

routes to Europe, Africa, the Middle East and India.

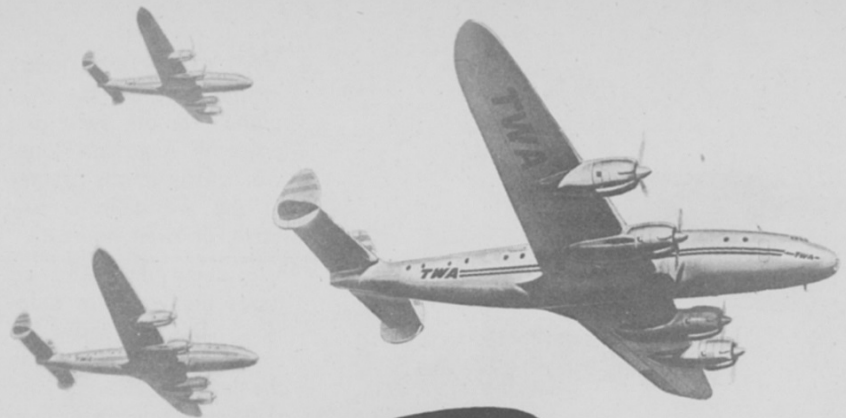
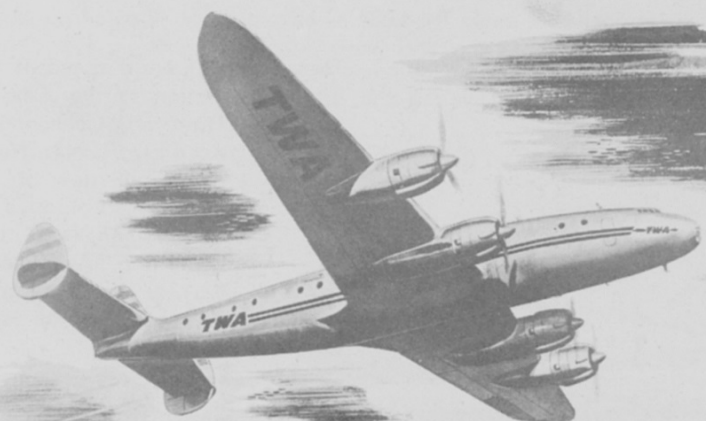
America's military combat planes are the best in the world. The war has proved that. Against the most powerful aircraft that Germany and Japan could send into the air, our fighter planes have emerged the victor. American bombers paved the way for our land force victories in every theater of war. The famous Flying Fortress and Liberator leveled cities in Germany. The great Superfortress, largest bomber then in action, proved the scourge of Japan. Today, the B-36, the Stratojet and other super-planes continue to extend the range, the speed, the capacity of air-power.

Jet propulsion fighter planes appeared during the last stages of the war in Europe. America has been a leader in jet propulsion and has built the world's fastest jet planes. Several of these planes have exceeded the speed of sound—bringing nearer and nearer the every day reality of speeds over 1000 mph.

Already jet propulsion is being designed into transports of the future. Many engineers believe that within a few years jet-propelled airliners will be flying around the world at 500 miles an hour and more. Creating such planes will be one of the jobs for you young model builders when you take up careers in aviation.

Gas turbine engines likewise are being developed. Turbines are similar to jet engines except that they turn a propeller. Both types are much lighter than present-day internal combustion engines of comparable power.

We believe every American boy and girl is proud that our country leads the world in aviation. And just as our young people of yesterday are the aviation leaders of today, so will our present rising generation become the leaders of tomorrow.



# Air Power

by TWA CAPTAIN  
BOB BUCK



Since his first solo flight at the age of 16, Captain Buck has flown more than 1,500,000 miles to every part of the world. In 1930, Buck set the junior trans-continental speed record. In 1931, he set another junior speed record—New York to Havana and return. In 1932, he established a third record—New York to Mexico City to Los Angeles. Buck became a TWA First Officer in 1937, and a Captain in 1940, and Chief Pilot of TWA in 1945. He is now one of TWA's leading million-miler Captains flying TWA's international routes from United States to Europe—Africa—Asia.

**WE ARE LIVING** today in the Age of the Airplane. In our swift and powerful American Planes we can fly to any country in the world in a few days, or even hours.

We know that America leads the world in aviation. Do you know the story of how we became the leaders? Bravery and skill and daring are all a part of this story. I am sure you would like to hear about it.

Two American brothers, Orville and Wilbur Wright, were the first men to fly an airplane.

For hundreds of years, men had dreamed of flying. Orville and Wilbur Wright were dreamers, too, but they were practical dreamers. First they experimented with model planes. Next they constructed and flew gliders large enough to carry a man. Finally they built a 12-horsepower gasoline engine and installed it in a home-made biplane.

December 17, 1903, is the greatest day in the history of aviation. On that day the frail Wright aircraft took wing from the windy beach at Kitty Hawk, North Carolina. It covered 120 feet in level, powered flight. Modern flying had been born.

There was many a young lad who thrilled to the achievement of the Wrights. They grew up to be the engineers, designers and fliers who gave their skill—and some of them their lives—to the cause of American supremacy in the air. In the twenty years after the historic flights at Kitty Hawk, airplanes improved slowly but surely. Then, as now, each new plane was first built in model form and tested in wind tunnels. Models are the first step in all aviation progress.

Planes were increasing in size and power after 1925, the year that commercial airlines started operations throughout the United States. Among early passenger planes, the most famous was the 12-passenger, all-metal Ford. It had three engines and cruised at 113 miles an hour. Pilots affectionately called it "The Tin Goose."

In 1933, TWA, the first coast-to-coast passenger airline, planned "the ideal skyliner." Built by Douglas and called the DC-2, it was the "grandfather" of

modern transport planes. The DC-2 cruised at 180 miles an hour and could fly on either of its two engines. It had "wing flaps" for slower landing speeds, and the passenger cabin was sound-proofed and steam-heated. The DC-2 gave to the United States our world leadership in transport design.

Today's big bombers and transports, equipped with pressurized cabins, fly at altitudes of 20,000 to 30,000 feet. There the air is smooth but thin. Inside these cabins, however, occupants are kept in comfortable atmosphere by pressurized equipment.

This remarkable improvement stemmed from a series of experimental flights at high altitudes made in 1935 and 1936 by D. W. Tomlinson, a veteran TWA pilot. He risked his life many times by deliberately flying into storms to determine how high up the turbulence extended.

Tomlinson found that in the stratosphere above 16,000 feet the air is almost always clear—it is "over the weather." From his data, TWA compiled specifications for a giant high-flying transport. It appeared in 1940—the four-engine, 33-passenger Boeing Stratoliner. The Stratoliner was the first transport with a pressurized cabin for over-weather operation.

Before the war, we Americans had begun to extend our sights beyond the oceans. Air routes around the world were being established. Such flying requires airplanes of long range. Howard Hughes, holder of the round-the-world speed record of 91 hours and 14 minutes, and Jack Frye, president of TWA, conceived an airplane that could fly 4,000 miles and carry 48 to 64 passengers.

It was called the Lockheed Constellation. These planes have a speed of more than 300 miles per hour. Delivering the first Constellation to the Army Air

Transport Command on April 17, 1944, Hughes and Frye flew it from Burbank, California, to Washington, D. C., in six hours and 57 minutes. It was a new transcontinental transport speed record.

The first Constellations flew across the oceans on military missions. With the end of the war they are ready for peacetime service on TWA's domestic routes and foreign

