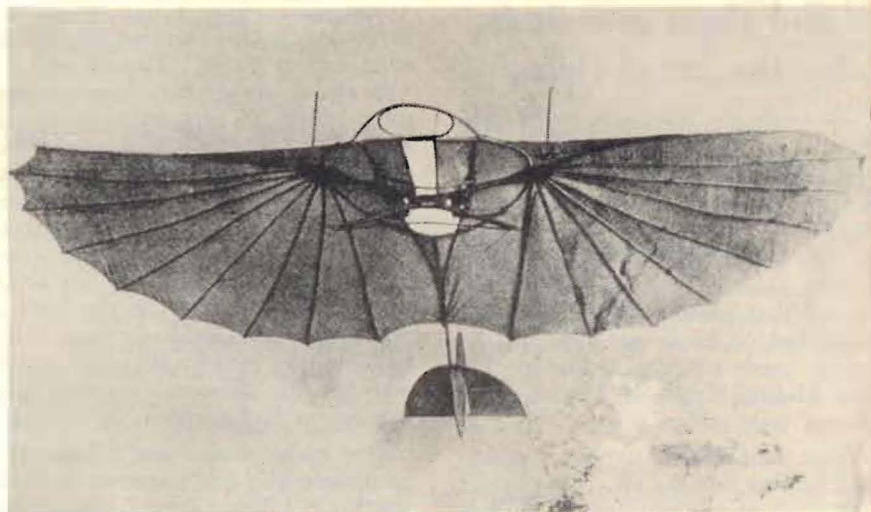


"Passive Flyers" versus "Power Flyers"

An old story in the development of the art of flying, but one that constantly rears up and then complacently drops back, has many times been told to those willing and eager to continue the study of the air in relation to safe and efficient aircraft operation. Despite the fact that agreement had been reached early in the search for a vehicle of the air to the effect that concentration alone on the craft was not the only answer, our power-conscious experimenters ignored air research via the glider. However, as if to re-emphasize the place of the glider in aviation, Orville Wright returned to Kitty Hawk, North Carolina, with a glider to conduct further experiments with an automatic stabilizing device for airplanes.

As an outgrowth of the experimental flights mentioned above, Orville Wright established a duration record for gliders of 9 minutes, 45 seconds, which remained unbroken in the United States until 1928. A German pilot, with a German-designed-and-built glider, was the first to break the Wright record. Incidentally, the latter record-breaking duration soaring flight was made at Cape Cod. As an indication of what the man on the street at this time thought of man's chances of conquering the air, one newspaper item is offered. On January 13, 1911, "The Valley News" published at Waverly, New York, stated, "We are killing off our aviators at the rate of two a day which shows the weakness of our aeroplanes. A fabric as frail as an aircraft needs to be, to be kept afloat in its filmy element will always crumple under the breath of the fiercer winds." The "filmy element" and "the breath of the fiercer winds" referred to above by the news reporter is the air we live in. It does many jobs for us but little or no public attention is focused on what scientists know is not an element at all



Lilienthal "Hang" Glider

but consists of a mixture of several gases making up Cayley's "navigable ocean," called the atmosphere. Atmosphere, or air in motion is a result of temperature and pressure differences complicated by terrain and the rotation of the earth and possibly other factors yet to be proven by soaring flight.

Dr. Albert F. Zahm in his book "Aerial Navigation" published September, 1911 writes: "A separate treatment has not been allotted to passive flyers because of their backward state of development. Passive gliders which maneuver in the air merely by virtue of gravitational force, or acquired momentum, are familiar enough . . . It may be hoped, however, that the vulture's art which now is well-nigh overlooked because of the triumphant advance of dynamic flight, will soon receive such attention that future treatises may relate human achievements in soaring that shall rival the dextrous and marvelous feats of the condor and albatross, as the majestic sweep of the dynamic aeroplane now rivals the powerful soaring flight of the strongest birds of prey." Dr. Zahm had his hopes fulfilled, in part at least, when he was an interested spectator at the soaring expeditions at Big Meadows, Virginia, conducted by the Soaring

Society of America in the fall of 1934.

Despite the many discouragements, a few hardy individuals kept going and "spotty" activity took place in the United States. As was to be expected, the enthusiasts at Massachusetts Institute of Technology, Cambridge, Massachusetts, were not to be outdone and they, as the Aeronautical Engineering Society, started gliding activities. A glider was built by this group and entered, and flown, in an Intercollegiate Meet held at Squantum, Massachusetts.

To return for a moment to the two schools of thought regarding which medium, power or no power, should prevail, the accident frequency among experimenters became so serious that a "special learned commission appointed by State (Germany) officially declared that man would never be able to fly." Despite such an ominous warning, two brothers, Gustave and Otto Lilienthal, German citizens, started the search for what we have today: the airplane. The glider was regarded as the stepping stone in the eyes of all the pioneers and this correct and reliable assumption came to pass. Otto Lilienthal, the patient and persevering brother, has been credited with being the first man to really glide and make a scientific study of gliders and gliding.

The city government wishes the Soaring Society of America success—
smooth sailing.