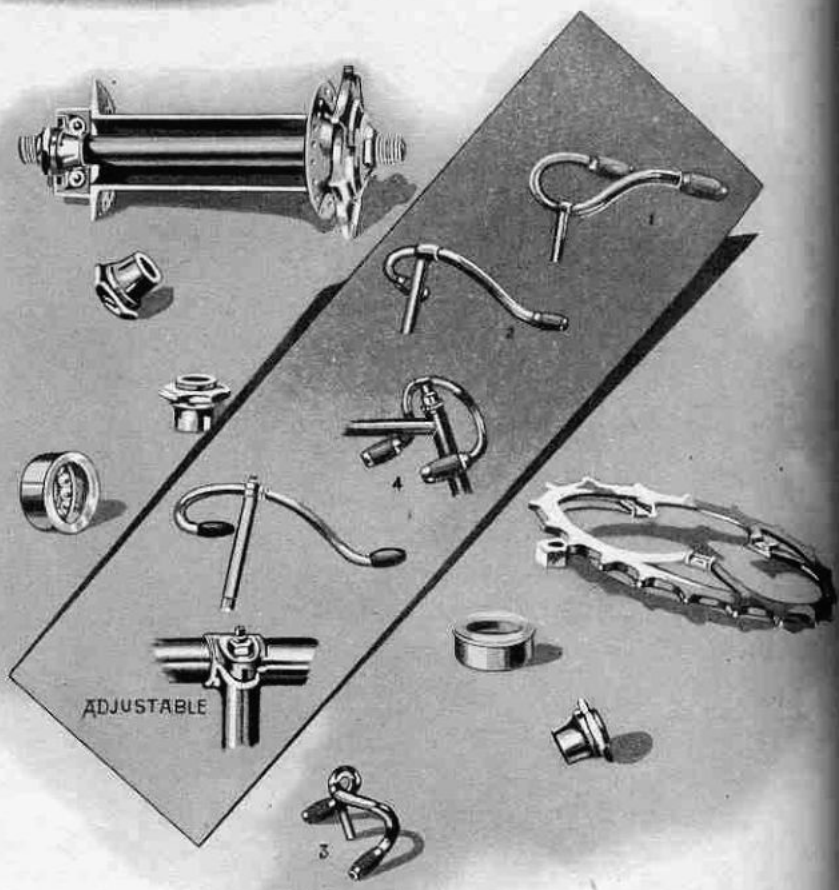
FAMOUS SCHWINN-BUILT CYCLE PARTS OF THE 90's

Reprint of a page appearing in the Arnold, Schwinn & Company catalog published in 1896

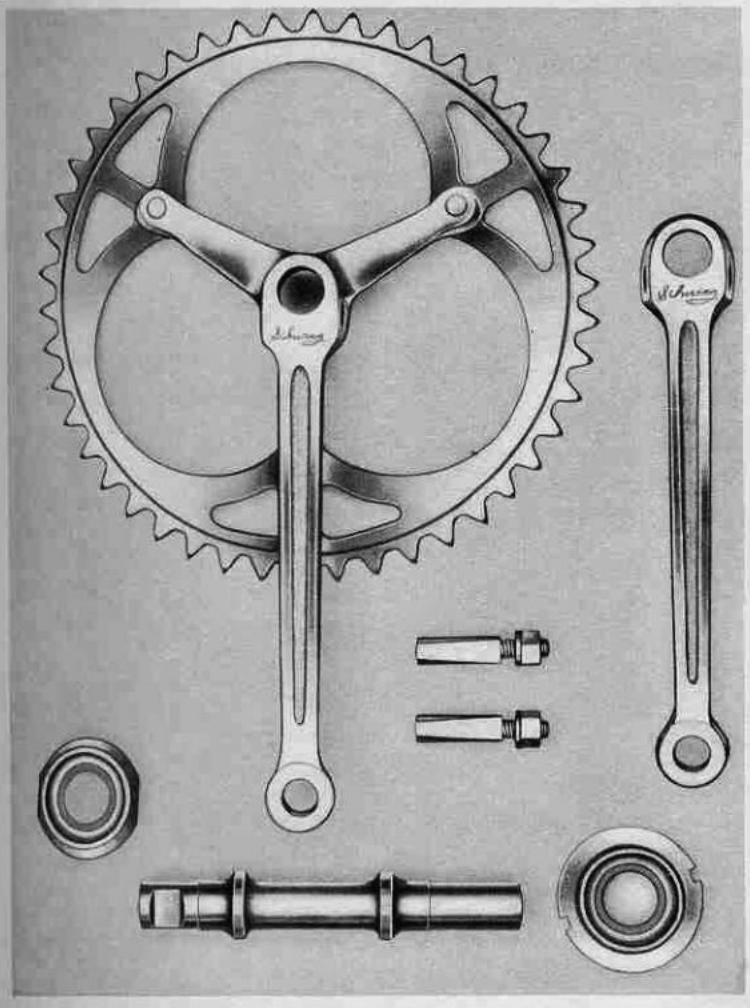


These parts, designed and produced in the original Arnold, Schwinn & Company plant, under the supervision of Ignaz Schwinn, were a decided advance in cycle engineering practice fifty years ago. Note disc adjusting hanger bearings and one-piece cranks with spider type detachable chain wheel—a forecast of things to come!

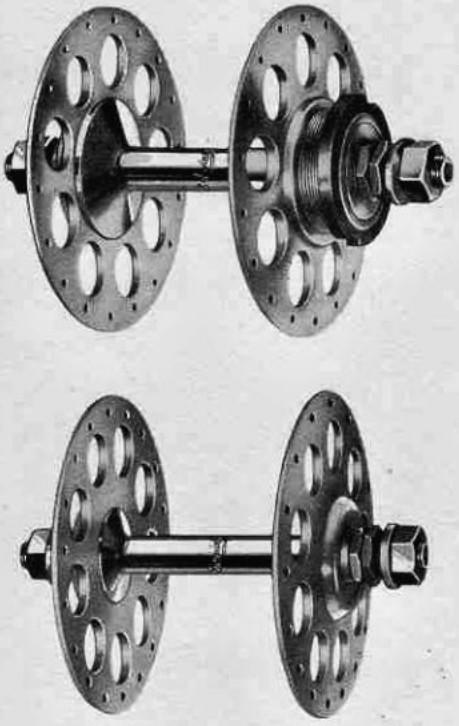
Design of bearing cones and cups was very similar to best modern practice. Note also adjustable handlebar and binder bolt handlebar stem. 'World' Bicycles were famous in the 90's for their mechanical excellence and high standard of quality.



FAMOUS SCHWINN-BUILT 'PARAMOUNT' CYCLE PARTS OF TODAY

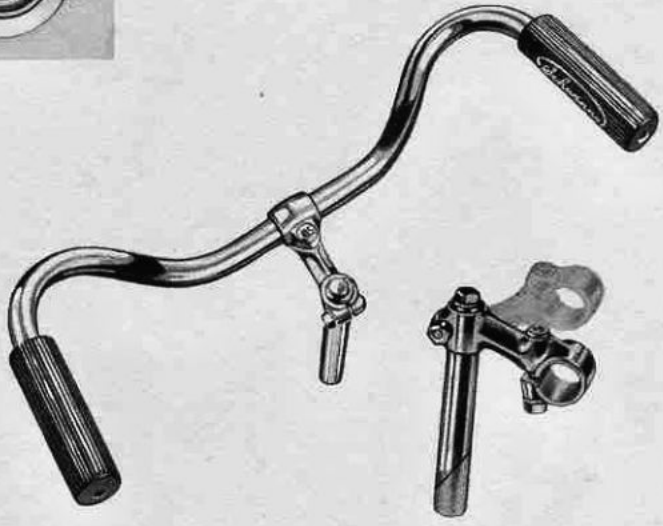


Schwinn 'Paramount' Crank Set three-piece cottered type forged from chrome molybdenum steel



Schwinn 'Paramount' Hubs

Schwinn 'Paramount' Head Fittings



Schwinn dural drop forged double-adjustable Stem and Tourist Handlebar

Arnold, Schwinn & Company is today the only manufacturer of fine, precision-built cycle parts in America producing two distinct sets, the 'Paramount' and the 'Superior' series.

1895

FAMOUS SCHWINN-BUILT BICYCLES

Schwinn-Built 'World' Roadster

These fine bicycles ranged in price from $100 to $125, and in weight from 19 to 24 lbs.

Schwinn-Built 'World' Ladies' Model

OF YESTERDAY AND TODAY

1945

Schwinn-Built 'Paramount' Sports-Tourist

These bicycles rank with the world's finest; made from the best materials procurable and to precision tolerances as close as 2/10,000 of an inch.

Schwinn-Built 'Paramount' Ladies' Sports-Tourist

1895 · FAMOUS SCHWINN-BUILT BICYCLES

Schwinn-Built 'World' Racer

One of the famous racing machines of the 90's
weighed nineteen pounds complete and sold for $125.

Schwinn-Built Tandem of the 90's

This Schwinn-Built tandem weighed 40 lbs. and sold for $140.00.

1945

Schwinn-Built 'Paramount' Racer

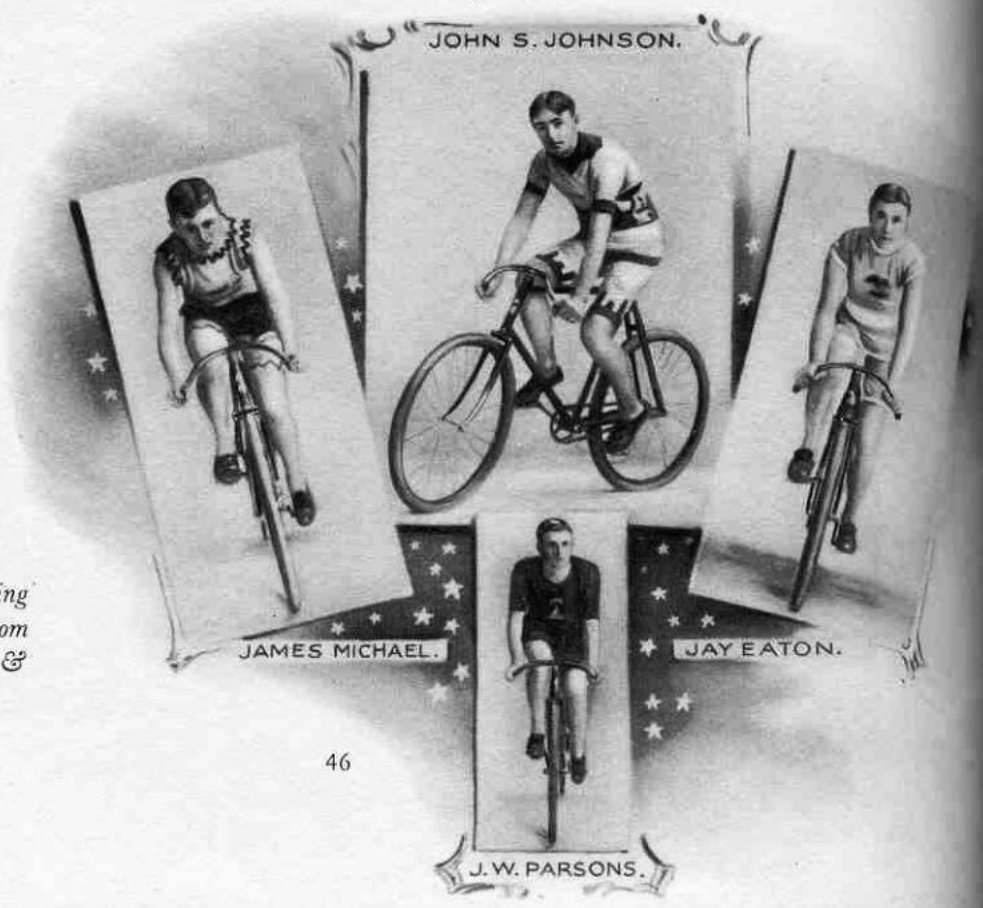
Up to World War II, the 'Paramount' was the only all-American Racer used in the six-day races.

A Modern Schwinn-Built Tandem

The ultra modern deluxe version of 'The Bicycle Built for Two'

CYCLE RACING IN THE

IN THE 90's cycle racing was the sport sensation of the world. Top racing men were the heroes of the day. The sports sections of the newspapers were crowded with stories of current cycle racing events, and the breaking of a record for any distance was front page news. Track racing drew tremendous crowds and streets were lined for blocks with spectators, watching the finish of road races. Every young cyclist had racing aspirations, and policemen on bicycles were busy apprehending the 'scorchers,' those speed maniacs who endangered the lives of cyclists and pedestrians by pedalling through town at the fearful rate of 20 miles per hour. The cycle engineers competed with each other in producing ever lighter, freer running racing bicycles. Even an ounce of weight



The Famous 'World' Racing Team of 1896. Reprinted from the Arnold, Schwinn & Company catalog of 1897

more or less was a matter of great moment.

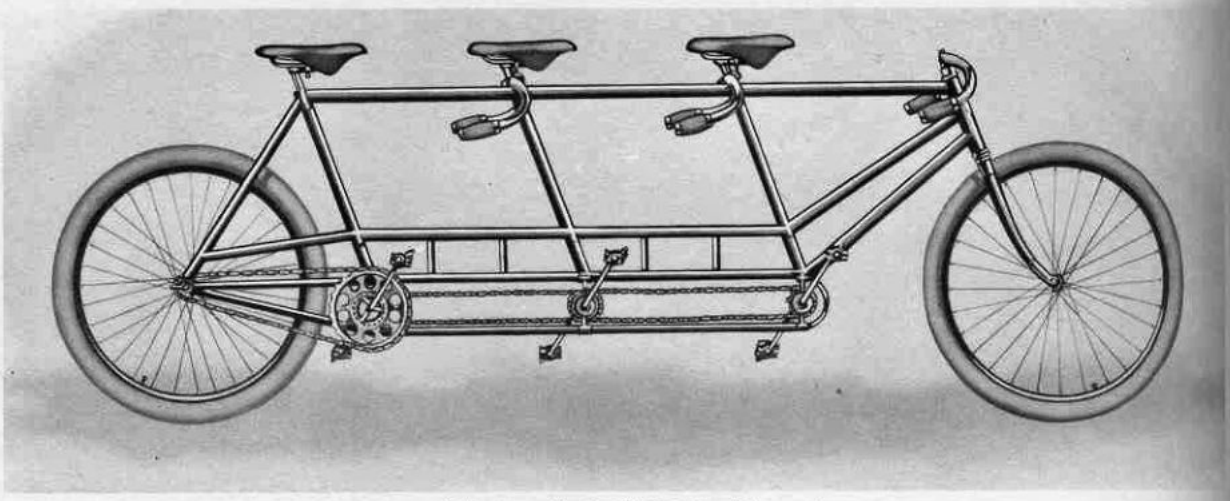
On October 3, 1896, the half-mile cement track at Garfield Park in Chicago was opened and 25,000 people attended the opening events. Jimmy Michael, a star of Arnold, Schwinn & Company's racing team, broke the American five-mile record that day, and Johnny Johnson, another 'World' star (to quote the cycling magazine, *Bearings*) . . . "rode the mile in 1:40 2/5," the fastest exhibition mile on record at that time.

The Arnold, Schwinn & Company's 'World' racers were a famous team of the day. Through the able management of Tom Eck, record after record fell under their speeding wheels; and, in the 'World' catalog of 1897, the company proudly printed the statement that more records had been broken on 'World' racing bicycles in one year than on all other makes combined.

The 'World' team had been abroad that year competing against the best riders of Europe, and winning races in Italy, France and England. In France, Johnson set new French records for the half-mile and the kilometer, and a new world's record for the half-kilometer. In England, Johnson set a new European record for the quarter-mile

Ignaz Schwinn congratulating his team man, Jerry Rodman, at the 1939 Chicago Six-day Race

The Schwinn 'Paramount' Racing Team of top-flight Six-day stars



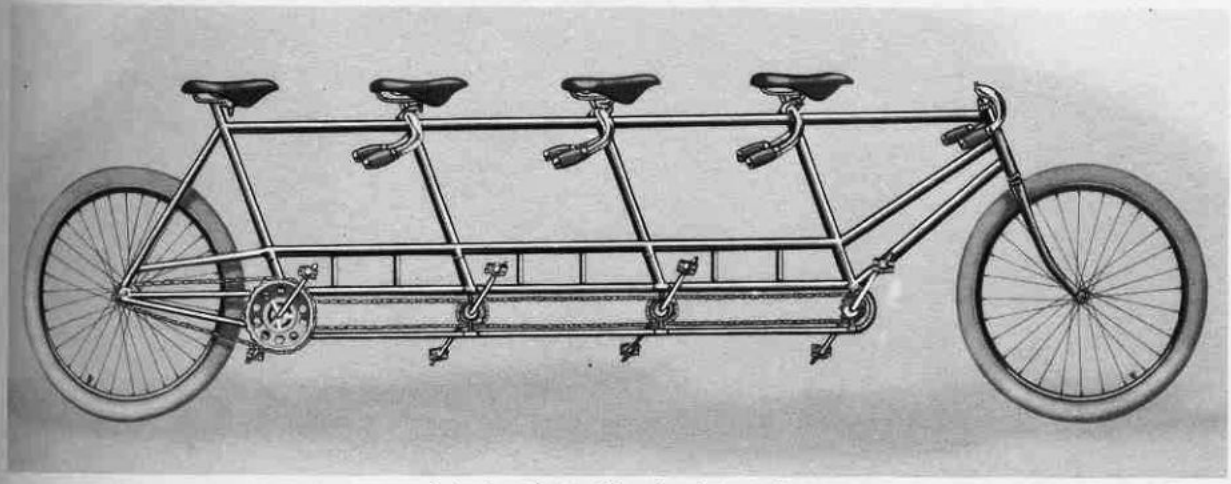
Schwinn-Built 'Triplet' of the 90's

and half-mile and a new world's record for the kilometer.

Paced racing, wherein the racer 'took pace' behind three, four, five and even six seated pacing machines was very popular. The rider would have two or three such pacing machines on the track, each pacing him for a distance, to be replaced at intervals by another which had been riding slowly and resting for its turn and supreme effort. This changing of pacing teams in front of a rider going at top speed, required much skill and developed into a fine art wherein the misjudgment of a split second's time might mean a spill and serious injury to the changing pacing teams and the rider. It made an exciting spectacle and drew great crowds, regardless of weather. The Arnold, Schwinn & Company team had the best in pacemakers mounted on the famous Schwinn-Built pacing machines, triplets, quads and quintets.

Johnny Johnson and Jimmy Michael, headliners of the 'World' Team

The October 15, 1896, issue of the cycle magazine *Bearings* carries a lengthy and interesting account of a record-breaking camp Arnold, Schwinn & Company had established at the new Garfield Park Race Track and illustrates the interest in cycle racing at the time. In spite of unusually cold weather, thousands stood for hours waiting patiently for the occasional appearance of the pacing teams and riders, hoping to witness the fall of another record. The team remained in camp for more than three weeks, attended all this while by crowds of fans and reporters from every Chicago paper. The magazine *Bearings* reports: . . . "Mr. Schwinn took the liveliest interest in the record camp and expressed the hope that records would be broken in the home city—'Chicago'—and records *were* broken."

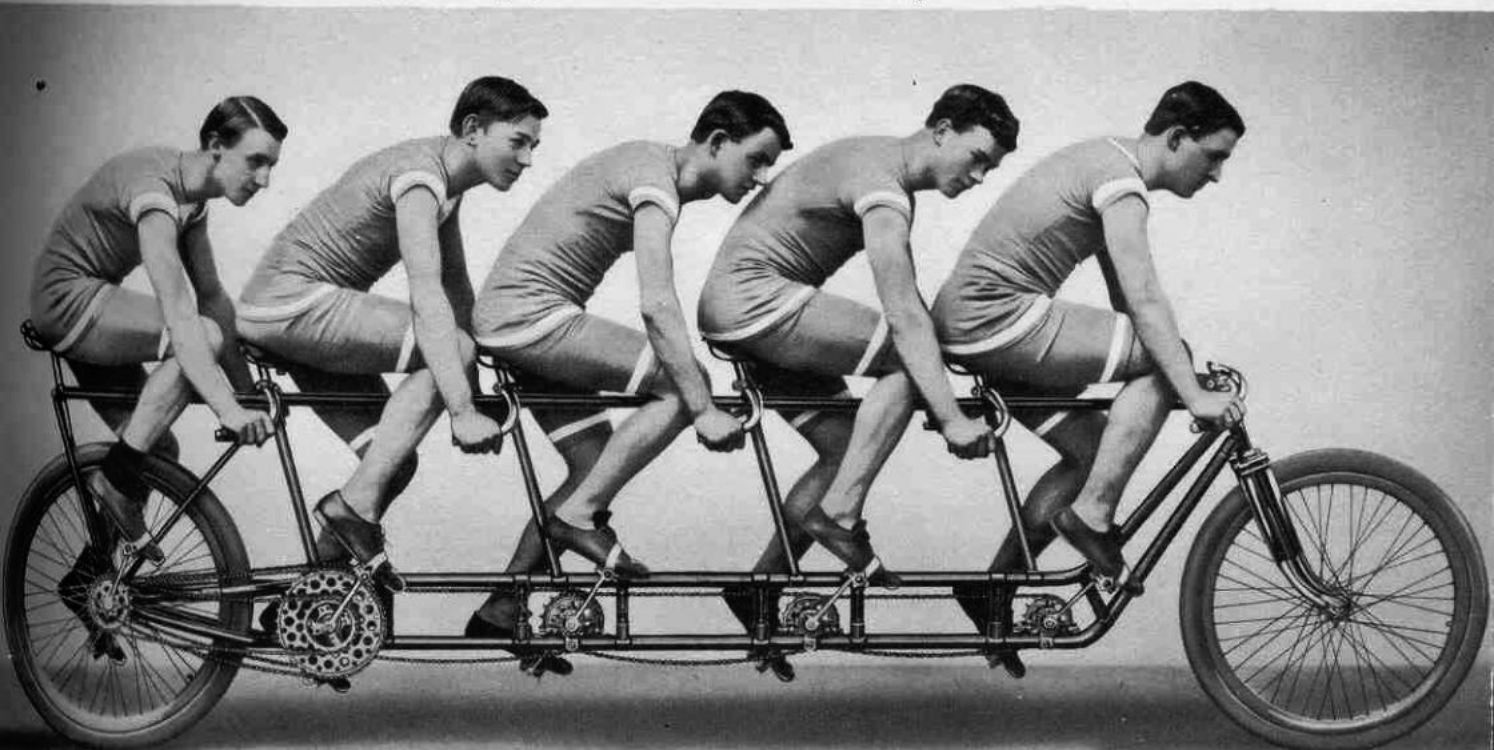


Schwinn-Built 'Quad' of the 90's

Johnson lowered the quarter, half, one, and two mile world's records, riding the fastest mile on record at that time. Little Jimmy Michael lowered the five mile world record and took the three and four mile records in the ride. Jimmy Michael was a sensational rider of great speed and stamina, all the more remarkable because he was small in stature, weighing only 107 pounds, one of the outstanding speedmen of his time. Later, at Nashville, the 'World' team lowered more records and continued its sensational career until the crash of the cycle industry.

With the crash, the public lost interest in cycling and cycle races, and, while cycle racing continued for some time, it never recovered its popularity, and disappeared from the sport columns of the newspapers shortly after the turn of the century. The six-day bicycle racing carried on, however. Well promoted, it is 'good theater' and draws big crowds. It was popular until World War II temporarily put an end to it. Unfortunately, in the only racing which remained—the six-day racing and a little amateur racing—none but European racing machines, or those assembled in this country from imported parts, were used for many years.

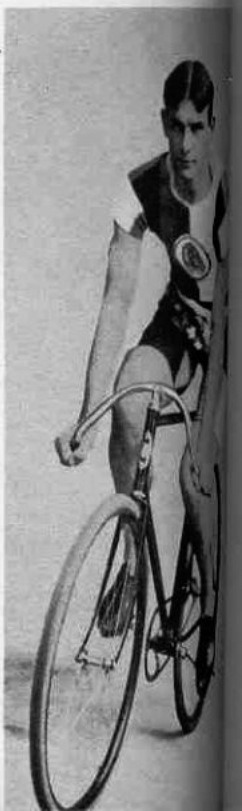
Schwinn-Built Quint Racing Team of 1896. Left to right: Billy Bainbridge, H. Voight, Fred Rau, H. 'Red' Van Herik, John Lund



Garfield Park half-mile cement bicycle track, built in 1896

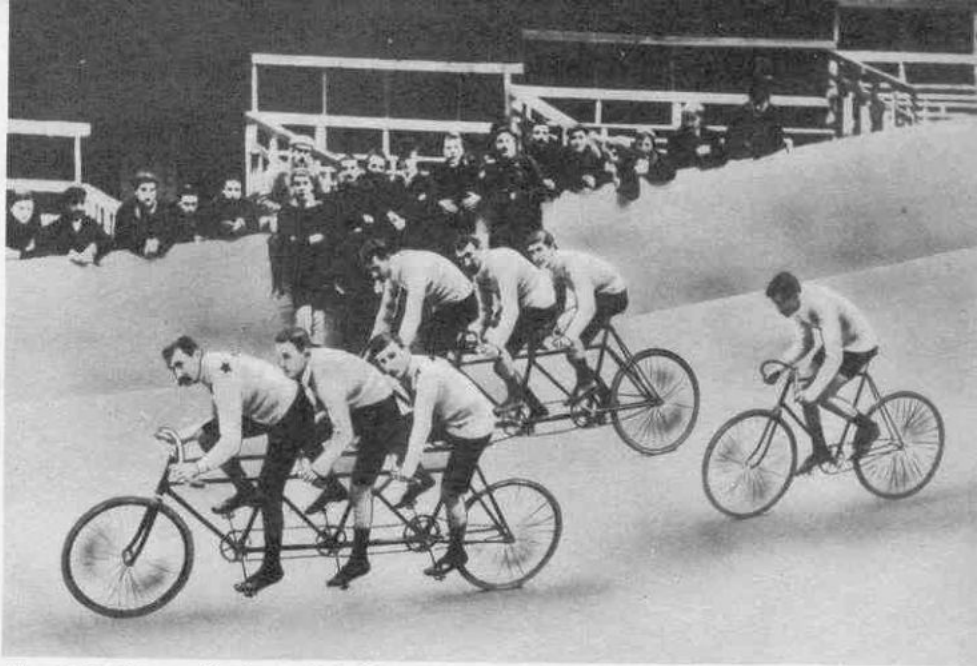
A. D. Kennedy, a star of the 'World' Team

It became currently accepted that fine racing bicycles just could not be built in the United States. Arnold, Schwinn & Company decided to demonstrate the error of this idea, and in the middle 30's again designed and built fine, light bicycles, among them the 'Paramount' racer. These bicycles, built from the finest obtainable materials, and to precision tolerances not found on the best machines from abroad, reflect the great tradition of Arnold, Schwinn & Company in the building of fine bicycles. They were taken up immediately by American teams, and used with great success until World War II put an end to international competition. It is significant that many foreign racing men used Schwinn-Built 'Paramount' parts on their bicycles as soon as they were available.



Above: Eddie 'Cannon' Bald, Barnes Team, and at right, Tom Cooper, other famous stars of the 90's

Arthur Gardiner, 'Thistle' Team



Paced Racing at Paris track in the 90's. Rider is changing pace making triplet teams

In recent years there has been an increasing interest in amateur cycle racing. Small, but important in the implications of its growth. A clean, healthy sport, entirely democratic, in which the team member restrictions of other sports does not pertain, every youngster has a chance to compete and develop his speed, and what is more important, his health and physical stamina.

It can be hoped that cycle racing will one day be on the sports curricula of our High Schools and Colleges, along with baseball, basket ball, football and other sports. It will add to the sports interest and make it possible for a far greater portion of the student body to participate in the sports program of the school. Inter-school, inter-city and national competition will find sympathy and support throughout the nation.

Trophy donated by Cycle Racing Stars of the 90's

First meeting of the Bicycle Racing Stars of the 19th Century, at Sportsman's Park, Chicago, September 1941

Charley 'Mile-a-Minute' Murphy

MACHINE-PACED

in the 90's

FORTY-SIX YEARS AGO, June 30, 1899, Charles M. Murphy startled the world when he rode a mile behind a Long Island R. R. train in 57⅘ seconds, thus earning for himself the famed "Mile-a-Minute Murphy" title.

The ride was staged on a specially built board track, laid between the rails at Maywood, L. I. Murphy rode within a frame hood built over the car platform, completely protected from wind resistance, an early practical demonstration of the streamline principle.

Charley Murphy on his mile-a-minute ride behind a railroad train

CYCLE RACING

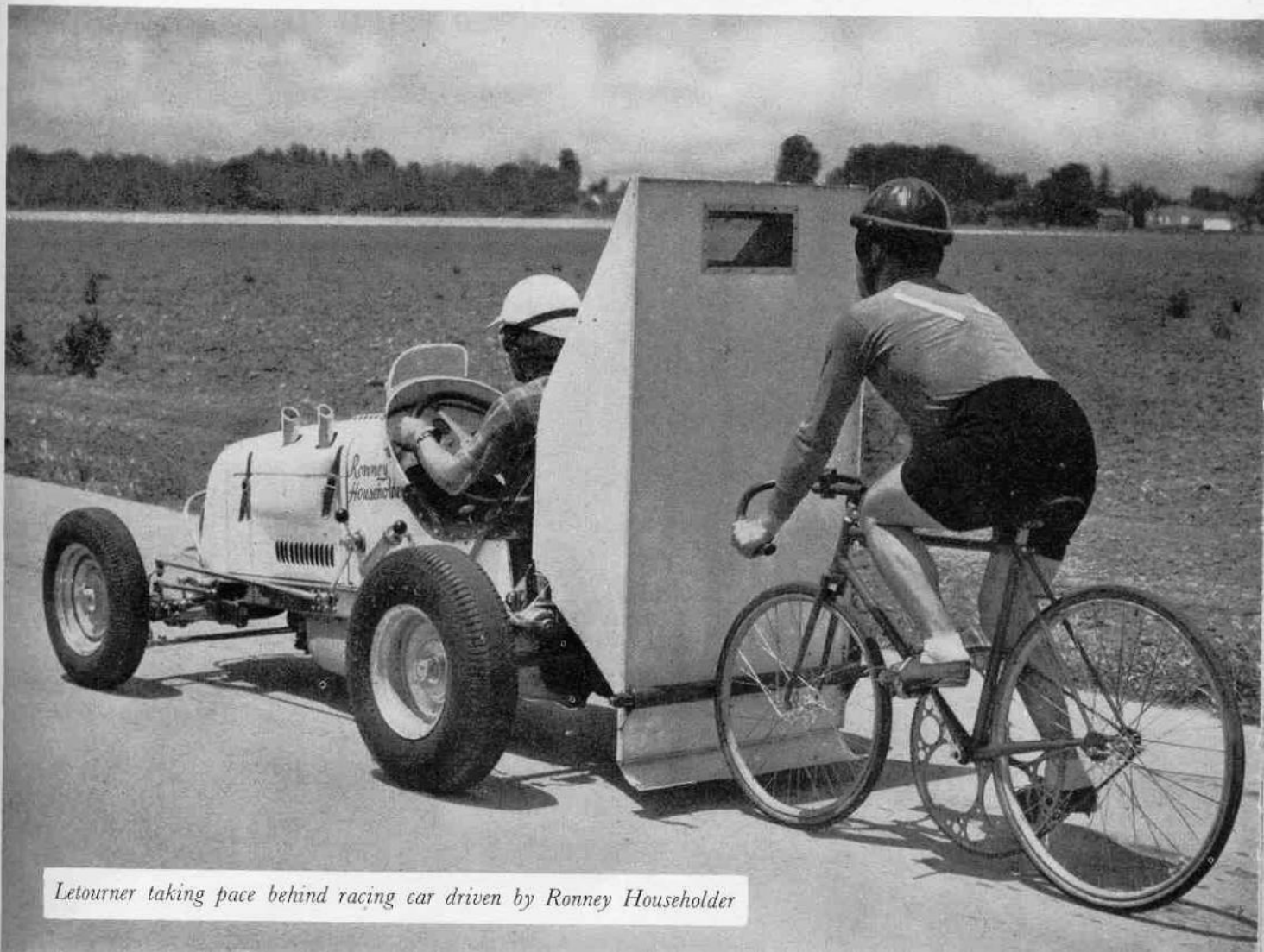
...and Now

On May 17, 1941, Alfred Letourner, prominent former six-day star, shattered all cycle speed records when he pedalled a Schwinn Paramount Racer a mile in 33.05 seconds—at the rate of 108.92 miles per hour.

The trial was held on a highway near Bakersfield, California. Letourner rode behind a shield attached to the rear of a racing car driven by Ronney Householder.

The Schwinn racer was equipped with the highest gear ever fitted to a bicycle. The large sprocket has 57 teeth, the rear, six, which gives a 'gear' of 252

Alfred Letourner on his high-geared 'Paramount' racer



Letourner taking pace behind racing car driven by Ronney Householder

THE AMERICAN BICYCLE, 1900–1940

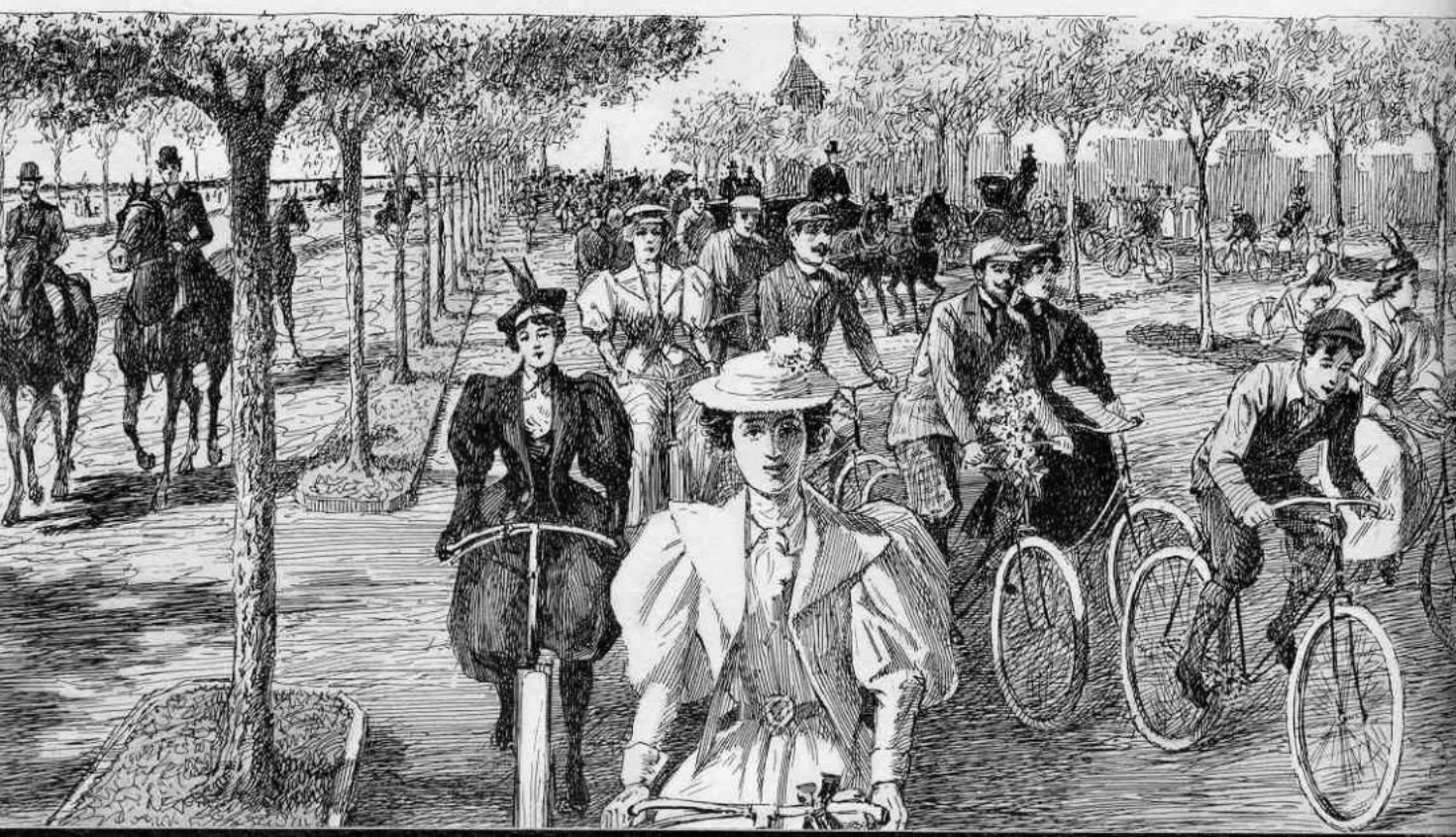
In the 90's cycling was more than a sport and something new in transportation. It was a craze, the fashion of the hour, and very much the thing to do. With cycling came the cycling costume; for men, short Norfolk jackets and knickers far from baggy, usually made from tweeds or similar cloths, woolen socks, and small, round caps. Women had a rather bad time of it. Women's clothes were voluminous at the time, with long skirts sweeping the ground; but soon sports ensembles appeared with jackets and daringly short skirts, still reaching well below the shoe tops. These were usually topped off by straw sailors securely anchored with two or more long hatpins. A few daring young women took to bloomers—a scandalous business, and for a time much frowned upon. However, the bloomer costume soon became quite popular.

Every city and town had its cycle clubs, many socially important. In a large city there would be hundreds of cycle clubs, some of them housed luxuriously and boasting an elite membership. In the clubs and out, bicycles, cycling, cycle racing, and the petted heroes of the race track, were ever popular topics of conversation. Everyone who could possibly afford a bicycle owned one, and they were not cheap in the middle 90's.

Bicycles sold for a hundred to a hundred and fifty dollars; and in those days a hundred dollars was a respectable sum of money. Wages and salaries were low in the 90's compared with today's pay envelopes; and time-payment buying, as we know it today, was still a generation away.

In spite of the high price of bicycles, streets, parks, and adjacent country lanes were crowded with cyclists on Sundays and holidays. On week days cyclists riding to and from work filled the streets mornings and evenings, throughout spring, summer and fall.

In the later 90's cycling lost its great popularity almost overnight, and within a very short time seems to have become passé. Perhaps it had been overdone—at any rate, a public reaction seems to have set in against it. There were contributing causes, of course, important among them the very considerable improvement in urban and interurban public transportation facilities. By 1900 faster and more adequate electric and cable street cars



had replaced the slow horse-drawn busses and horse cars, to a very considerable extent and good electric and steam interurban transportation provided excellent service between the larger centers of population and for the towns and villages en route.

The bicycle business collapsed suddenly, and many fortunes were lost almost overnight. Most of the factories closed their doors; and eventually some turned to the production of motor cars, some to other products. A few managed somehow to struggle through, and among these was Arnold, Schwinn & Company. The heyday of the bicycle was over, and cheaper bicycles, if there were to be any at all, were the order of the day. Lower prices made the bicycle possible for older children, and gradually a new market for bicycles developed in America—a children's market.

The bicycle remained an important factor in adult transportation until the practical and inexpensive motor car became the backbone of American transportation, with car ownership all but universal. After the close of World War I the bicycle served principally as transportation for our children to and from grammar and high school, for errands, recreational jaunts to nearby playgrounds and visits to friends and playmates. In this period the bicycle came into use for nearby delivery of the many everyday items and services of various kinds, and has brought us much in the way of convenience.

On account of the thoughtless, often very rough handling and abuse it suffers at the hands of children, and the heavy loads it is often required to carry in delivery service, the bicycle has had to be built heavier than the light, well-cared-for machine of the 90's; and by the end of the 20's, a sturdier machine had been developed.

If the bicycle had anything in the way of an outstanding characteristic in the years 1900 to 1932, it was monotony. To increase the juvenile interest in bicycles a few attempts were made to give it something of the appearance of the motorcycle. Mudguards, a rarity on men's bicycles in the 90's, had been added; but no appreciable increase in interest or

Arnold, Schwinn & Co.

MODEL B10F

Introduces

Super *Balloon Tire* Bicycles

LOW PRESSURE
18 to 22 Lbs.
According to weight of rider

The only major development since the coaster brake—on the finest specially constructed bicycles built by the oldest and most outstanding American manufacturer. A 2¼" automobile type double-tube, straight-side, cord tire—on a new deep drop center rim—a construction embodying all the latest advancements in the tire art.

ARNOLD, SCHWINN & CO.
1718 NORTH KILDARE AVE.
CHICAGO, ILLINOIS
TELEPHONE BELMONT 6793

sales volume had resulted. The bicycle was still fundamentally the same old bicycle—a sturdy but angular and unattractive machine.

The bicycle had become so standardized that only the men in the cycle trade could tell one make from another. Factory identification had all but disappeared; and, as a general rule, dealers bought bicycles from whichever manufacturer sold at the lowest price, and resold them under their own trademark. Quality, particularly in the cheaper grades, which constituted the bulk of the sales, was too often conspicuous by its absence. There was little to interest the buyers and expand the market. A bicycle was just a bicycle. The great depression of the early 30's played havoc with the American cycle industry. Business came practically to a standstill, and so far as Arnold, Schwinn & Company was concerned, something had to be done about it. In the summer of 1930 a new department was created and staffed with a group which had many years of experience in engineering and development work on motorcycles.

The duty of this department was the business of improving the bicycle in quality and appearance at the least possible increase in cost to the cycle rider.

In the most discouraging period which American industry has ever experienced, and in the face of an apparently dubious future, Arnold, Schwinn & Company fearlessly made large investments in engineering, machine tools and other equipment for modernizing and improving the bicycle.

At the bottom of the great depression, Ignaz Schwinn made perhaps his greatest contribution to the American cycle industry by embarking upon a program for breaking the almost traditional policy of standardization which had been so much a part of the American cycle industry for nearly thirty years.

Arnold, Schwinn & Company quickly became the acknowledged leader of the American bicycle industry, continuing its policy of 'always better' bicycles until the great war temporarily halted the effort. In the ensuing pages, something of that leadership and those improvements, as they developed through the years 1932–1940, is illustrated.

THE BALLOON BICYCLE TIRE

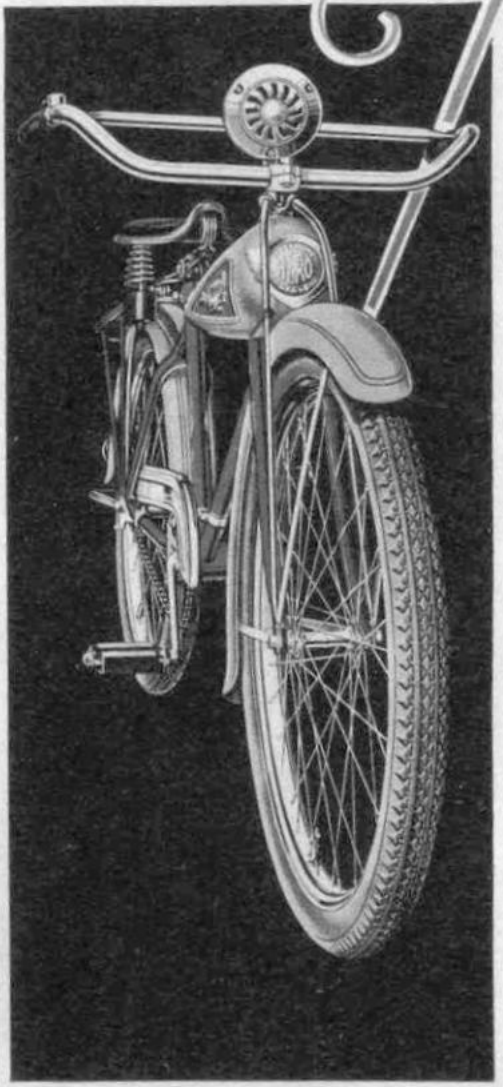
The antiquated single-tube tire had been standard equipment on American bicycles from the 90's to 1933. Small double-tube tires were available, but expensive and little used. Everywhere else in the world only double-tube tires had been used for a generation, because they were readily repairable, while the single-tube tire was not. Small punctures in the single-tube tire could be repaired by makeshift methods, but large punctures could not be repaired satisfactorily, and a cut of any size meant the purchase of a new tire. The fiction that the American cycle buyer just wouldn't pay the additional cost of the practical, repairable, double-tube tire had taken root, and no serious attempt was made to encourage their use.

A member of the engineering staff of Arnold, Schwinn & Company, on tour in Europe in 1932, in search of useful improvements for bicycles, noted the highly successful and popular bicycle balloon tire. This was a double-tube tire of over 2″ cross-sectional diameter, not only practical, but, because of its large size, far longer wearing than the 1½″ size used in America. Its adoption on Schwinn-Built Bicycles was immediately decided upon. Arnold, Schwinn & Company paid for tools for the special rims these tires required and the tire molds for the tire.

Everywhere in the industry it met with discouragement, and very little in the way of coöperation. The cycle industry, quite naturally, resented any interference with its scheme

Arnold, Schwinn & Co.

Introduces The Streamline Aerocycle



WITH THE NEW WELDED FRAME — BUILT LIKE AN AEROPLANE FUSELAGE

Another basic and radical improvement—in strength, beauty, and modern streamlined appearance.

It's a greater sales stimulator than the revolutionary balloon tire introduced last year by this leader of the industry.

WRITE AT ONCE FOR THE NAME OF YOUR NEAREST JOBBER

ARNOLD, SCHWINN & CO.
1718 NORTH KILDARE AVENUE, CHICAGO
7 EAST 17th STREET, NEW YORK CITY

of standardization. The dealers in cycles, however, were quick to see the practical and sales advantages of the balloon tire. At long last they had something new to sell!

Balloon tires for motor cars had been introduced some years before and had been given much publicity. The youngsters knew all about the automobile balloon tire, and, when bicycle balloon tires were made available, they just had to have them on their bicycles. Arnold, Schwinn & Company introduced the Bicycle Balloon Tire in the Spring of 1933—two years later it was the standard for the industry.

THE BICYCLE HAS A CHANGE OF APPEARANCE

From the summer of 1931 on, there had been much activity in the factory of Arnold, Schwinn & Company. The engineering department had been busy on three major problems: production engineering for still better quality at the least possible increase in cost to the consumer; new, practical devices and accessories to increase the comfort and usefulness of the bicycle; and the modernization and improvement of its appearance. Much had been done in the preceding years in streamlining motor cars, railroad trains, and even household appliances and various other types of mechanical devices. Nothing of any consequence had been done for the bicycle in this respect.

In 1934 Arnold, Schwinn & Company announced a new model — 'The Streamline Aerocycle', the first radical departure from the standardized appearance of bicycles in nearly forty years. Suggested by the streamline influence of the aeroplane and aerodynamics on modern design, which started in the early 30's, it presented a problem in cycle design. The mechanics of the bicycle imposed definite limitations. The simple tube structure of the bicycle left little latitude to shape it for better appearance, and every change involved a number of stress factors. In this first attempt, comparatively little was done with the tube structure of the bicycle, but much was accomplished with accessories and related parts. The result was a bicycle of strikingly new and modern appearance which created a sensation in the cycle market, made cycle publicity for the industry—and for Arnold, Schwinn & Company. It did far more than that; it awakened other cycle producers and started all factories thinking in terms of something new in bicycles. By the end of 1934 a number of cycle factories had become 'new model conscious'—more bicycle dealers had something new to sell. The market responded surprisingly. Not so much of a surprise for Arnold, Schwinn & Company—its principals had seen the obvious need. Bicycle business, stimulated by new product, improved rapidly in spite of the backwash of the great depression; and was one of the leaders in the recovery period—1933–1936.

Part of the drafting room where Schwinn-Built bicycles are designed and engineered

1935

Reproduced above is an advertisement of Arnold, Schwinn & Company in the cycle trade paper, *American Bicyclist*, announcing the 'Cycleplane' of 1935.

In 1935, Arnold, Schwinn & Company brought out another new model—The 'Cycleplane'. Considerably improved in appearance, it became popular instantly and further demonstrated the interest of the American cycle buyer in the idea of change and improvement. This machine is particularly interesting because it served as the foundation type for further improvement which culminated in the more attractive bicycles of a few years later.

* * *

All this while, much more than new models in bicycles were coming out of the engineering and research department of Arnold, Schwinn & Company. Frames were no longer built by brazing the tubes together. The oxy-acetylene steel welding method of the airplane industry of that time had been adopted and was being successfully used. Other manufacturers, encouraged by the success of Arnold, Schwinn & Company, followed and used the process. Arnold, Schwinn & Company was not only blazing the trail of more sales-attractive bicycles, but also improving the quality by modernizing production methods.

Later in 1935, Arnold, Schwinn & Company introduced the built-in bicycle lock. Along with the lock came the cheaper cycle-theft insurance which the lock made possible and which had been arranged for by Arnold, Schwinn & Company. The combination met with instant acceptance. The cycle lock has been an important and distinctive feature of the Schwinn-built Bicycle ever since, and has constantly increased in popularity.

* * *

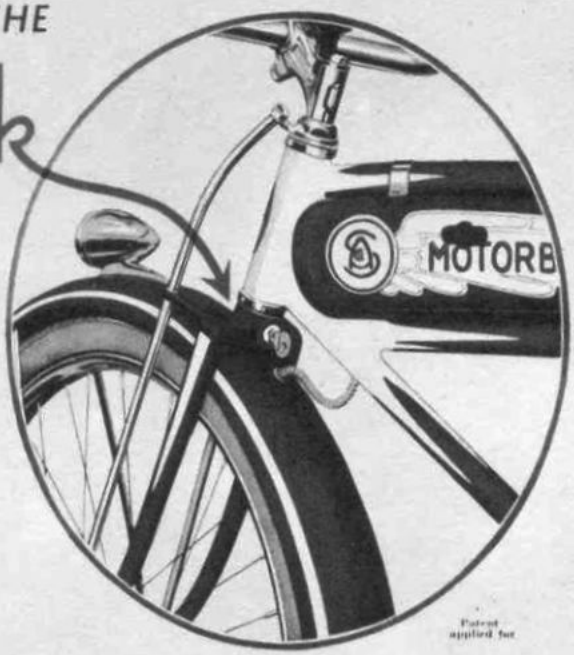
The 'Cycelock', like all Schwinn features, is a worthwhile device and fills a definite need. Cycle stealing has always been a problem. Designed to prevent a thief from casually mounting a bicycle and riding it away, it reduces the chance of loss by theft 90%.

ARNOLD, SCHWINN & CO.

INTRODUCES THE

Cycelock

THE FINAL SOLUTION *of the* BICYCLE THEFT PROBLEM



Patent applied for

A new development by the SCHWINN organization released only after the most exhaustive tests.

A YALE *lock* built into the steel drop-forged front fork crown which locks the fork and front wheel at such an angle that the bicycle cannot be ridden or wheeled.

The fork cannot be disassembled when locked. The CYCELOCK is theft-proof, tamper-proof and fool-proof.

All new series SCHWINN bicycles can be furnished with the CYCELOCK fork, and previous models can be fitted by any good bicycle repair man.

The SCHWINN CYCELOCK will be the outstanding bicycle sales factor of 1936.

Order a sample from your jobber at once and cash in on this new sales builder.

ARNOLD, SCHWINN & CO.

INCORPORATED

1718 N. KILDARE AVENUE, CHICAGO — 7 EAST 17th STREET, NEW YORK

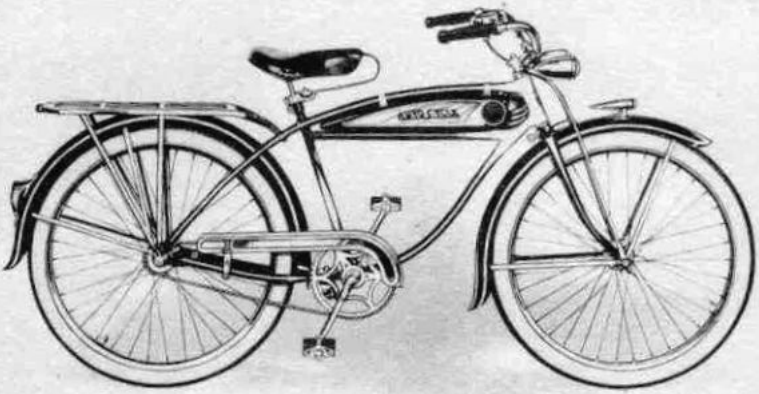
See next page for complete details

ARNOLD SCHWINN & CO.

Presents

the AUTO CYCLE

The Bicycle Sensation of America



Greater Beauty · Greater Comfort · Greater Safety

Greater Sales

By the ultra-modern grace and beauty of its appearance—by the multiplicity of its new and exclusive features—and by its fundamental advancement in cycle engineering and design—the AUTO-CYCLE takes its place as the leading bicycle of America.

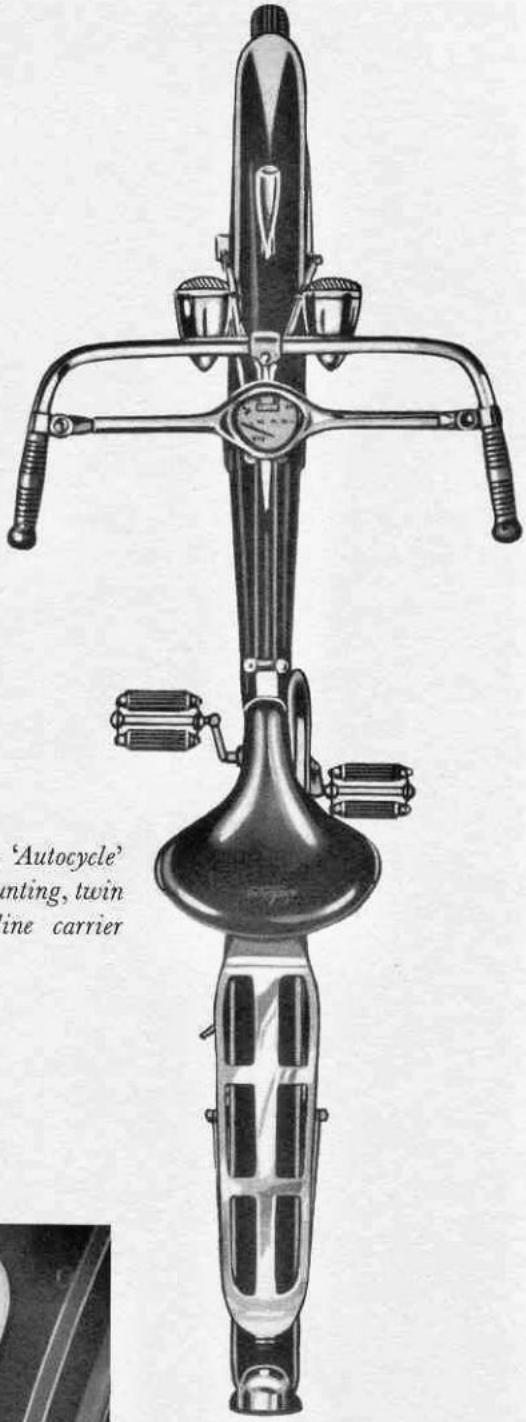
MR. DEALER

The AUTO-CYCLE will increase customer traffic in your store, giving you greater opportunities for larger and more profitable sales on your entire line. Can you afford to pass up this kind of sales-building factory cooperation? **Join the leader now!**

If you have not received our new catalog, write your jobber or us for it.

DEMAND SCHWINN BICYCLES FROM YOUR JOBBER!

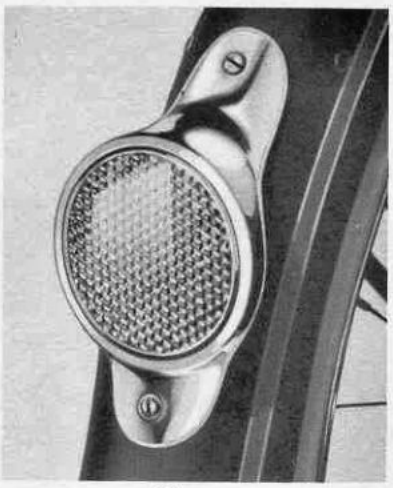
The new, Full-floating Saddle provided comfort never before found on a bicycle and the 'Stimsonite' reflectors provided the very best protection for the cyclist riding at night. Speedometer mounting and the many other features all served a useful purpose, but most remarkable of all, and an accomplishment of importance, was the styling of the frame. Careful engineering and a thorough understanding of the principles of design had solved a problem. The erstwhile ungainly and angular bicycle had at last achieved something in the way of beauty.



Top view of Schwinn 'Autocycle' showing speedometer mounting, twin headlights and streamline carrier

Schwinn drop-forged handle bar stem

Schwinn Full-floating saddle and seat-post

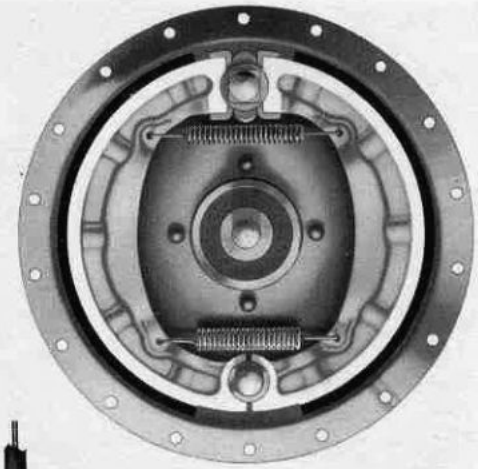


Schwinn 'Stimsonite' rear reflector

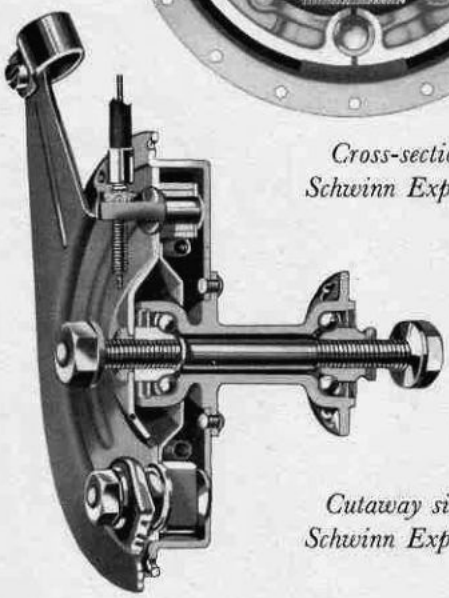
The introduction of the 'Fore-wheel' Brake by Arnold, Schwinn & Company in 1937 was the first important contribution to the safety of the cyclist in America since the introduction of the coaster brake forty odd years before. It is a perfect replica of the type of brake which had won out over every other in the development of the motor car.

Ladies' bicycles too had been improved in quality, appearance, safety and comfort. Ladies' bicycles were becoming important. Styling for better appearance and the improvement in riding comfort developed a very considerable demand for ladies' models.

The Schwinn-Built Drop Forged Handlebar Stem was introduced at a time when this device, so vital to the safety of the rider, was badly needed. To provide a handlebar stem of good design and the required strength to assure the safety of the rider, Arnold, Schwinn & Company designed and produced the part from forged steel. This was the first handlebar stem of this type used in America; and the forged steel stem is now practically standard on all high grade bicycles.



Cross-section view of Schwinn Expander Brake



Cutaway side view of Schwinn Expander Brake

Schwinn-Built 'Hollywood' of 1937 a fully equipped deluxe bicycle for ladies

ARNOLD, SCHWINN & CO.

Introduces THE SCHWINN

FORE-WHEEL BRAKE

for BICYCLES

The greatest sales booster since our introduction of the balloon tire.

Velvety smooth braking or instantaneous stop in emergency.

Safety in traffic demands it.

It will sell more bicycles for you.

Automotive type internal expanding
Aluminum Alloy Brake Shoes
Molded Reybestos Brake Lining
Excess Braking Surface Area
Thumb Screw Brake Adjustment—No Wrenches
Chrome Plated Handlebar Hand Lever
Schwinn Dust and Water-proof Control Cable Casing
Genuine Turned Steel Hub
Dust-proof Hub Bearings with Grease Retainers
Separate Adjusting Cone Locknut Bearing Adjustment not disturbed by wheel removal

Engineered, tested and built by

ARNOLD, SCHWINN & CO.
CHICAGO

See our exhibit at the Toy Fair, Rooms 831-833, McAlpin Hotel, New York, April 5th to 17th

•

Permanent Exhibit, Julius Levenson, Inc., 7 East 17th Street, New York

MR. DEALER, can you afford to pass up the greatest sales builder since the balloon tire? Write for descriptive folder and our 1937 Bicycle Catalog.

ARNOLD, SCHWINN & CO.

Introduces . . . **THE SCHWINN KNEE-ACTION SPRING FORK**

★

A Revolutionary Improvement in Riding Comfort!

Every Demonstration **A SALE!**

★

Another startlingly new, necessary and practical Schwinn feature.

This fork will be a bigger sales producer than the Schwinn Fore-Wheel Brake, the Cycelock or the Balloon tire.

Mr. Dealer: Can you afford to be without this sales stimulating business getter in 1938?

Get on the band wagon NOW and benefit by This and Other Exclusive Schwinn Features.

Order a sample from your jobber today!

CONCEIVED, DESIGNED, ENGINEERED, MANUFACTURED AND GUARANTEED BY

ARNOLD, SCHWINN & CO. • CHICAGO, ILLINOIS

Reproduction of part of an advertisement introducing the 'Auto Cycle' which appeared in the February 1938 issue of a cycle trade paper

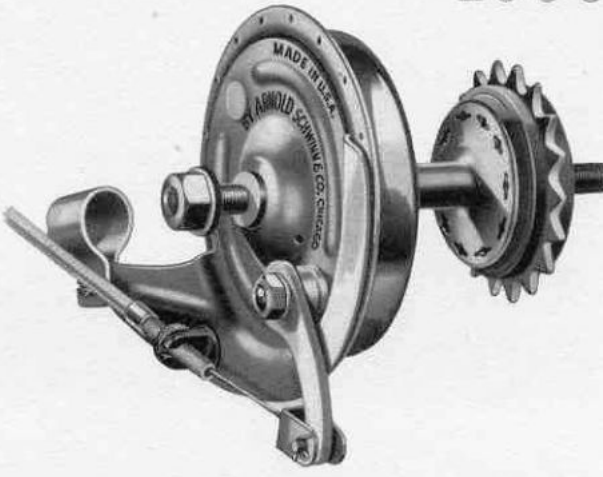
1938

1938 brought more new features and models for the American cycle dealer to sell, continuing the effort Arnold, Schwinn & Company started in 1932.

The Cantilever Frame model further improved the appearance of the bicycle and its strength.

The Spring Fork improved riding comfort and created buying interest through its novelty appeal.

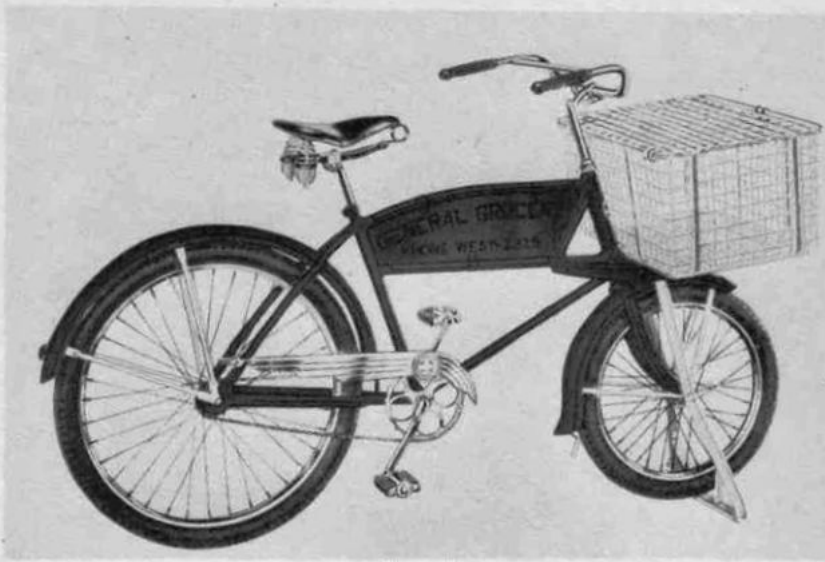
The Rear Expander Brake complementing the company's forewheel brake provided added safety and completed the modernization of the bicycle braking system.



Schwinn Rear Expander Brake—a notable advance in American cycle brakes

ARNOLD, SCHWINN & CO.

Presents the **CYCLE-TRUCK**



(Patents applied for)

THE FIRST PRACTICAL FACTORY BUILT DELIVERY BICYCLE

The basket is attached to the bicycle frame, not to the fork or handlebar. Therefore, the load does not affect the steering.

Entirely new counter-braced frame construction. Guaranteed for loads up to 150 lbs.

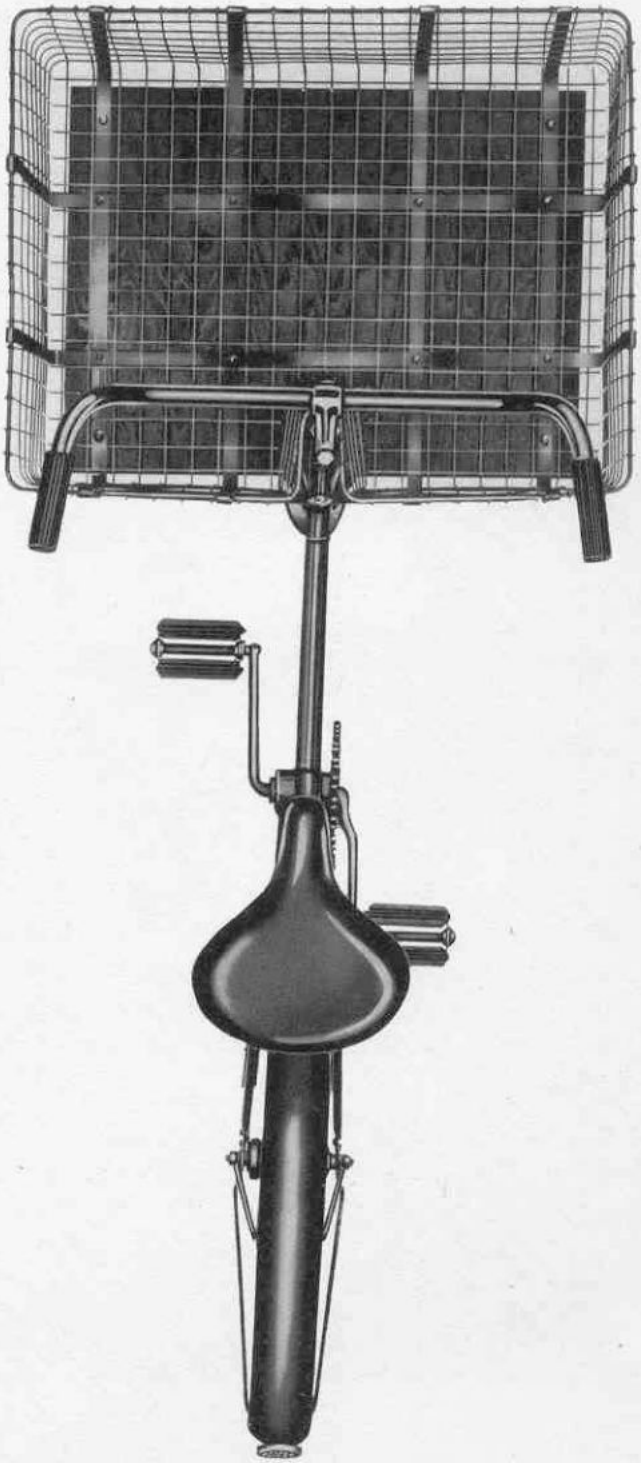
Extra heavy duty tires. Extra heavy rims. Motorcycle spokes. Large genuine motorcycle front hub and ⅝" knockout axle. Extra heavy fork. Superior turned and case-hardened head fittings. Quick acting, extra wide front stand which locks the steering when racked. Standard model equipped with over-sized wire basket (24" x 16" x 11"), with wire cover which can be padlocked.

OPENS LARGE NEW SALES FIELD FOR THE DEALER

Designed, built, tested and guaranteed by

ARNOLD, SCHWINN & CO. 1718 N. KILDARE AVE. CHICAGO, ILL.

This type of delivery bicycle had instant acceptance, broadened the field of usefulness of the bicycle, and opened up a new field for the bicycle dealer.



Top view of Schwinn-Built 'Cycle Truck' showing the extra large basket. Load carrying-capacity 150 lbs.

In 1939, Arnold, Schwinn & Company opened a new field of usefulness for the bicycle by the introduction of the Cycle Truck. Bicycles with baskets of limited size attached to the handlebar had been used successfully in delivery service for light loads. Heavy loads could not be carried because, suspended from the handlebar they interfered with the steering and balancing. Loaded in this manner, beyond a given point, the bicycle became unmanageable and extremely dangerous to ride when it could be ridden at all.

The Cycle Truck is so designed that the load, instead of being suspended from the handlebar, is carried by the frame of the bicycle on brackets extending forwardly over the front wheel. The steering of the bicycle is, therefore, in no way interfered with by the load, and loads weighing up to 150 lbs. can be carried safely. A rack or stand attached near the front wheel was fitted so that it could, in effect, be rolled under it, permitting the bicycle to stand upright while being loaded and unloaded.

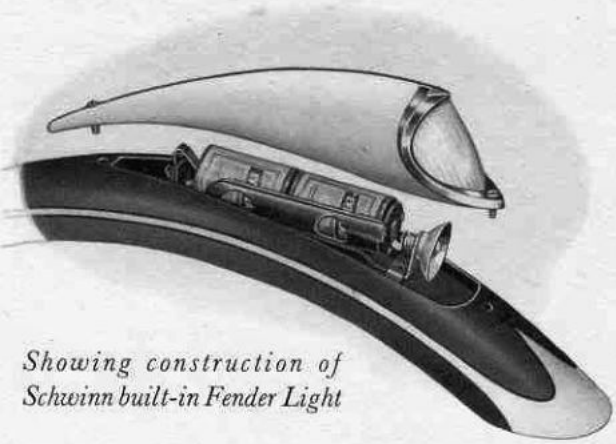
Schwinn-Built streamlined Tank and top of Schwinn Spring Fork

1940

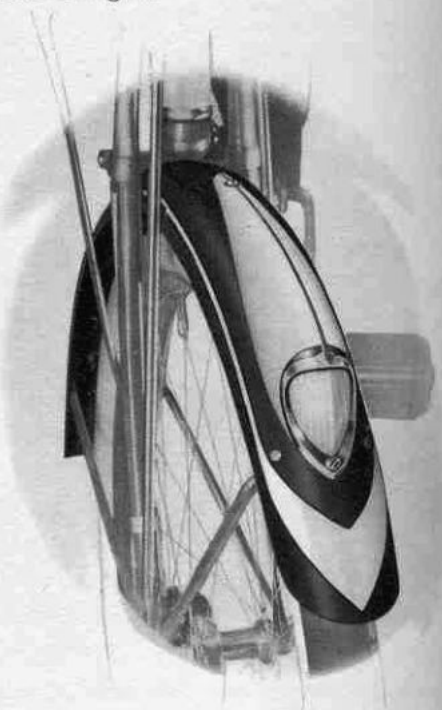
Schwinn-Built Standard Front Hub

In 1940 Arnold, Schwinn & Company further improved the appearance, usefulness and safety of the bicycle and gave the cycle buyer a far greater selection of accessories and equipment than he had ever had before.

The tank or case which housed the electric horn and the batteries, which make it sound, was streamlined into the bicycle frame so that it became a part of it, instead of just something hung onto it. The electric headlight was treated the same way. It was built into the front mudguard, so that it no longer had the appearance of something stuck on as an afterthought.

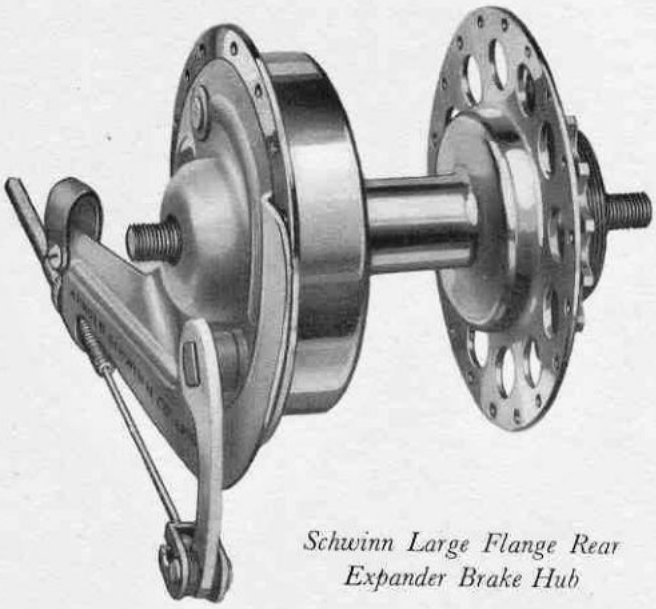


Showing construction of Schwinn built-in Fender Light

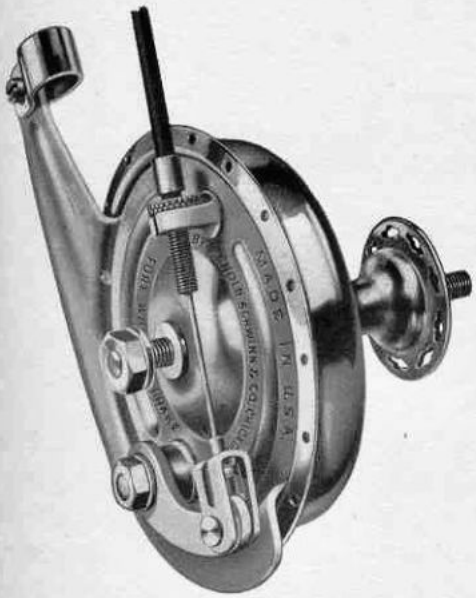


Schwinn built-in streamlined Fender Light

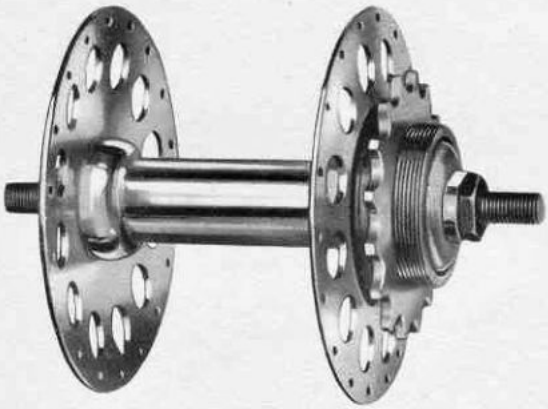
A complete line of hubs was produced, to cover every possible service requirement. For the first time in over a generation an American bicycle factory was building a line of bicycle hubs and never before had any factory offered a line so complete. All of this further increased the public interest in bicycles and the continuing expansion of sales proved the soundness of the judgment of Arnold, Schwinn & Company in instituting the policy of change and improvement.



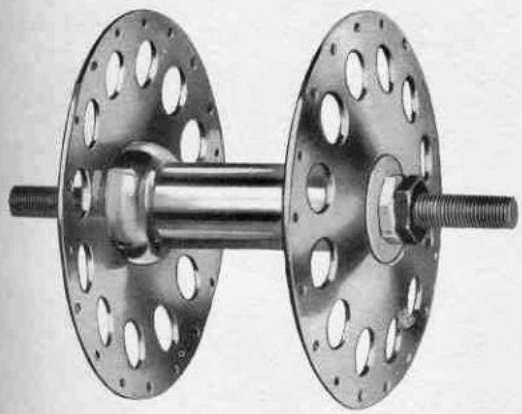
Schwinn Large Flange Rear Expander Brake Hub



Schwinn Small Flange Fore-Wheel Brake



Large Flange built-in Free-Wheeling Hub



Schwinn Large Flange Front Hub

The Schwinn Fore-Wheel Brake, particularly, had the quickest, in fact immediate, acceptance and has been a very popular cycle item since its introduction. Up to this time no brakes for the front wheel of the bicycle had been available and in the event of failure of the one and only brake, the rider was in for a spill or worse. In hilly territory particularly, they filled a long-felt want. The cycle dealers quickly recognized the genuine worth and sales appeal of this unusual cycle brake and found in it a valuable medium for increasing sales and customer good-will.

The 'Autocycle' De-Luxe is the last word in modern design and completeness

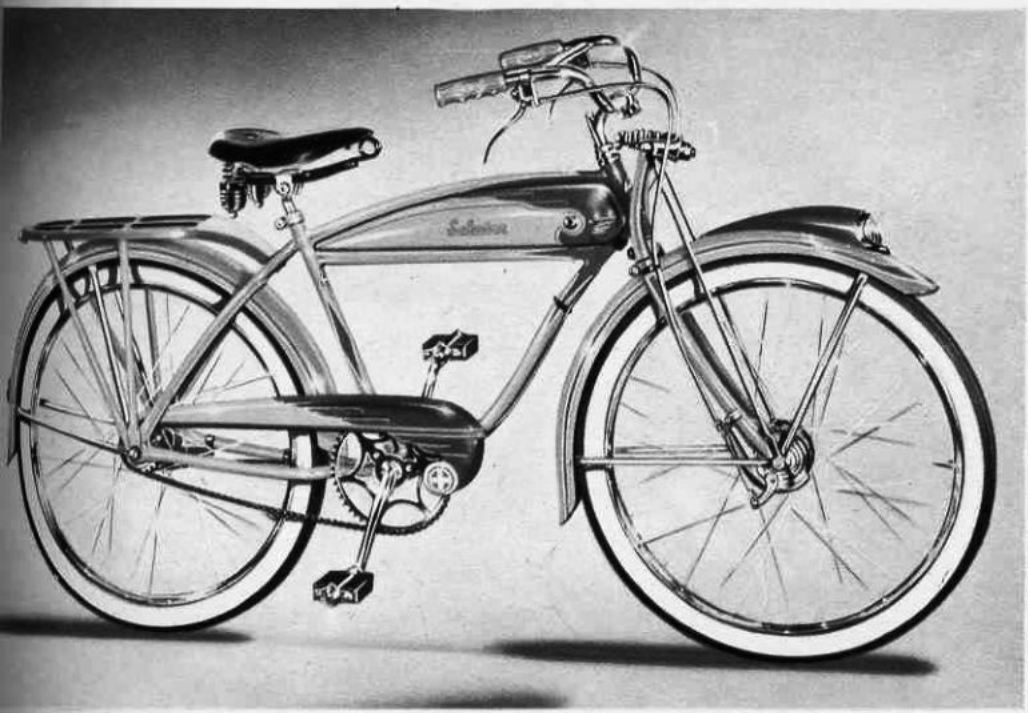
MODERN SCHWINN-BUILT BALLOON TIRE MODELS

1941

ON these pages are illustrated a few of the American type bicycles Arnold, Schwinn & Company was producing in 1941. At this time the company was building several different lines of bicycles. To picture all of them in their equipment variations, would require many pages. The models illustrated suffice to give an idea of the character of the company's products, which brought the greatest demand for its bicycles since the cycle boom of the Nineties.

At the beginning of World War II, Americans fearful of the rationing of tires and fuel

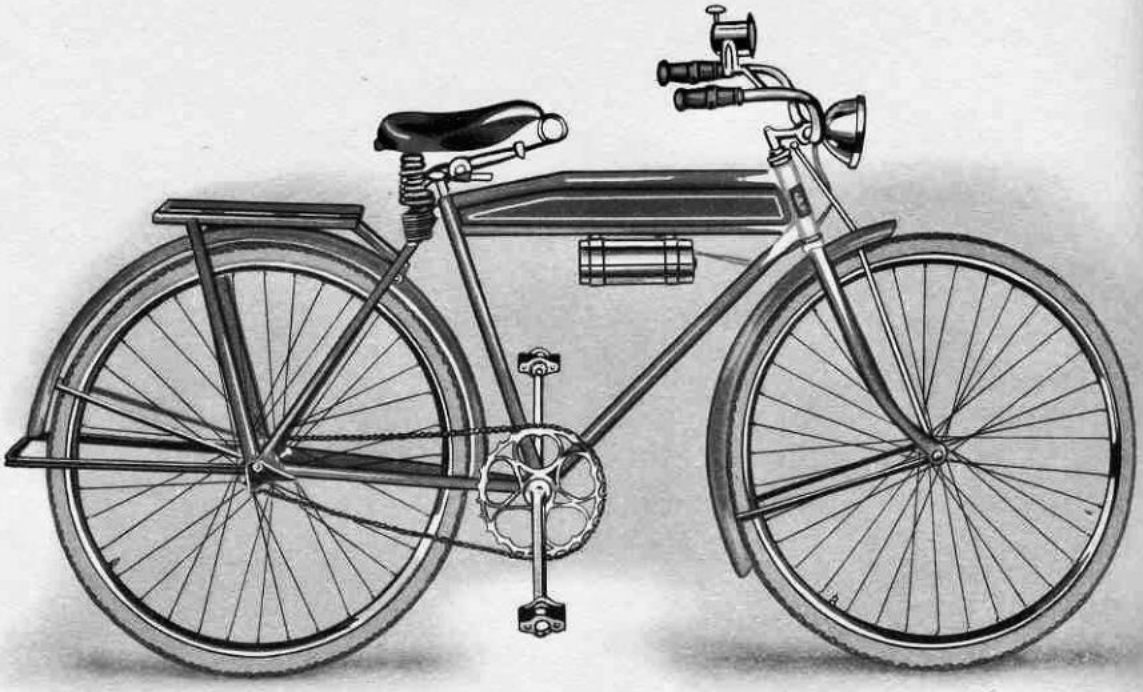
Hollywood Ladies' Model with Schwinn Fore-Wheel Brake



One of the famous B series bicycles with special equipment

for their motor cars called for bicycles and more bicycles. Arnold, Schwinn & Company, working day and night, achieved the record production of its history. It had the most complete line of the American type of bicycles in two price ranges, replete with every type of cycle accessory and a large selection of hubs. No new models or features in bicycles were brought out by the company in 1941. The engineering and research departments soon had other things to do. The shadow of the great war which was to burst upon our country in December of 1941, made demands upon Arnold, Schwinn & Company. By September, three months before Pearl Harbor, Arnold, Schwinn & Company was already in production on war material.

A standard model of the DX Series



Schwinn-Built fully equipped Motorbike model of 1932

THE CHANGE IN TEN YEARS

In 1932, Arnold, Schwinn & Company broke away from the traditional industry policy of standardization and started its program for the improvement in quality, service and appearance of the American type of bicycle. The pictures above illustrate the result achieved. For the sake of accuracy in comparison, the same number of equipment items, tank, lamp and horn, are shown in both pictures, except the chain guard which appears in the modern bicycle and was not used on men's bicycles in 1932. The change in appearance is striking. Incorporating much that is fine and adaptable in modern design, its sales-attractiveness is obvious. Appearance, however, is the least important of the changes which were effected—far more important were the installation of modern machinery and equipment, much of which was designed and built for the special purpose of manufacturing bicycles; the research work in materials and processes, and the mechanical design and engineering which involved over forty patents, granted and applied for; and, most of all, the knowledge born of years of experience plus the most important factor of all, the will and courage to do the job.

Arnold, Schwinn & Company now has several different types and styles of bicycles for its customers to choose from and over 40 varieties in parts and accessories, most of these of its own manufacture. The special need of its customers in various geographical locations are provided for.

As the company's effort expanded, its business grew, and it became the acknowledged

The latest Schwinn-Built 'Autocycle', illustrating the great improvement in appearance effected in less than ten years

leader of the industry in America. The courage of Ignaz Schwinn in making investments in engineering, machinery and equipment in the depths of the great depression, encouraged the industry, and the resultant competition in the improvement of the product during the recovery years brought prosperity to the bicycle industry and a volume no one would have believed possible in the years from 1900 to 1939. The industry produced a million eight hundred thousand bicycles in 1941, nearly five times the average for the preceding thirty-odd years.

Important as this was to the industry, Ignaz Schwinn and his organization made a still more important contribution in 1938: the re-introduction of the fine, light bicycles for the adult rider, for transportation, recreation and health. In a few short years it has opened a new market for bicycles in America—a new market for our generation. The ensuing pages tell something of the story of this effort.

In the year 1938 three new trade marks flashed across the sky of the bicycle industry: 'Paramount,' 'Superior' and 'New World.' Three Schwinn-Built Bicycles for the adult rider, built in the finest tradition of the 90's with every advance in material and manufacturing technique the years between had brought.

They opened a new market for the American cycle industry. That market has grown with the years and will bring constantly increasing volume and prosperity to the industry. But, these fine, adult bicycles have brought far more than that—better health and much pleasure to thousands of Americans, through exercise and fun; out in the fresh air and the sunshine. Such fine bicycles had not been built in America for a genera-

ARNOLD, SCHWINN & COMPANY

Presents the

PARAMOUNT AND SUPERIOR SERIES OF RACING AND SPORTS TOURING BICYCLES

The ultimate in light weight precision-built bicycles

THE ENGINEERS and designers of Arnold. Schwinn & Company have incorporated in these bicycles all that is practical and desirable of the most advanced thought and practice in modern design. engineering. precision workmanship and metallurgy. ⋄ The materials used include the most recent developments of modern metallurgical science—Seamless drawn tubing of Chrome Molybdenum steel—Heat treated high carbon Chrome Molybdenum and Nickel steel drop forgings—Dural drop forgings and stainless steel—The finest rubber compounds and textiles and the best of other materials obtainable. ⋄ These light weight bicycles and parts are built in a new and separate factory on special precision tools and machinery. ⋄ With the production of these super-fine light weight touring and racing bicycles, the United States of America takes its rightful place among the leaders of the fine bicycle manufacturing nations of the world.

THE MOST IMPORTANT CONTRIBUTION TO AMERICAN CYCLING AND THE BICYCLE TRADE IN FORTY YEARS

ARNOLD, SCHWINN & COMPANY · CHICAGO

The Schwinn-Built 'Paramount' bicycles —the finest adult type cycles in the world

tion. The few in use in this country had been imported from abroad. The leadership of Ignaz Schwinn re-established their production in our country.

When our participation in the great war temporarily halted cycle production, Arnold, Schwinn & Company was producing three distinct types of fine, light, adult bicycles from the very finest money could buy, to the popular priced models, and a selection of parts and accessories as complete as any to be found abroad.

THE WAR EFFORT

EARLY IN 1941 the executive staff of Arnold, Schwinn & Company was concerning itself with the possibility of serving our country in the event we should be plunged into the war then raging in nearly every quarter of the world. Three months before Pearl Harbor the company was already producing critical war materials in spite of the greatest cycle production in its history. Ignaz Schwinn had served his country in this respect before. In World War I he had produced training plane motors, bomber plane parts and numerous other items in his factories. By the end of 1942, Arnold, Schwinn & Company was busy with an all-out effort for war. The company received the Army and Navy "E" Award for the excellence of its performance in the production of war materials. The company produced shells and munitions parts of various types, airplane parts for the primary training planes and other planes, intricate and difficult tube structures for highly secret electronic devices, parts for the ship building program, parts for gun mounts, communication devices and other items.

As this is written, in the fall of 1944, the company has successfully produced and delivered 217 different items to various Army, Navy and Air Corps Departments. The engineering department of Arnold, Schwinn & Company has contributed to the design of important and critical items for various branches of the Army and Navy, in most instances without any thought of procuring additional work, because it already had all it could do to carry on the work in hand.

Arnold, Schwinn & Company has been entrusted with the production of much highly secret and critical work, and for that reason but little of the story of its performance can be told at this time.

A few statements from the presentation address of Commander Singer for the Navy

at the presentation of the Army-Navy "E" award, are quoted below:

"Not only have you consistently met or anticipated your delivery schedules, but you have kept up a high standard of quality that resulted in a need for rejecting less than 1% of your production. That makes you practically perfect. . . . "

. . . "your records are particularly noteworthy because of the difficulties you have had to surmount in converting from peacetime to war production. . . ."

"The Navy also appreciated the valuable research and design contributions you have made and the way in which your time and energies were generously offered. . . ."

Major Roesch for the Army in his presentation address said:

". . . you at Arnold, Schwinn & Company have done a remarkable job. I know, because we of the Chicago Ordnance District know where to go when we want a job done right and fast."

"You all remember that you have been called upon by us not only for large-scale production jobs, but also for special rush, urgent effort . . . and you have succeeded. Your record is an outstanding one. . . ."

In spite of an all-out effort for war, Arnold, Schwinn & Company's policy for an always better product has not lagged. Somehow, in every spare moment and many an evening far into the night, a gigantic postwar program was developed and when the war is over, Arnold, Schwinn & Company will be ready with much that is new and fine in bicycles and the largest program of new and modern equipment the company has undertaken in its history.

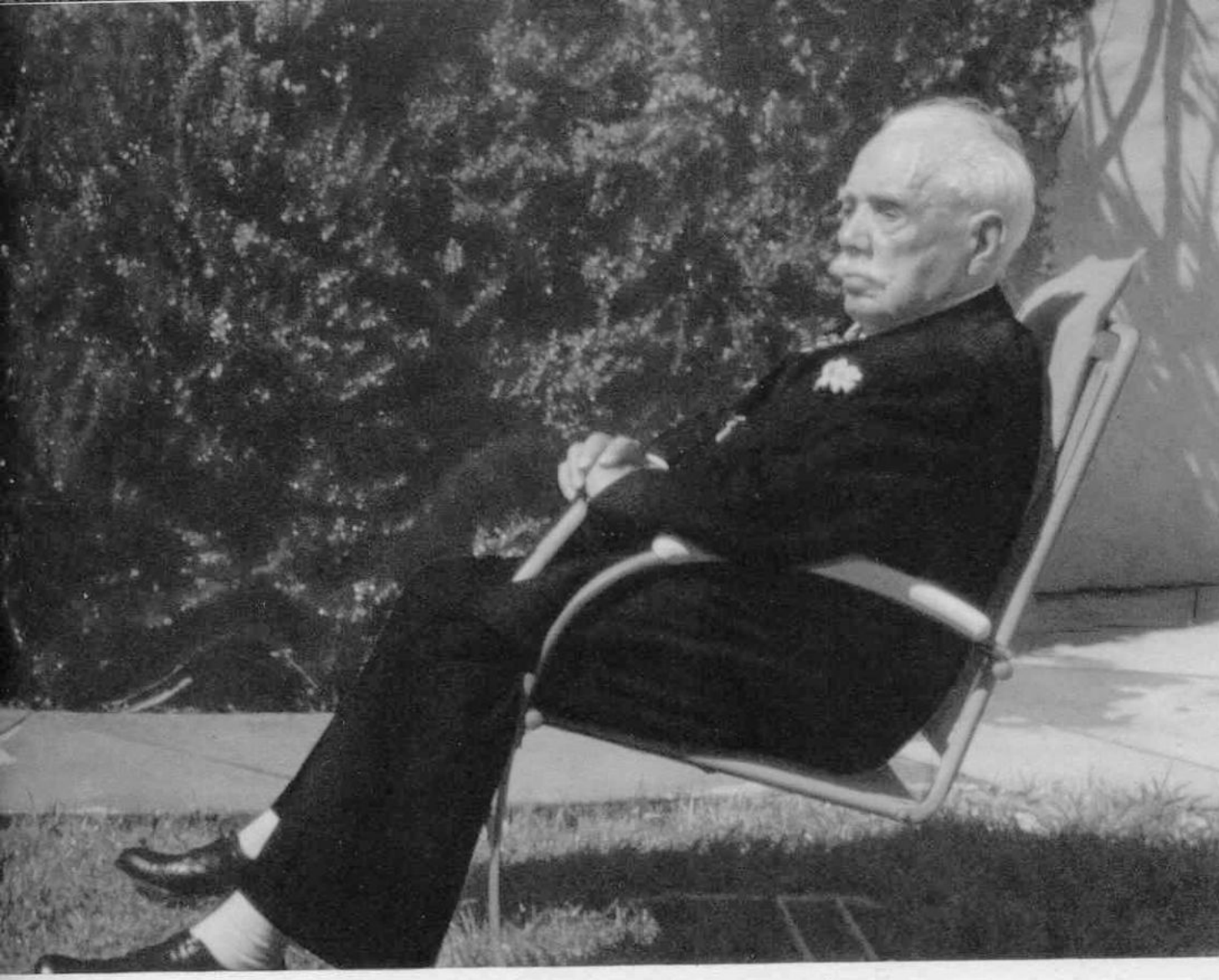
Army and Navy E Award presentation ceremony

THE ORIGIN OF ARNOLD, SCHWINN & COMPANY'S LEADERSHIP

THE OLD WORLD across the stormy Atlantic, torn for centuries by war and revolution, had grown mean and quarrelsome. Then as now, kings and princes, ministers of state and saviours of the people, politicians all, had played ducks and drakes with every vestige of human rights. For their personal advantage, their greed for power and what they called "glory," they had pitted nation against nation, class against class, brother against brother until hatred was the watchword and peace, when there was peace, was only an anxious interlude. The common man suffered the decrees, laws, rules and iniquities of king and commoner alike and finally, stripped of nearly everything in the way of personal liberty, he staggered on under a fantastic burden of taxation born of national insolvency—that handmaiden of war. The lot of the common man was not an enviable one. Of opportunity there was so little the very word was mockery; but with that inextinguishable spark—the will to survive and a blind trust in his Maker, he carried on. That he made so much out of so little, will always remain the greatest of miracles. But, there were many who could not find contentment. They had more courage, perhaps, and a blind instinct which moved them to seek a better way of life.

For centuries they gazed into the unknown —searching, watching. At long last, a faint glimmer of the light of personal freedom arose on the far horizon. That strange, and at that time almost legendary new world, America, was becoming a reality, an escape. They came, slowly at first, for the way was long and hard; but as these more courageous souls sent back words of encouragement, more came, and still more. By the end of the 19th Century that moving mass of human seekers after freedom and opportunity had become as a mighty stream, as many as five million souls and more in a single decade—and still they came. In the first fifteen years of the 20th Century the flood-gates burst. A migration unprecedented in the history of mankind was on. A mighty flood of humanity which flowed not in thousands or hundreds of thousands, annually, but in millions. Nearly fourteen million human beings came to America in fifteen years.

How were they to fare in that new land? Those teeming millions with their confusion of tongues, their many different manners and customs, this mixture of many races who worshipped the same God in so many different ways? Millions upon millions of human beings needed food, clothing and shelter—they needed work, well organized; and needed it quickly, lest millions starve. To obtain it they needed, above all, leadership—and leadership of no mean order. That leadership, that power for organization, did not fail to come forward and its story is one of the great sagas of humanity. Whence came that leadership? It came with the people! They came, those many leaders, unheralded and unsung. In the main, just so many immigrants. There were those among them, even among the most humble, whose minds transcended the petty things, and who carried within their breasts that quiet courage which makes no blustering show, but never cries "quits." They arose from the ranks, quickly, and there were many of them. They organized for their



"With deeds my life was filled — not with inactive years" — OVID

fellows the work which they must have to live; organized it quickly, surely, and fairly, asking nothing but the right and freedom to build and to grow with their building.

Today, many lesser men, frustrated by their own dubious accomplishments, presume to criticize the manner of that building; but they built well, those many leaders, each in his sphere, great or small. Together they built our farms, our industries, our cities and our markets. Together they built that miracle which is America, preserving always that measure of freedom, without which all building, all progress must sooner or later cease.

One of those many leaders, those builders, was Ignaz Schwinn. He was one of the men who leaped into the breach and provided work for his fellow men. He too helped to build America. His work is nearly finished, and he rests now, quietly in the warm sunlight, contemplating the manner of his building, and at peace with the world.

Of his many endeavors, there is none finer than that which brought to so many thousands the opportunity to help themselves along their way through life by fabricating the materials he needed, selling the product he manufactured or gaining a livelihood in his employment. The quality of the leadership, which made Arnold, Schwinn & Company, is its very lifeblood. The example of courage, diligence and industry which Ignaz Schwinn has for so many years lived for his organization, will carry on. It will not be forgotten.

THE BICYCL

THE BICYCLE serves us in many ways. For years it has brought your newspaper to your door in fair weather or foul; delivered those urgent messages—the telegrams; that medicine you wanted quickly from the drug store, or a quart of ice cream; food from the market in response to a telephone order; and so much in similar service. The bicycle with the big basket has long been a familiar sight in our streets. This short distance delivery is inexpensive; it requires no motor fuel; its tires last so long they are discarded because of age deterioration more often than because of wear. The investment in the cycle is small and with reasonable care it lasts indefinitely. But for the bicycle, this service would be costly, perhaps far too costly and we would lose much in the way of convenience.

The bicycle is the transportation of our children and our youth. It takes them to and from grammar and high school and is seen

IN OUR ECONOMY

in constantly increasing numbers on the campuses of our colleges. The yards of our grammar and high schools attest to its popularity and practicability. Always there are bicycles in the school yards and often hundreds of them.

It is cheap, pleasant, safe and healthy transportation. But for the youngster, it is far more than that. Every normal boy and girl wants a bicycle. It is one of the most important things in their young lives. In our age of mechanization, mechanical devices have a constantly increasing interest for our children, and nothing satisfies that interest so much as the bicycle. With the bicycle they

School parking spaces crowded with bicycles attest the utility value of the bicycle

can visit their friends and playmates, not only in their own neighborhood, but far afield. They can ride to the ball game across town, to the parks and places of amusement; and, on Saturdays and holidays, out into the country to the lakes and streams and woods. Best of all, cycling is always the finest of exercise, out in the fresh air and sunlight, building strong, healthy bodies for another generation. It teaches children the rules of traffic control and safety and conditions them for the greater responsibility of driving a motor car later on.

Youth hostels are becoming more popular with older children and youths, and as the popularity increases their numbers increase also. Bicycling and youth hosteling go hand in hand. This great youth movement and bicycling are essentially democratic and will contribute much to the physical and mental

A familiar sight in school yards of every city and town

well-being of future generations. It takes the child and the youth out of the cramped environment of many living places, into the broader aspects of the surrounding territory and gives them the opportunity to exchange views with companions from other sections.

The great depression of the 30's brought a re-awakening of adult interest in cycling, born perhaps of a desire for simpler, saner living after the strain of the frantic 20's. That interest has grown constantly and bids fair to become an important factor in adult recreation and transportation. Factory yards, like school yards, have ever-increasing numbers of bicycles, during working hours. Workers who live within cycling distances of their work, are beginning to realize the folly of driving their motor cars comparatively short distances to and from work, and subjecting them to deterioration brought about by standing out in the dust and baking heat of summer.

Youth Hostel Trails or 'Loops' are laid out along less frequented roads, with Hostels located at easy cycling distances

More important, perhaps, is the growing realization of the need for exercise in the sun and fresh air and there is none finer than cycling. You can exercise with the expenditure of any degree of effort from the slow sauntering ride—so much less effort than walking—to the extreme of the stiff, thirty-mile-an-hour clip. It is an exercise adjustable at will, to the desire and strength of the young and the old, and always it is fun to do, out in the fresh air and sunshine where it will benefit most.

Cycling for health will do much toward relieving the nervous tension of modern living and overcome the debilitating effects arising from the convenience of modern, mechanized transportation, both public and private. Too many of us go on vacations to regain something in the way of physical fitness, only to pass the time in an all too sedentary manner. The bicycle can make your vacation not only more beneficial, by supplying the very best of exercise, but add to your enjoyment by transporting you to out-of-the-way places of interest, many of which are not easily accessible by motor car and, perhaps are a little too far for walking. Cycling requires only a pathway. Where bicycles have been made available through the installation of bicycle rental depots, their popularity with vacation-

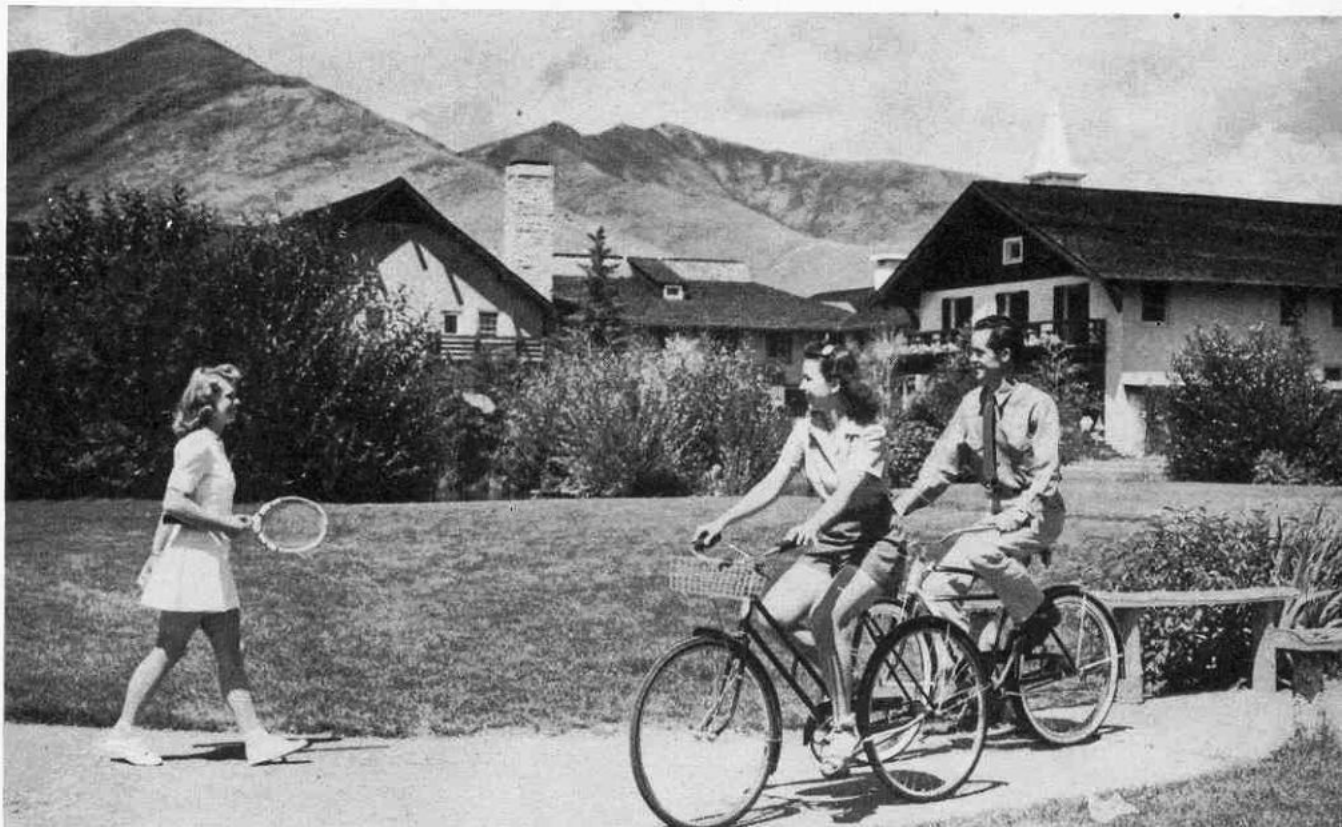
Long lines of war workers' bicycles are parked at war plants

Bicycles solve the transportation problem for war plant and factory workers

"Time out for lunch!"

The broad highway—companionship and pleasant cycling

Atlantic City Board Walk is a popular cycling promenade



In Beautiful Sun Valley, where vacationists go in for cycling and sports

Sunny Miami Beach, where cycling has long been a pleasant pastime

ists demonstrates how much the bicycle adds to the pleasure and enjoyment of 'time out for play.' At Yosemite National Park, for instance, even in the war season of 1944, over 100,000 hours of bicycle renting were recorded up to September 30. Railroads transport bicycles as baggage. It costs you little or nothing to take a bicycle along on your vacation, or if you are going by motor car, your cycle dealer will arrange for packing and shipping at very little cost.

Buy a bicycle and prove to yourself how much cycling can do to make you physically fit, to relieve you of those extra pounds you know you shouldn't have. Take a bicycle on your next vacation and come back feeling so much better than you ever have before. But —buy a *good* bicycle! a bicycle which will give you service free of trouble and annoyance for a lifetime; one which proudly carries the hallmark of the factory which is famous for bicycles that are built and equipped for the service you require. A genuinely fine bicycle costs so little more.

Yosemite National Park, where thousands annually explore this vacationist's paradise on bicycles

A PRODUCT, *like an individual, has character—good, bad or indifferent as the case may be, and only too often, nondescript. The character of a product reflects the character of its maker, of the organization behind it. In the degree to which that organization recognizes its responsibility to the consumer and is willing to replace defective parts which in spite of its vigilance and care may occur in its product—in that degree you can judge the honesty and integrity of the organization.*

Arnold, Schwinn & Company has always stood squarely behind its product, and for fifty years has had a policy of replacing any part of its manufacture which proved defective either in material or workmanship. The Company has never set a time limit upon this self imposed obligation. Parts which prove defective are replaced regardless of the length of time they have been in service.