FROM CUB TO CHEYENNE

The Story of

Piper Aircraft Corporation

Half a century ago a company in a depression-ridden community in upstate Pennsylvania went into voluntary bankruptcy. The news scarcely made the local newspaper. The company was small and its contribution to the local economy equally small. Reorganized, and with a subsequent change in name, this company last year grossed $400 million in total sales. It has left an indelible imprint on one important segment of the American business community - the manufacture of aircraft for non-military, non-airline flying: general aviation.

General aviation includes personal flying, agricultural dusting and spraying, pipe line patrols, mapping and rescue, natural resource prospecting, life-saving ambulance airlift, taxi and commuter operations, and growing increasingly important - business airplanes which greatly multiply management efficiency and effectiveness.

General aviation barely existed on that day in 1931 when the Taylor Brothers Aircraft Corporation went bankrupt. Therein starts the story of the Piper Aircraft Corporation.

It has been said that the Piper Aircraft Corporation has been a mirror image of its founder. W. T. Piper's personality was embedded in sober British stock that emigrated to New England. He was always a teetotaler. He never smoked. He didn't moralize on alcohol and tobacco -- he merely felt that

neither contributed to a man's longevity. He was an anachronism -- a gambler and an archconservative. He took risks but they were calculated. He believed in individual responsibility and initiative. He believed simply that work was both honorable and rewarding.

When Mr. Piper was 18, his father sent him to Harvard because Cambridge tolerated no saloons. Graduated cum laude from the engineering school in 1903, he entered construction engineering, building the first reinforced concrete garage in New York City. Presently he found such work dull. With oil in his background, he returned to Bradford, formed a partnership that owned and operated several oil properties, and thereby got into aircraft manufacturing by the back door.

An aircraft company started by C. G. Taylor had accepted an invitation from the Bradford, Pennsylvania, Chamber of Commerce to move from Rochester, New York, and shares of common stock in the Taylor Brothers Aircraft Corporation were sold to local residents to finance the operation. A factory was erected. It was about the size of a hangar on most small airports. Mr. Piper and his partner bought only a few shares, sufficient at least to lend moral support to the project.

The company did not fare well. It was building a two-place model that sold for approximately $4,000 in direct competition with several excellent and popular airplanes being manufactured by Curtiss-Wright, Travel Air, and Waco, to name only a few. Many companies, caught in the Great Depression, faced insurmountable problems in 1930 and 1931, and the small, under-financed, fledgling aircraft company in Bradford was no exception. It went into bankruptcy.

Although he didn't personally have sufficient financing and was by no stretch of the imagination even moderately well off, Mr. Piper did have a fair income from his oil properties and a deep-rooted conviction that the airplane was a travel vehicle of the future.

One other factor influenced his decision. A short time before the company went backrupt, he and Mr. Taylor decided that the airplanes then being manufactured for student instruction and airport operations were too expensive, and under the prevailing economic conditions could not be sold. They believed that if a very light plane could be developed within the financial reach of enough airport operators, an entirely new era in aviation would open up.

Two companies had already designed such airplanes, the Curtiss Aeroplane and Motor Corporation, a subsidiary of Curtiss-Wright, and the Aeronca Aircraft Company. Mr. Taylor designed a small, high-wing, two-place monoplane which he called the "Cub." The prospects for the sale of this airplane, as much as anything else, influenced Mr. Piper to stay in the business.

When they picked up the pieces after the Taylor failure, Mr. Piper bought the assets for $600, refinanced from his oil earnings and a bank loan, and in a typical act of generosity promptly gave half of everything to Mr. Taylor. The partnership organized the Taylor Aircraft Corporation.

The Cub was an attractive small plane in comparison to its competition, and as some of the light plane skeptics used to say, begrudgingly, it at least looked like an airplane. But the manufacture of airplanes in the early thirties was tough going. At one point there was so little money in the till that Mr. Piper had to go to a wholesale grocer, an old friend, to ask if he would accept chits to pay the company's employees in food. In

time the company would redeem the chits. The grocer said no. He would be satisfied with W. T. Piper's verbal promise to pay.

During this period engines were available to Piper only for cash and stored at the railroad express office. Mr. Piper would accept a check in payment for an airplane from a customer who personally called at the factory for it. Leaving the customer to the care of the office staff -- what there was of it -- he would race to the bank, cash the check, lash the engine to the bumper of his secondhand car, and whiz back to the plant. There, while the customer finished his fifth cup of coffee, the engine would be installed in the airplane, and it was "test flown" once around the field.

By 1938 three events had contributed to the company's fortunes: The partnership had been dissolved, and Mr. Piper was in sole command; a disastrous fire in Bradford had resulted in the relocation of the factory to Lock Haven, roughly in mid-Pennsylvania; and Adolf Hitler had evoked a worried response in the United States. This country was badly in need of a big reservoir of civilian pilots who could form the core of a military air force.

In Lock Haven, once one of the nation's great logging capitals, the now Piper Aircraft Corporation had acquired a large, abandoned silk mill. At the same time the government instituted a vast civilian pilot training program. Piper alone had the production capacity to meet the demand for a small, inexpensive, trainer-type airplane. The result? Four out of five U.S. pilots in World War II got their original instruction in Piper Cubs.

That war produced such combat aircraft names as Superfortresses, Liberators, Marauders, Avengers, Warhawks and Thunderbolts. Those airplanes

had prodigious horsepower and carried a devastating armament of machine guns, cannons and bombs. Then there was another combat airplane, called the L-4 and made by Piper. It was a conversion of the J-3 Cub, painted Army olive drab and on its nose was a little engine of sixty-five horsepower. One war correspondent reported that when a passenger armed with a .45 caliber automatic climbed in, the airplane's fire power was doubled. Yet the L-4 earned the respect of being one of the world's most effective warplanes.

In use by the thousands in the Pacific, on the continent of Asia and in Europe, the L-4's were Air Observation Posts, and they had at their command the most formidable array of guns in the history of warfare. One observation airplane, completing a mission in less than ten minutes from takeoff to return, could call down on a target the combined fire of several battalions of artillery. When low ceilings grounded the regular photo-reconnaissance planes during the Volturno offensive in the drive on Rome, the entire U.S. Fifth Army was immobilized for days for want of information on the enemy. An OP plane flew right up the valley of that river in the Apennines under the overcast, snapping pictures, returned without a scratch, and the assault began.

Famous generals used the little airplane for transportation and for personal assessment of tactical situations. Among them were Dwight D. Eisenhower, George S. Patton of the Third Army, Omar Bradley, who was in immediate charge of the Normandy assault under Eisenhower, George C. Marshall, Army Chief of Staff, and Mark Clark, commanding the Fifteenth Army Group. Even Winston Churchill flew in the ubiquitous Piper L-4.

Between the first powered flight of the Wright Brothers in 1903 and the start of the decade of the 1960's, thousands of different kinds and brands of aircraft were manufactured. In 1961, a jury of four men, including the famous Jimmy Doolittle, who in 1942 led the first air assault on Tokyo, chose an even dozen airplanes that had had the greatest impact on the course of human flight. The Piper Cub was one of them.

Today, as the Super Cub, this design has had a far longer production life than the Ford Model T, and holds the record for being the longest production run aircraft in man's history.

In the late 1940's the great bulk of general aviation aircraft had limited utility. Aside from control surfaces and wheels, they had only two moving parts -- an engine and a propeller. There were, true, more sophisticated airplanes manufactured by general aviation, but the unit output was small and their prices, measured by the dollar's value of the times, were astronomical. Piper airplanes, and those of less than a dozen competitors, simply were not in the same ball park with the expensive machines. They were not meant to be. They were for more of a mass market.

In addition to the J-3 Cub model, Piper had manufactured a side-by-side Piper two-seater called the Coupe and a three-seater called the Cruiser. With the start of the war, the Coupe was dropped but the J-3 and the Cruiser were continued, a limited number of which were converted to ambulance use.

With the war over, light plane manufacturers were seized with a great delusion. At long last, they thought, a half-million citizens would acquire their own personal wings. In terms of potential sales, the sky would be the limit. Hundreds of thousands of men trained to fly war planes

would be returning to civilian life, and did anyone think that they were going to be happy with a car averaging only thirty miles an hour? Millions of mustered out soldiers would be schooled under a GI Bill, and a hearty proportion of them would elect to take courses in flying.

The light plane industry, with Piper in the vanguard, enjoyed a frenzy of production and sales right up to the Spring of 1947. Then the market collapsed. The reasons for the collapse were several, but a main one was that the product was exactly what it had been before Pearl Harbor. The Cub-type of machine was still an "airport airplane", confined, by and large, to flying in the vicinity of airports. Its utility was minimal. It could not be driven to the grocery store. It had neither the speed, range nor the instrumentation for reliable cross-country transportation.

What finally resulted was a recognition that Piper airplanes had a sizable niche to fill in the spectrum of transportation, but they would have to accommodate four persons and upward. They would need a lot more speed and that meant more power. In comparison with the automobile they had to offer a personal transportation alternative. No longer would a man buy an airplane if, against a brisk headwind, a Ford V-8 could outpace him on the highway below. The light plane no longer could be called a light plane. It could not be noisy and unheated. Its seats could not be wooden benches overlaid with imitation leather stuffed with cotton batting. It must have hours of range. It must take off with reasonable assurance of getting where it was going, the weather, almost, notwithstanding.

One of the first adjuncts to a more useful vehicle hit upon was the tricycle landing gear. It didn't matter that the Wright Brothers had introduced the idea.

The Tri-Pacer was Piper's first use of the tricycle concept. In 1950 and 1951 the company had been manufacturing a plane called the Pacer, a four-place, high-wing model that performed exceptionally well on 135 horsepower, but it had a narrow landing gear and short fuselage. By installing a nose wheel and moving the main gear rearward for balance, the Tri-Pacer was born. To be really stable, the main gear in a tricycle configuration should be spread apart wide enough to give stability on the ground. With a narrow fuselage and a high wing, this is very difficult. Consequently, the trend has been to low-wing design which permits the main landing wheels to be placed as far apart as necessary.

But, the first real breakthrough for the Piper Aircraft Corporation in the postwar period occurred in 1954 when its first twin-engine aircraft was designed. Piper had begun to discover where its markets lay. One was the businessman who wanted to get somewhere in a hurry and didn't have the time to await airline schedules, or had a takeoff point or destination too far from an airline terminal for easy access - a key concept even today.

The airplane developed into a low-wing, all-metal machine with controllable propellers and a retractable landing gear. Originally, it was planned to be a $17,000 machine, an unheard-of low price for a twin. Named the "Apache", this aircraft began Piper's tradition of adopting Indian names for its various models.

The Apache was the only all-metal airplane on the market with a tubular steel framework completely enclosing the passenger compartment. The Aztec, a later airplane and a lineal descendant of the Apache, has the same type of construction, in fact, some of the same tools are used in its manufacture. Going to metal caused the company some trauma. Workmen had

to be re-schooled. A fabric-covered airplane could be turned out with as few as 250-500 tools such as drill fixtures, milling and welding fixtures, router and drill templates, and dies for forming and stretching a small amount of metal. Today, one of Piper's all-metal airplanes, the Navajo, requires over 10,000 tools, and, the turboprop Cheyennes require over 7000 additional ones.

When the cost analysis people got through, the airplane had to sell for almost twice the figure originally set. But the Apache did sell. For its type and price, the airplane had the market to itself. In the nine years that it was produced, Piper marketed over 2,000 of these airplanes.

The Apache was the true cornerstone of the company's postwar growth. Properly priced for a reasonable profit, its sales financed expansion which included construction of a research center and manufacturing facility in Vero Beach, Florida, and that in turn has led into other avenues of airplane design and utility.

There are other markets, of course, besides the businessman in a hurry. Today Piper offers 29 models, including the popular Tomahawk, the first all-new trainer in three decades; a family of four-place, single engine aircraft offering fuel efficient business or personal travel; four spacious, six-place, singles with a variety of options to match their roomy cabins; eleven piston powered twins to meet the needs of business travel; a choice of four luxurious and speedy turboprops -- up to 290 miles per hour; three specially-designed agricultural aircraft; and the still-popular Super Cub -- the longest continuously produced aircraft in the history of man.

In 1976, Piper produced its 100,000th airplane and today the total is more than 122,000. To put this into perspective, consider that this means approximately one out of every ten aircraft man has ever produced has been a Piper. Today, Piper is noted for making and selling more twin-engine business aircraft than any other manufacturer in the world.

The company's manufacturing facilities were expanded as business grew. To the main plant in Lock Haven and the one in Vero Beach -- now mainly devoted to manufacturing -- were added fabricating plants in Quehanna and Renovo, PA., a few miles to the north and west of Lock Haven. In the early 1970s a new factory at Lakeland, FL was constructed. In 1978 Piper acquired the Ted Smith Aerostar Company of Santa Maria, CA., and now produces the Piper Aerostar at that location.

Aircraft design has always been tied to the thrust available, and engines grew in size, power and dependability. The technology of flight has burgeoned. Today omni-directional radio ranges make all weather navigation simple and safe. On the panel of a Piper airplane you can have similar equipment to that found on safety-conscience airlines.

Still another reason for the growth of general aviation has been its public acceptance. Airline deregulation, the decentralization of industry and the 55 mph highway restriction has steadily added to the use of light aircraft. Third level airlines, a quarter of which fly Piper airplanes in and out of airports that the scheduled jets don't serve, are aptly named "commuter airlines."

Piper airplanes almost daily are flown on delivery not only across the Atlantic but the Pacific as well. Pipers have made many record flights. Two Super Cruisers, specially fitted, flew around the world soon after the

war -- the first of their class to do so. Twenty-five years ago Max Conrad, the "Flying Grandfather," flew a Pacer from Minneapolis to Rome and back. For a plane of that size, it was a monumental achievement. The next year a woman pilot, Caro Bayley, set a Category Two World altitude record of 30,000 feet in a Super Cub. In 1959, Conrad flew nonstop from Casablanca to Los Angeles in a Piper and, in 1964, nonstop from Cape Town, South Africa, to St. Petersburg, Florida.. In 1967 Sheila Scott of England circled the world in a Piper. In 1973 Captain Elgen Long flew a Navajo around the world - via the poles - capturing several world records. The company that produced the aircraft capable of such feats was the same company that played so prominent a part in introducing the light plane to America a half century ago. Other record-setting Piper aircraft have been displayed at the prestigious National Air and Space Museum of the Smithsonian Institution.

Following a short illness, W. T. Piper died on January 15, 1970, one week after his 89th birthday. On July 19, 1980, Piper was inducted into the renowned Aviation Hall of Fame at Dayton, Ohio to join dozens of other distinguished aviation leaders. The remarkable achievements of these pioneers and their contributions to aviation and space technology cover a span of nearly three-quarters of a century, beginning soon after the Wright brothers' first successful powered flight, and extend into the present so-called 'Space Age.' Piper was among them for his instrumental role in the development of the lightplane for general aviation and private flying use. A man who started his aviation career at age 50, and achieved a multi-engine rating at age 75, his legacy lives on in the form of a major corporation that continues to stress his insistence upon producing the

highest quality products that offer the greatest value.

Piper Aircraft Corporation has always been -- and will continue to be -- a leader in its industry with technological innovations. Piper was the first to incorporate air conditioning into light single engine aircraft. Piper engineered an automatic retractable landing gear that thinks for itself. Piper's Pawnee was the first mass produced aircraft specifically designed for the agricultural market. Piper led the way with autopilot systems for light single engine aircraft.

Piper employees are proud of their heritage -- proud to have contributed to making America's general aviation industry the finest in the world. But they will not rest on their laurels. A heritage of innovation, quality and craftsmanship only establishes a benchmark for performance -- a goal of perfection that they pledge to attain every year. They believe in making more airplane for the dollar. Only by making this pledge can Piper be true to its founder's heritage.

Today Piper Aircraft is the second largest general aviation manufacturer in the United States. It is owned by the Bangor Punta Corporation, which is primarily a manufacturing company. Its principal products are merchandised domestically and abroad and include, besides Piper, such well-known names as "Smith & Wesson" firearms, law enforcement equipment and sporting products, "Cal," "Ranger" and "O'Day" sailboats, "Starcraft" power boats and recreational vehicles and, in Europe, "Jeanneau" sailboats and powerboats. The Company also operates a large agribusiness, Producers Cotton Oil Company, and manufactures and sells industrial products.

-PIPER-