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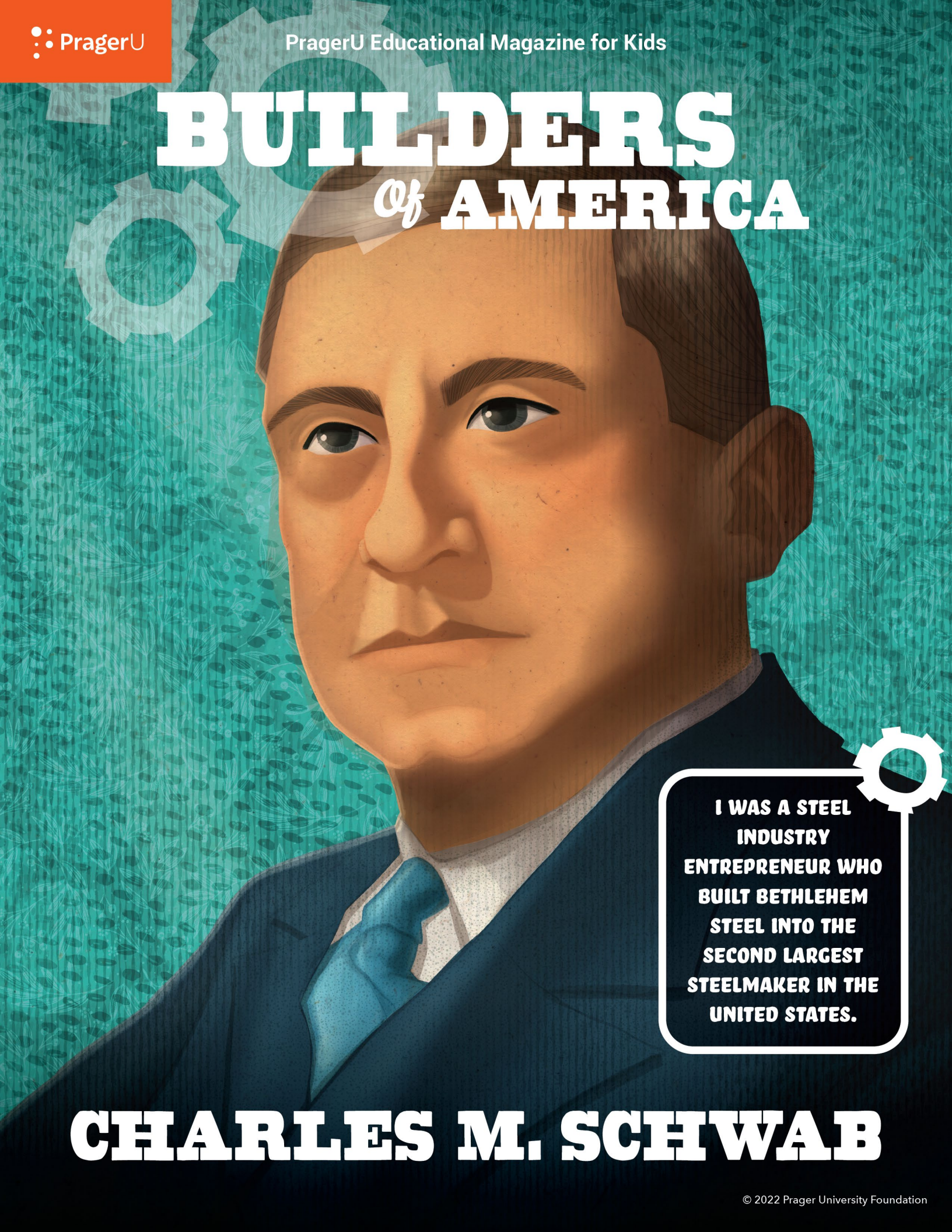
BUILDERS of AMERICA



I WAS A STEEL INDUSTRY ENTREPRENEUR WHO BUILT BETHLEHEM STEEL INTO THE SECOND LARGEST STEELMAKER IN THE UNITED STATES.

CHARLES M. SCHWAB

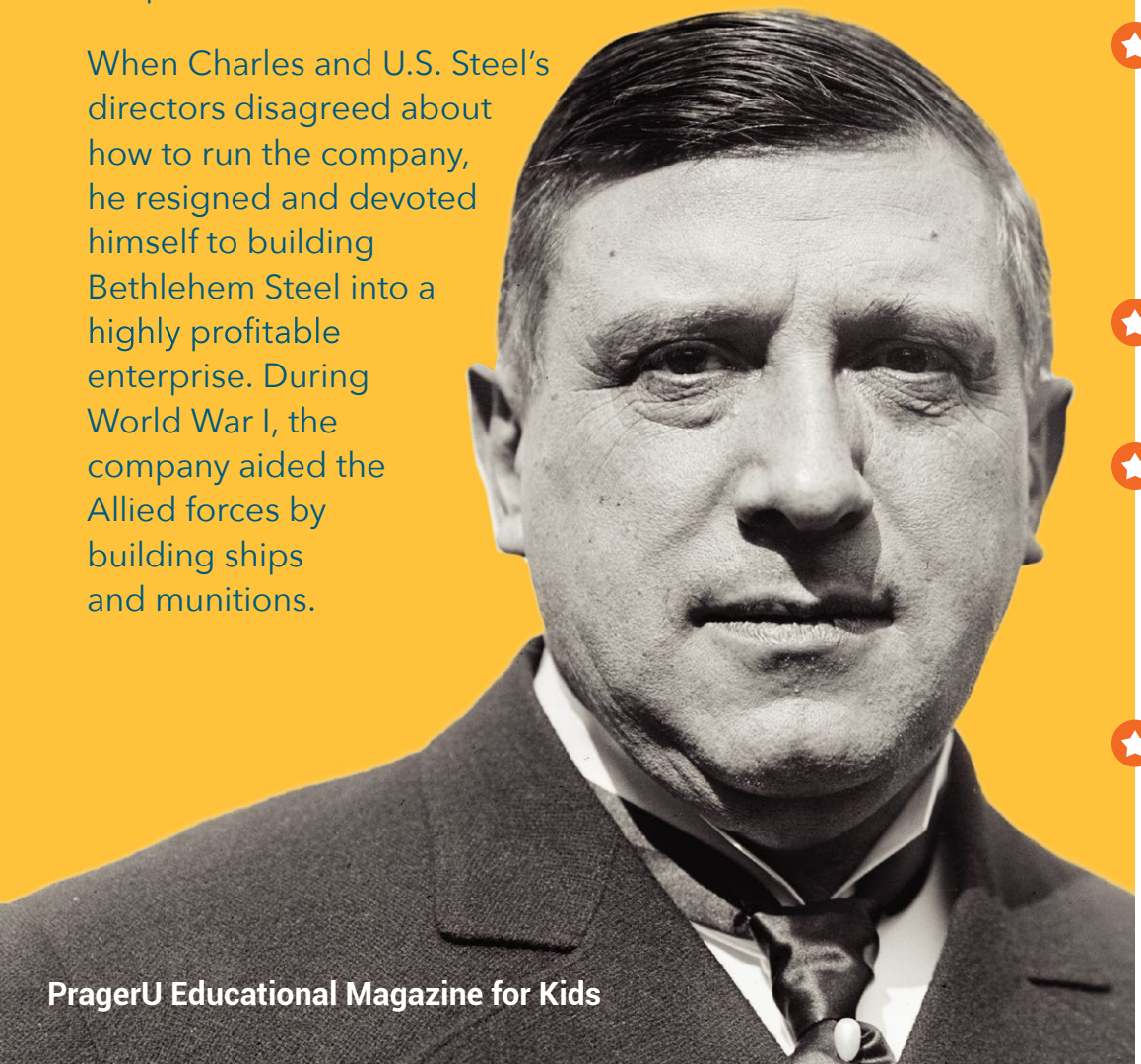
Meet Charles M. Schwab

Charles M. Schwab (also known as "Charlie") emerged from a modest upbringing to become the foremost production expert in the U.S. steel industry. A natural entertainer, young Charlie delighted family and friends with his musical talent and outgoing personality.

From a young age, Charlie desired to make a favorable impression. He never wanted to admit when he didn't know the answer, often pretending that he did. Then, he worked really hard to figure it out quickly.

At seventeen, Charlie entered the steel industry as a day laborer in Andrew Carnegie's mill. He pleased his supervisor through hard work and initiative. Charles soon became the mill's assistant manager and continued his ascent to the top of the steel trade. He eventually served as president of the Carnegie Steel Company and later, of the United States Steel Corporation.

When Charles and U.S. Steel's directors disagreed about how to run the company, he resigned and devoted himself to building Bethlehem Steel into a highly profitable enterprise. During World War I, the company aided the Allied forces by building ships and munitions.



At-a-Glance

- Born on February 18, 1862 in Williamsburg, PA
- Revolutionized the steel industry with his innovative business practices
- Worked with J.P. Morgan to consolidate competing steel companies into the United States Steel Corporation in 1901
- Established Bethlehem Steel Corporation, which became the second largest steel producing firm in the world
- Known for his genius in dealing with people
- By the time of his death, depleted his entire fortune, estimated at $200 million (nearly $4 billion in today's dollars)
- Died at 77 years old on September 18, 1939 in New York City

Humble Beginnings

Charles Michael Schwab was the eldest of Pauline and John Schwab's eight children, three of whom died in infancy. Charlie was born in Williamsburg, and the family later moved to the small Catholic village of Loretto, Pennsylvania.

Charlie's father and grandfather worked as weavers and traded wool products. During the Civil War, they produced blankets and overcoats for the Union Army.

Although the Schwabs earned enough money to cover the basic necessities, **frugality** was emphasized at home. Pauline made all of the family's clothing. The Schwab children did not own many toys, nor did they receive many gifts. Later in life, Charlie recalled that there was even one Christmas where his stocking contained only a single marble.

The family's primary source of entertainment was music. On Saturday evenings, Charlie's grandfather would borrow a small church organ and lead his children and grandchildren in song.

From an early age, Charlie felt comfortable in front of an audience and exhibited a natural talent for singing. He liked to entertain relatives and guests with songs, jokes, and magic tricks. Charlie usually played the starring role in his school's recitals and pageants.

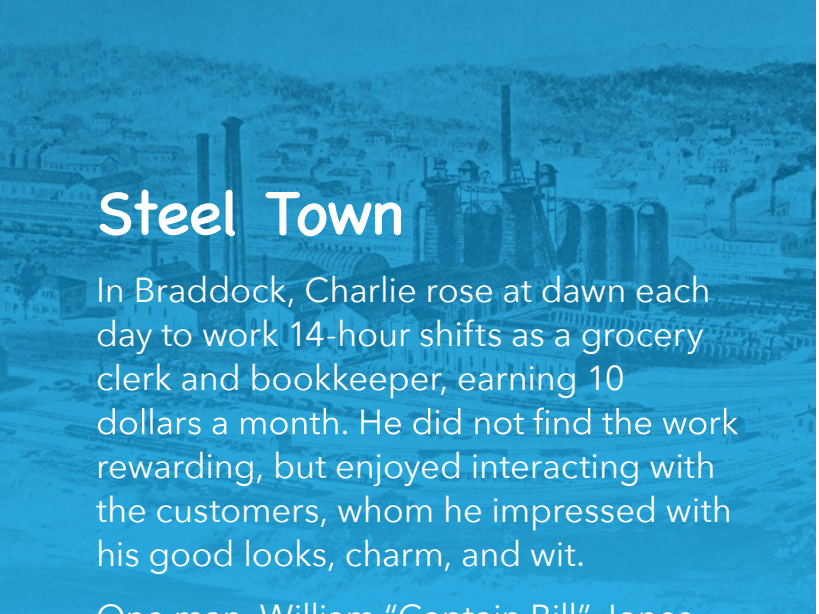
A STAR IS BORN

Charlie was a star student at St. Francis College where he studied Christian doctrine, literature, history, and math. He also took courses in public speaking, perspective drawing, bookkeeping, surveying, and engineering.

Charlie was fiercely competitive and driven to excel. One of his teachers later reflected that Charlie was a boy who never said, "I don't know." He operated under the principle "pretend that you know and if you don't, find out mighty quick." Thus, some of his success was due to bluffing.

When Charlie wasn't at school, he delivered mail to neighboring villages. Occasionally, he also carried passengers in his mail wagon. He earned a reputation as the "singing cabby" for entertaining them with ballads.

One passenger gave Charlie a travel book that opened his eyes to the world outside small-town Loretto. An ambitious young man, Charlie longed to begin a career in the theater. Instead, his parents arranged a position for him as a grocery clerk in Braddock, a suburb of Pittsburgh. At age seventeen and a year before high school graduation, Charlie left home.



Steel Town

In Braddock, Charlie rose at dawn each day to work 14-hour shifts as a grocery clerk and bookkeeper, earning 10 dollars a month. He did not find the work rewarding, but enjoyed interacting with the customers, whom he impressed with his good looks, charm, and wit.

One man, William "Captain Bill" Jones, mill superintendent of the Edgar Thomson Steel Works, took an immediate liking to Charlie. They discovered a mutual interest in music and became friends. Captain Bill asked if Charlie might be qualified for a position at the steel mill.

Although he hadn't graduated from high school, Charlie presented his certificates for completed coursework in surveying and engineering. Captain Bill offered him a position at Edgar Thomson Steel Works, and Charlie began work in September 1879. Initially, he worked as a laborer for the engineering corps that designed plans for building furnaces.

Charlie relied on his basic knowledge of engineering to give the impression that he was skilled in surveying and engineering. He then learned on the job, asking questions whenever they would not reveal his lack of experience. At night, he increased his knowledge by reading books about the steel industry.

Charlie worked overtime to master his craft and within months, he had become Jones' right-hand man. In this role, he often delivered messages to mill owner Andrew Carnegie.

Standout Worker

Thankfully for Charlie, Carnegie promoted workers based on merit. He sought employees who could help make the best possible steel at the lowest price and rewarded those who excelled through bonus payments and partnerships.

Capable and competent, Charlie advanced through the organization, soon becoming Andrew Carnegie's chief problem solver. As he completed small assignments successfully, he was given greater responsibility. Charlie installed meters in the factories and reduced natural gas waste. He redesigned a rail-finishing department, resulting in reduced manufacturing costs. He helped calm angry workers during a violent strike in the Homestead plant. When Captain Jones died in a blast furnace explosion in 1889, Charlie became the superintendent at Braddock.

Charlie greatly admired Carnegie's efficiency and thorough knowledge of the business, watching and learning as Carnegie rose to the top of the American steel industry. At 35, Charles became president of Carnegie Steel and the two men ran the company together. The company's profits soared as they made further innovations, increasing efficiency and reducing the production cost.

U.S. STEEL

When Carnegie retired, he sold Carnegie Steel to J.P. Morgan for $480 million (nearly $10 billion in today's dollars). Charles served as his **emissary** and worked with Morgan to combine Carnegie Steel with other companies to establish U.S. Steel, the first billion-dollar company in American history. At Morgan's insistence, Charles served as its first president, earning an annual salary of over $2 million.

Charles' role as president was short-lived. Morgan had organized the new company to be run by an executive committee that set company policies and relied on Charles to implement them. The board valued stability over riskier strategies such as price-cutting, technology development, and profit-sharing. This management structure inhibited Charles' ability to innovate at U.S. Steel in the same ways he had at Carnegie Steel, and he soon found himself at odds with the company's board of directors.

Personal Struggles

Under Carnegie's **tutelage** and influence, Charles kept his extravagant tastes and tendencies in check. However, after Carnegie's retirement, Charles' life took a different direction. He built a massive New York City mansion that consumed an entire city block and cost a fortune to maintain.

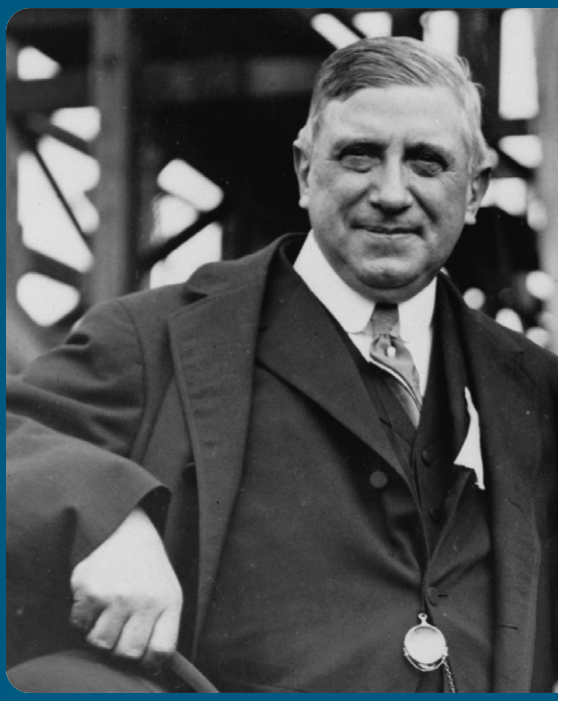
He began gambling in the casinos of Monte Carlo, and was frequently absent from home, straining his marriage. The combined stress of work-related demands, gambling pressures, and high home expenses took a toll on Charles' physical and mental health; and in 1904, he resigned from U.S. Steel.

While employed at U.S. Steel, Charles made a private investment in a much smaller steel company known as Bethlehem Steel. Founded in 1857 as Bethlehem Iron, the company had successfully manufactured wrought-iron railroad rails, but after the Panic of 1893 it had survived mostly on government contracts.

Bethlehem's future was in doubt when Charles Schwab arrived in 1904 and boldly announced that he would make it "the greatest armor plate and gun factory in the world."

"The fellow who sits still and does what he is told will never be told to do big things"

— Charles Michael Schwab



"I love to appeal to the American spirit of conquest in my men, the spirit of doing things better than anyone has ever done them before. There is nothing to which men respond more quickly."

— Charles Michael Schwab

The "Bethlehem Beam"

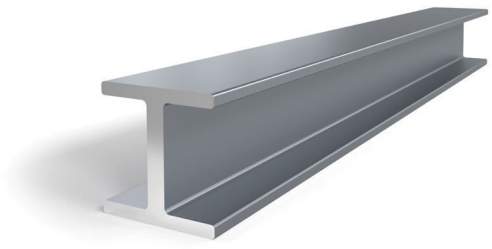
Charles wanted to challenge U.S. Steel through a multi-pronged approach. First, he began to move Bethlehem Steel away from its reliance on government contracts. Then, he shifted to the **open-hearth process** for steel production, as opposed to the older technology that U.S. Steel employed.

He clashed with the conservative Bethlehem staff, who viewed him as an outsider. So, he reorganized the staff from top down, offering fifteen young men out of the mill the opportunity to be his partners.

Finally, Charles also looked to technology to challenge his former employer. He took advice from inventor Edward Grey, who had developed a way to make steel beams differently. Grey claimed that beams could be made directly from an ingot as a single section instead of riveting small beams together, offering stronger beams at a lower cost. Other steelmakers rejected Grey's theory, but Charles took a chance.

He invested his own fortune and persuaded other wealthy investors, raising $5 million to design the plant, build the mill, and pay Grey's **royalties**. Bethlehem Steel soon began manufacturing steel **girders** for skyscrapers. Charles aggressively recruited big contracts for his "Bethlehem beams," making it his greatest innovation.

By the 1920s, the Bethlehem beam had become such a powerful product that U.S. Steel began secretly making Bethlehem beams to keep up with the competition.



Innovation Through Incentives

U.S. Steel offered bonuses based on the overall profitability of the company, not on individual performance. By contrast, Bethlehem Steel offered an elaborate profit-sharing system based on Charles' belief that every man should get exactly what he makes himself worth. In *Succeeding with What You Have*, Charles wrote: "This is the only plan I know of which is equally fair to the employers and every class of employee."

Charles rewarded workers with bonus pay based on the time allotted for each task. Therefore, any shortcuts the worker could devise to complete it faster, or any unusual energy he may have shown, were turned into profit for him.

In the case of specialized tasks, Charles was more concerned with the quality of work rather than the quantity turned out in a given time. If workers rushed too much, a lot of steel would have to be thrown out. In the case of efficiencies, Charles took into account every element that depended on the initiative, originality, energy, or manual dexterity of a worker.

To manage the system, Charles created a costly department of statisticians to measure operational productivity, arguing that "it paid for itself a hundred times over."

The incentives were aligned such that Bethlehem Steel's workers were motivated to give their best efforts to their work, and **per capita** output in some departments almost doubled. Charles' employees were the best paid men in the American steel industry.

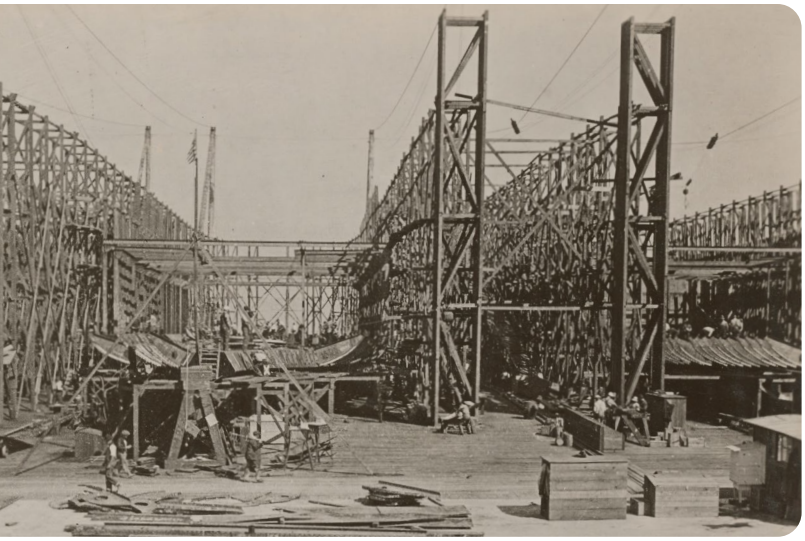
Through his unique approach to profit-sharing, Charles made Bethlehem Steel even more competitive, doubling its workforce every five years from 1905 to 1920. During the same period, U.S. Steel's workforce stagnated.

The result? Bethlehem Steel's sales increased 2,200% from $10 million in 1904 to $230 million in 1916.

The Schwab residence, known as "Riverside"

ADAPTING THE SYSTEM

Charles believed that his profit-sharing system could be adapted to any industry. He used it in his own home. When expenses soared, he offered his steward ten percent of the first thousand dollars he could save in house expense, twenty-five percent of the second thousand, and one half of the third thousand. The expense of operating the house was cut in half.



World War I

When the U.S. entered World War I, victory was uncertain. More ships were needed, resulting in delays in shipping cargo and sending troops to Europe. To find a solution, President Woodrow Wilson appointed Charles Director to General of the Emergency Fleet Corporation for the U.S. government. Charles investigated the shipping industry and found inefficiencies including laziness, incompetence, and poor coordination.

He approached the problem by rearranging incentives, tying profits to cost-cutting, and rewarding workers. He often paid productive shipbuilders out of his own profit. By the fall of 1918, ships were being completed on time or ahead of schedule.

Schwab's success with the shipbuilding industry soon resulted in more government contracts, and Bethlehem Steel began making military equipment including armor plate for ships, gun forgings, and shrapnel.

Government Tensions

The federal government sought to build a large Navy, so it urged steel companies to diversify into the **ordnance** business from their primary business of making rails. However, military equipment was complicated and costly, and the steel industry was reluctant to make the shift with the government as its only customer.

With such limited demand, companies like Bethlehem Steel faced high upfront costs to build a production factory. As a result, the government threatened to go build its own factory using federal funds.

Charles challenged this notion, leading the effort to defeat the bill being proposed in Congress. Eventually, the bill passed in the House and Senate, and the federal plant was built in South Charleston, West Virginia. By 1921 it was making guns, projectiles, and armor, all at much higher prices than that of Bethlehem Steel. Within one year, the entire federally funded plant had to be shut down.

Later Life

In the 1920s and 1930s, Charles seemed to lose his entrepreneurial drive. He had accomplished much in his life. Before his death, Andrew Carnegie acknowledged the greatness of Charles' career by writing, "I have never doubted your ability to triumph in anything you undertook."

In 1927, Charles urged the American Iron and Steel Institute members to "live and let live," urging them to fix prices instead of cutting them. He urged the steel men to use their existing plant capacity and not expand.

In 1930, America began charging high taxes on many items following the Smoot-Hawley Tariff, which Charles supported. Many countries responded by closing their borders to American-made exports, including steel products.

When Charles retired, he ran through his fortune by gambling in Monte Carlo casinos, as well as on Wall Street. Even as the Great Depression loomed, Charles continued to spend. His enormous mansion featured a swimming pool, gymnasium, bowling alley, six elevators, and ninety bedrooms, and required a staff of twenty servants to maintain it.

Near the end of his life, Charles suffered from poor health. He had to move into a small apartment when creditors seized his mansion. When he died at age seventy-seven, his debts exceeded his assets by more than $300,000.

Fascinating Facts

- At age seven, Charlie won first prize in a poetry recital.
- When he was eight, Charlie offered to clear his neighbors' driveways of snow. He earned five cents for each driveway and a reputation as a "good boy."
- Charlie married Emma Eurania Dinkey, known as "Rana" on May 1, 1883. The couple never had children.
- Charlie took organ and singing lessons from Reverend Horace S. Bowen, a pupil of composer Franz Liszt.

How to Solve Big Problems

Writing Exercise

Charles believed that "the best place to succeed is where you are with what you have."

1. *What do you think he meant by this statement?*
2. *What special talents or skills do you possess that might help you succeed at school? At a job? In your life?*
3. *How can you make the most with what you have every day?*

Answer key on page 10

What Do You Know?

1. Charles M. Schwab is best known for:
   - a. His ability as a performer
   - b. Revolutionizing the American steel industry
   - c. Serving as President of U.S. Steel

2. Charles learned about the steel industry by:
   - a. Learning on the job
   - b. Reading books about it at night
   - c. Asking questions
   - d. All of the above

3. Charles greatly learned from, and admired his longtime employer:
   - a. J.P. Morgan
   - b. Andrew Carnegie
   - c. "Captain Bill" Jones

4. Charles transformed Bethlehem Steel by:
   - a. Investing in a new manufacturing technology for steel beams
   - b. Offering employee bonuses based on overall profits
   - c. Actively seeking government contracts

5. Charles's profit-sharing plan resulted in:
   - a. Lower quality of work
   - b. Increased production and sales
   - c. Poorly paid employees

6. During World War I, Bethlehem Steel focused on:
   - a. Steel beams for skyscrapers
   - b. Wrought-iron railroad rails
   - c. Shipbuilding, guns, projectiles, and armor

Detect the Difference

Find the five differences in these nearly identical images of Bethlehem Steel's towers and machinery (as it appears today).

Answer key on page 11

Glossary

- **Assets**: The entire property owned by a person, association, corporation, or estate, including cash, accounts receivable, securities, inventories, goodwill, fixtures, machinery, or real estate.
- **Emissary**: An agent sent on a mission to represent the interests of another.
- **Frugality**: Careful management of material resources and money.
- **Girders**: Beams used as main horizontal supports in a building or bridge.
- **Open-hearth process**: A 19th century steel making technique invented by William Siemens that uses the wasted heat given off by a furnace. The process redirects those fumes through a brick checkerwork and back into the furnace, increasing the flame temperature, and resulting in a superior product. Although the process has now mostly been replaced by newer technologies, it is still used in about one-sixth of worldwide steel production.
- **Ordnance**: Military supplies including weapons, ammunition, combat vehicles, and equipment.
- **Per capita**: Per unit of population; per person.
- **Royalties**: A share in the proceeds paid to an inventor or proprietor for the right to use their invention or services.
- **Smoot-Hawley Tariff**: The 1930 Smoot-Hawley Tariff Act raised the United States's already high tariff rates to protect American businesses and farmers. The tariff added strain to the international economic climate of the Great Depression.

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WHAT DO YOU KNOW? KEY: 1–B. 2–D. 3–B. 4–A. 5–B. 6–C.