

**Finding aid for:  
The Budd Company  
Historical File**

**Accession 2411**

Finding aid by  
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**BUDD COMPANY**  
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**HISTORY:**

Edward Gowen Budd was born in Smyrna, Delaware, on December 28, 1870, the descendant of one of the original Quaker settlers of Burlington, N.J. After graduating from high school, he became an apprentice at the local Taylor Iron Works. From there he moved to the Bement-Pond works in Philadelphia, where, working as a machinist, he completed his studies in mechanical drawing and studied metal-forming and die-building operations. He then moved to the American Pulley Company in 1898 and then to the Hale & Kilburn Manufacturing Company, a manufacturer of furniture and railroad car seats. It was here that Budd as Works Manager, began to replace heavy castings with metal stampings. Budd was one of the first to appreciate the possibilities offered by thin pressed steel. In a sense, he represented the culmination of Philadelphia's long metal-working traditions, making the transition to light, welded construction for twentieth century applications.

While at Hale & Kilburn, Budd began making steel panels for the automobile industry and began to formulate plans for all-steel, welded auto bodies that would be stronger than the wooden and composite bodies then in use. With the encouragement of Charles W. Nash, then president of Buick and a contract for steel body panels from the Hupp Motor Company, Budd formed the Edward G. Budd Manufacturing Company on July 22, 1912. Associated with him were Leo I. Heintz, who later left to found the Heintz Corporation, Joseph Ledwinka, and A. Robinson McIlvaine. The new company was aided by the decision of the Dodge brothers, John and Horace, to cease building engines and chassis for Ford and manufacture their own all-steel car. Backed by Dodge orders, Budd moved into a new facility at Hunting Park Avenue in North Philadelphia. Budd introduced the all-steel enclosed car body in 1923.

Budd also pioneered in the manufacture of all-steel wire automobile wheels. The Budd Wheel Corporation was formed at Philadelphia in 1916. It was reorganized as the Budd Wheel Company in 1921. In 1925, Budd established a new plant at Charlevoix Avenue in Detroit to be close to its customer base. By this time, Budd's patents were being licensed to the major European automakers, and in 1926, Budd engaged in two joint ventures to manufacture auto bodies and parts directly. The Pressed Steel Company, Ltd., was established in combination with Morris Motors of Oxford, U.K. Budd sold its interest in 1936. Ambi-Budd Presswerk, GmbH was organized in Berlin under the management of Paul Pleiss. It was separated from its parent by the Nazi regime, and after the war its facilities were in East Germany. From 1930 to 1943 a third subsidiary, Budd International Corporation, held the Budd interest in these two firms and also handled all foreign licensing.

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**HISTORY: (Cont.)**

The Depression greatly curtailed automobile production, and Budd sought new markets. He had begun to experiment with stainless steel, a material that had been in use for some time, but for limited applications. Budd's chief engineer Col. Earl James Wilson Ragsdale developed the "Shotweld" process of controlled resistance welding which passed an electrical current through the metal to make a strong bond with no discernable joint. Budd combined "Shotweld" fabrication with the strength and rigidity of corrugated stainless steel to create vehicles that were light in weight, durable, were impervious to rust and needed minimal maintenance.

In the fall of 1930, Budd built the first stainless steel airplane, the *Pioneer*, which made demonstration flights across the United States and Europe and was eventually installed as an exhibit in front of the Franklin Institute. However, the company received no aviation business until World War II. Budd also began making stainless steel truck trailers and, beginning in 1932, three experimental lightweight railcars with Michelin rubber tires. The latter were unsuccessful because of their mechanical transmissions, but in 1934, Budd produced the first lightweight, diesel streamlined train, the Burlington *Zephyr* (later the *Pioneer Zephyr*). The *Zephyr* caused a sensation and led to further orders for streamlined railroad cars, whose Moderne interiors were designed by the Philadelphia architect Paul Philippe Cret. Although Budd produced a number of famous trains, including a whole fleet of Burlington *Zephyrs*, the Santa Fe's *Super Chief*, the Rock Island's *Rockets*, the Atlantic Coast Line's *Champions*, and the Seaboard Air Line's *Silver Meteor*, it was never able to get a decent market share, in part because the dominant firm, Pullman, both manufactured cars and operated a national sleeping car monopoly. Budd also pioneered the railway disc brake, which it marketed just before World War II. In 1940, Budd introduced one-piece auto body construction for the Nash Motors Company.

During the war, Budd produced 17 Conestoga RB-1 cargo planes for the Navy, the first large stainless steel airplane. The planes were manufactured in a large facility built by the government on Red Lion Road straddling the Philadelphia-Montgomery County border, but the design was never put into full production. Budd also manufactured bazooka rounds, shells, and bombs. War orders helped the company recoup its Depression losses. Edward G. Budd died November 30, 1946, and was succeeded by his son, Edward G. Budd, Jr. On June 11, 1946, the Edward G. Budd Manufacturing Company and the Budd Wheel Company merged to form The Budd Company, with new financing from a public stock offering. In the same year, Budd purchased the Red Lion plant from the government for use as a railroad car factory.

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**HISTORY: (Cont.)**

The postwar steel strikes interrupted Budd's production and this, compounded by internal production problems, turned Chrysler and then other automakers to begin producing parts in-house. Budd took the lead in bringing an antitrust suit that forced Pullman to divest its sleeping car operations from its manufacturing arm at the end of World War II, and it enjoyed important orders into the mid-1950s. It developed the vista-dome car with a raised sightseeing lounge in 1945, and in 1949, it introduced the Rail Diesel Car (RDC), a self-propelled lightweight passenger car that could be operated by only an engineer and conductor. After that, long-distance rail passenger service began a rapid decline. Budd countered with its "Slumbercoach" that offered economical private sleeping compartments in 1953, and in 1956 it introduced a new generation of ultra-light, low-center-of-gravity passenger cars that it designated "Pioneer III." Except for the experimental *Keystone* train and six electric commuter coaches, all built for the Pennsylvania Railroad, "Pioneer III" attracted no customers.

To revivify its automotive business, Budd introduced an all-plastic body for the 1954 Studebaker and the following year won the contract to produce the bodies for the new Ford Thunderbird. The moribund Railway Division received a boost in 1965 when it received the contract for electric self-propelled cars, eventually called "Metroliners," for high-speed service between New York and Washington. The cars were rushed into production without adequate prototype testing, problems in the electrical components provided by Westinghouse and General Electric delayed the start of service, and the cars never lived up to their supposed potential. Budd also managed to land large contracts for subway cars and from the public authorities that were now overhauling and reequipping commuter rail lines, but these too often required debugging, produced cost overruns and damaged the company's reputation. Between 1977 and 1980, Budd built a new generation of long-distance railroad passenger cars for Amtrak. Called "Amfleet," they were improved, unpowered versions of the "Metroliner" body shells. Budd attempted to market a second-generation RDC, the SPV-2000, in the late 1970s, but these too failed because of poor performance.

Edward G. Budd, Jr., retired in 1967 and died in 1971. In 1970, Budd had losses of \$20 million. In the fall of 1971, Gilbert F. Richards, vice president of sales for the Automotive Division, became president. He moved the company headquarters from Philadelphia to Troy, Michigan, in 1972 to be closer to the auto makers who were Budd's largest customers and the source of 90% of its profits. Budd's automotive sales peaked in 1977 but then declined under the impact of the 1979 oil crisis, the subsequent deep

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**HISTORY: (Cont.)**

recession, and end of Big Three market dominance under competition from superior imports from East Asia and Europe.

In April 1978, The Budd Company became a subsidiary of Thyssen AG of Germany, then the largest steel producer in Europe. Thyssen restructured the company and poured in capital. Thyssen's strategy was to concentrate solely on the automotive industry, and they were able to bring sales back to late-1970s levels with half the number of employees. As the amount of plastics used in auto bodies increased, Thyssen upgraded the Plastics Division. By 1986, Budd had perfected its System 59, by which sheet-molded plastic parts could be produced at the rate of one every 59 seconds.

In contrast, the money-losing rail car business, called the Transit Division since 1978, was gradually abandoned. A second "Amfleet" order, completed in 1982, brought Budd's main line car building to an end. By this time, it was also being undersold by foreign competitors in the transit car market. The Transit Division was spun off to a separate Thyssen subsidiary, Transit America, Inc., on January 1, 1985, to isolate its losses and prepare it for liquidation. On September 18, 1987, Transit America, sold its property, including all the Budd rail car designs, to Bombardier, Inc., of Canada, and the Red Lion Plant was closed. Bombardier had acquired the designs and property of long-time Budd rival Pullman nine months earlier, making it the sole producer of rail passenger cars in North America. The Red Lion site was cleared in the late 1990s, and after environmental remediation was sold for \$6 million and redeveloped with a golf course and housing.

The Budd Company itself ended its long presence in Philadelphia when it closed the outdated Hunting Park Avenue plant in 2002.

**SCOPE AND CONTENT NOTE:**

The records of The Budd Company consist of a synthetic "historical file" assembled for public relations purposes at its Michigan headquarters. Some of the materials were removed from Red Lion and Hunting Park and some created in Michigan. Complete archival records generated at those plants have for the most part been destroyed. While some photographs and pamphlets were removed from Red Lion before the sale, all of the Budd drawings passed to Bombardier, Inc. in 1987, and as of 2008 are still in their possession.

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**SCOPE AND CONTENT NOTE: (Cont.)**

The bulk of the Budd Company gift consisted of photographs, the house organ *Buddgette*, and other publications. These are now housed in the Pictorial Collections and Imprints Departments.

The manuscript historical files contain a number of original items of some importance. Chief among these is an extensive typescript entitled "The Life and Work of Edward G. Budd." This document seems to have been prepared as a basis for writing historical sketches or lectures. It contains both biographical information on Edward G. Budd, Sr., and on the early history of The Budd Company based on interviews and extracts or summaries of now-lost documents. Other important original documents include a report on The Budd Company's facilities prepared for the Rover Company, Ltd., of Great Britain in 1925, a report on the "Shotweld" process prepared for the Civil Aeronautics Authority in 1939, both well illustrated, organization documents for Ambi-Budd Presswerk GmbH, and facsimile of a 1914 letter from the Dodge Brothers about an early Budd order.

The remainder of the file consists of clippings, tear sheets, press releases, and various letters and pamphlets removed from their original context, all dealing with company products, personnel or employee relations. Among these are letters from the Pennsylvania Railroad Company from 1944 and materials relating to the "Pioneer III" and "Metroliner" cars. One of the tear sheets describes how company official Paul Pleiss and his German counterpart at Ambi-Budd smuggled the secret of the German army's innovative 5-gallon gasoline can out of Germany in 1939. This can, manufactured by Budd's affiliate and called the "jerry can" by the British, was the key to supplying the mechanized units of blitzkrieg warfare with fuel and was far more efficient than Allied designs.

The Railroad Museum of Pennsylvania at Strasburg has acquired 13,000 negatives of Budd railroad cars built between 1939 and 1954 from the photographer. It is known as the Budd-Williams Collection, Accession RR96.32.

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- B-1            Airplanes – “Pioneer,” 1969-1977 & n.d.  
                  Ambi-Budd Presswerk, GmbH (German subsidiary), 1924  
                  Appointments – Management, ca. 1960-1973  
                  Auto bodies, 1929-1954  
                  Budd, Edward G., Sr.  
                  “Life and Work of Edward G. Budd,” n.d.  
                  Miscellaneous, 1934-1957  
                  Budd-Thyssen merger, 1978  
                  Budd Wheel Company, 1945  
                  Company History – General, 1937-1981  
                  Dodge Motor Car Company letter, 1914
- B-2            Employee representation plan, 1933  
                  Employee’s guide, ca. 1930  
                  FMC Corporation – Bradley fighting vehicle, 1981  
                  Gas-turbine rail car, 1966  
                  Jerry cans, 1950-1975  
                  Labor relations, 1945-1946  
                  “Metroliners,” 1965-1968  
                  Milford Fabricating Company, 1993  
                  Ordnance, 1944  
                  Payrolls, 1912  
                  Pennsylvania Railroad Co. – Passenger cars, 1944  
                  “Pioneer III” railroad car, 1956  
                  Press releases, 1982, 1984  
                  Press releases & news clips, 1979-1982  
                  Product Development Division, 1972  
                  Ragsdale, Col. E. J. W. – Death – Condolences, 1946  
                  Rail Diesel Car, 1962  
                  Railroads – General, 1944-1961  
                  Railway Division, ca. 1980  
                  Rover Company, Ltd. – Report for (ilus.), 1925  
                  Shotweld process – Report to Civil Aeronautic Authority (illus.), 1939  
                  Streamlined trains:  
                  *Burlington Twin Cities Zephyr*, 1945  
                  *El Capitan*, 1954  
                  General, 1947  
                  *Prospector*, 1941  
                  *Sunset Limited*, 1950
- B-2            Subway cars, 1960

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Transit America – Freight cars, ca. 1990

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