

The drone of conversation quickly rose to a cry of excited cheers as the crowd that had gathered at a makeshift landing field in Guthrie Center in June 1919 first caught sight of the Curtiss JN-4D Jenny in the eastern sky. With a mail pouch strapped to one wing, the plane and its pilot, Carl Duede, were completing the first airmail flight ever flown in Iowa. Originating at Fort Des Moines, the flight carried a hundred copies of the *Des Moines Capital*, a cargo that was eagerly snapped up by the crowd that rushed onto the field.

While the flight heralded a new era in mail circulation in Iowa, it was just one successful step in Duede's career as a pioneer aviator. Born in 1886, Duede was a dedicated builder and flyer of kites as a child, but

he quickly moved on to experiment with more complicated and, potentially, more practical means of air travel. Balloons, airships, gliders and finally airplanes all captured his attention. "Anything that navigated the air always interested me," Duede later recalled.

I used to make kites to sell to other kids, I made tissue paper balloons. I built a large kite and sent it up at night with a lantern tied to the tail. The Stuart citizens saw the light and thought that an airship was hovering over the town. It caused considerable excitement until the real source of the light was discovered. Then the folks went back to bed in disgust.

Duede's experiments in aviation would, in fact, draw the attention of people around Stuart for years to come as he worked with increasingly complicated means of sending machines and people aloft.

IOWA'S EARLY BIRDS

In the early years of flight, pioneer aviators piloted aircraft that relied on faith as well as physics to stay aloft. Carl Duede of Stuart typified these daring "early birds," combining mechanical ingenuity with physical courage as he led fellow Iowans into a new age of transportation.

by David M. Hubler

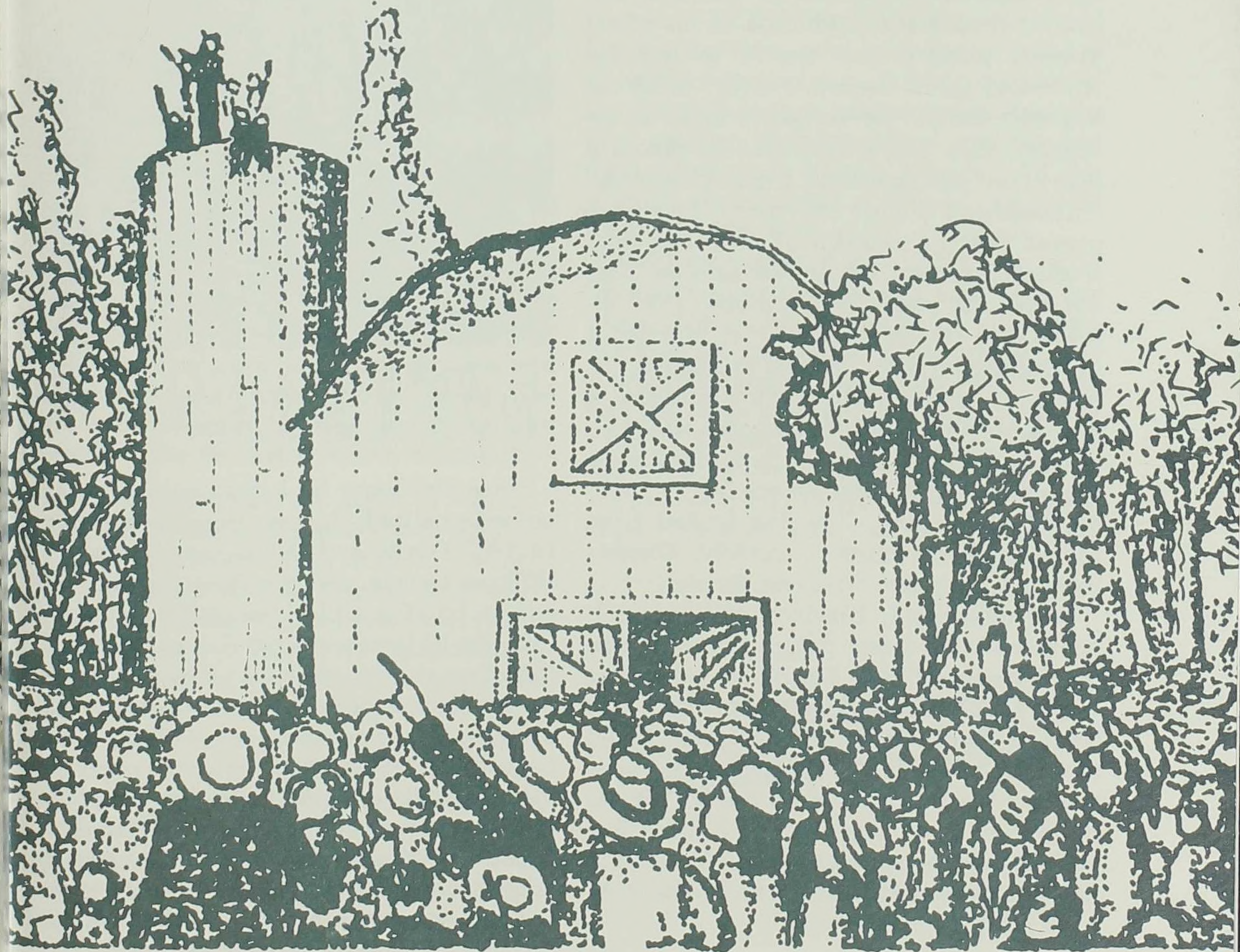


ILLUSTRATION BY JOHN BIRKBECK

After their early adventures with kites, Duede and a fellow aviation enthusiast, Olney Wilde, turned to something more challenging. They decided to build an airship. With the money they hoped to make by charging admission to airship flying exhibitions, they planned to buy a gasoline engine — the first step in their real goal of building their own airplane.

They first persuaded Duede's mother to sew together a cigar-shaped airbag of muslin cloth. Then, for the airship's power plant, they fitted a bicycle with a propeller. With the assembled airbag and power plant suspended from a tree limb, one of the young aviators pumped the bicycle to test the amount of thrust needed. Finally, to fill the bag with the hot air needed to make an ascension, they dug a long trench, placed a hole at one end, and built a fire at the other.

Duede and Wilde's first test of the airship proved less than successful. The two boys frantically fanned the hot air into the bag, but the loose weave of the muslin cloth allowed it to escape as fast as they pumped it in. Undaunted, they decided to coat the airbag with linseed oil to make it airtight. A new problem developed, however, when — after drying the airbag on a clothesline — the boys stored it in the Duede family kitchen for safekeeping. The bag ignited from spontaneous combustion. Luckily, Duede's mother was on hand to avert disaster.

Still undaunted, Duede and Wilde built another airbag a few days later. This time they discovered that the oil-coated airbag would hold the needed hot air but that it also trapped water vapor from the damp ground in which they had built their fire, the vapor entering the bag along with the hot air. As the water vapor condensed, both the airbag and the boys' hopes sagged. They decided to move on directly to the construction of other types of flying machines.



Carl Duede in 1918, when he served as a senior flying instructor in the Army and Navy Air Service (courtesy the author)

Since the money for a gasoline engine had not materialized, the next step was a glider. In 1907 Duede and Wilde were joined by William Couch, and the three together set out to build a glider from cloth salvaged from the ill-fated airbag and a set of curtain stretchers contributed by Olney Wilde's mother. The glider's test flights were held in a pasture next to the present South Oak Grove Cemetery in Stuart, and they required the cooperation of an obliging neighbor, Cy Bunch. "I'll never forget old Cy Bunch," Duede said later, "running his horse and buggy across the field pulling the glider with a long rope behind the buggy in order to get

the machine air-borne. The tow-flight ship would sail at a comfortable distance above the ground as long as 'Old Dobbin' kept up a brisk trot." Unfortunately, the glider proved too heavy to fly on its own.

For the next attempt, Duede harnessed himself between the wings of a biplane glider they had made. His forearms rested on the inner surface of the lower wings and his legs served as the landing gear. Running down a hill, Duede quickly soared off the ground, but before he could do any maneuvering, the glider flipped over on its nose and landed Duede on his head. This glider, too, was soon abandoned.

The three prospective aviators continued with their experiments, however, and Bill Couch soon unveiled his new "boxoplane." It sported wings on the order of a box kite and landing gear made from the wheels of a wheel chair. The landing gear went untested; the boxoplane never got off the ground.

By this time Duede, Wilde, and Couch had taken to conducting their test flights at night to avoid the derision of the townspeople. The town of Stuart had just completed a new 124-foot water tower, and when the three boys decided to launch some new test models, the water tower seemed the ideal site. Duede later described the clandestine tower launchings:

We would sneak up there at night, throw off our models and watch the results. One evening just at dusk, one of Bill's glider models tangled with the two electric light wires which ran to the public library. We on the water tower were horrified when the wires bounced together and emitted a big ball of fire. To add to the excitement, the lights went out every time the wires touched. We crouched up there wondering if those wires would ever stop coming together and end the fireworks. Just as we feared, the mayor appeared before we could get down, and we were

warned not to mount that tower again for any purpose. It was evident that the mayor was opposed to aviation.

It was at about this time, too, that Stuart's three aviation buffs began to scan the advertisements in a new Chicago magazine, *Aero*, for a used engine to power the craft all these experiments were leading to — their own airplane.

Their enthusiasm was heightened by a trip Olney Wilde and his father made to Chicago in August 1911 to attend an international air meet sponsored by the Aero Club of Illinois. The meet featured Jimmy Ward, in his famous "Shooting Star," and Lincoln Beachey, who later flew a number of exhibitions in Iowa. Wilde's account of the meet was later supplemented by the visits of a number of international aviators and their airplanes to nearby Atlantic. All this whetted the appetites of Duede's group for finally getting, and staying, in the air.

Their next attempt at a glider flew (with the aid of an automobile or a team of horses and a wagon), but in one flight with Olney Wilde at the controls the glider crashed, and Wilde was dragged for seventy-five feet before the automobile pulling it could come to a stop. This incident caused Wilde's father to call a halt to Olney's career as an aviator.

But Duede and Couch continued to work closely together, and their next glider was



An early tow-flight glider, dating from the early 1910s (courtesy the author)

more successful. It soared to heights of seventy-five to a hundred feet when pulled by a horse and buggy, but, Duede admitted, this means of propulsion did have its drawbacks:

If the wind was blowing hard the machine would buck up and down like a bronco. . . . Couch's first attempt to fly the plane was comical but nearly disastrous. He got up about thirty feet but could not get the machine to level off. The tow rope was tied to the landing gear. The axle broke and Couch came sliding down backwards out of the air.

As the number of glider mishaps rose, the local newspaper editor decided to keep two or three obituaries on hand, expecting that the young experimenters would shortly be dragged from a fatal crackup. In spite of the local residents' apprehensions, Duede and Couch continued to fly their gliders, and they gradually became accustomed to being in the air.

They also continued their search for a usable airplane engine. One motor they acquired disintegrated when a connecting rod broke. But another motor — a sixteen-horsepower Velie four-cylinder automobile engine — proved more successful. Duede obtained it from a Davenport man in trade for a shotgun. When combined with a leaky, brass-topped, Ford auto radiator; three dry-cell ignition batteries; a three-gallon gas tank; and a propeller Duede had carved from a two-

by-four with a spoke-shave and his pocket-knife, the engine formed the nucleus of Duede's first real airplane.

And it was this plane that finally carried Duede to his first controlled, powered flight. "Never will I forget the first time I was actually in the air in my motored plane," Duede later said. "Of course, I had made short hops, but this time I was off the ground and piloting a real ship. I forgot the rain of hot grease and water which showered me from the engine. I was flying."

By this time, Duede was receiving help in his experiments from Theodore Diebold, a machinist who had worked in the Rock Island railroad shops in Stuart, and Edgar Griffin, who now provided the towing power (with his two-cylinder, chain-driven Maxwell automobile) to get Duede into the air.

During the next two years, Duede conducted several successful flights over the town of Stuart and surrounding farmland, trying out various sets of landing wheels, improving the working parts of his machines, and constantly seeking more knowledge and experience in flying. In 1915, however, while making a landing in a hayfield through which a cooperative farmer had mowed a wide swath, Duede hit a fence, broke the propeller and landing gear, and jarred the plane's engine out of its bed.

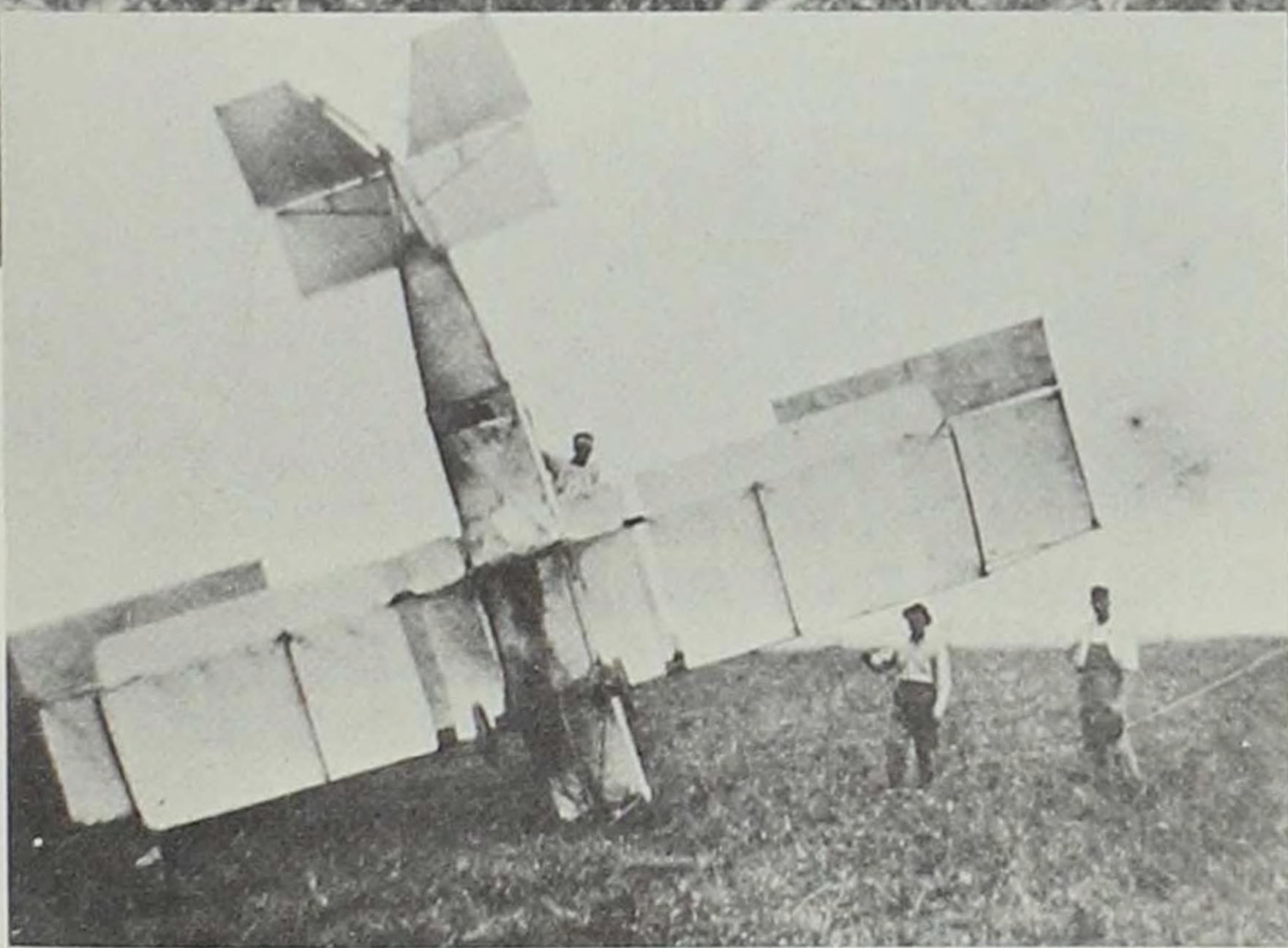
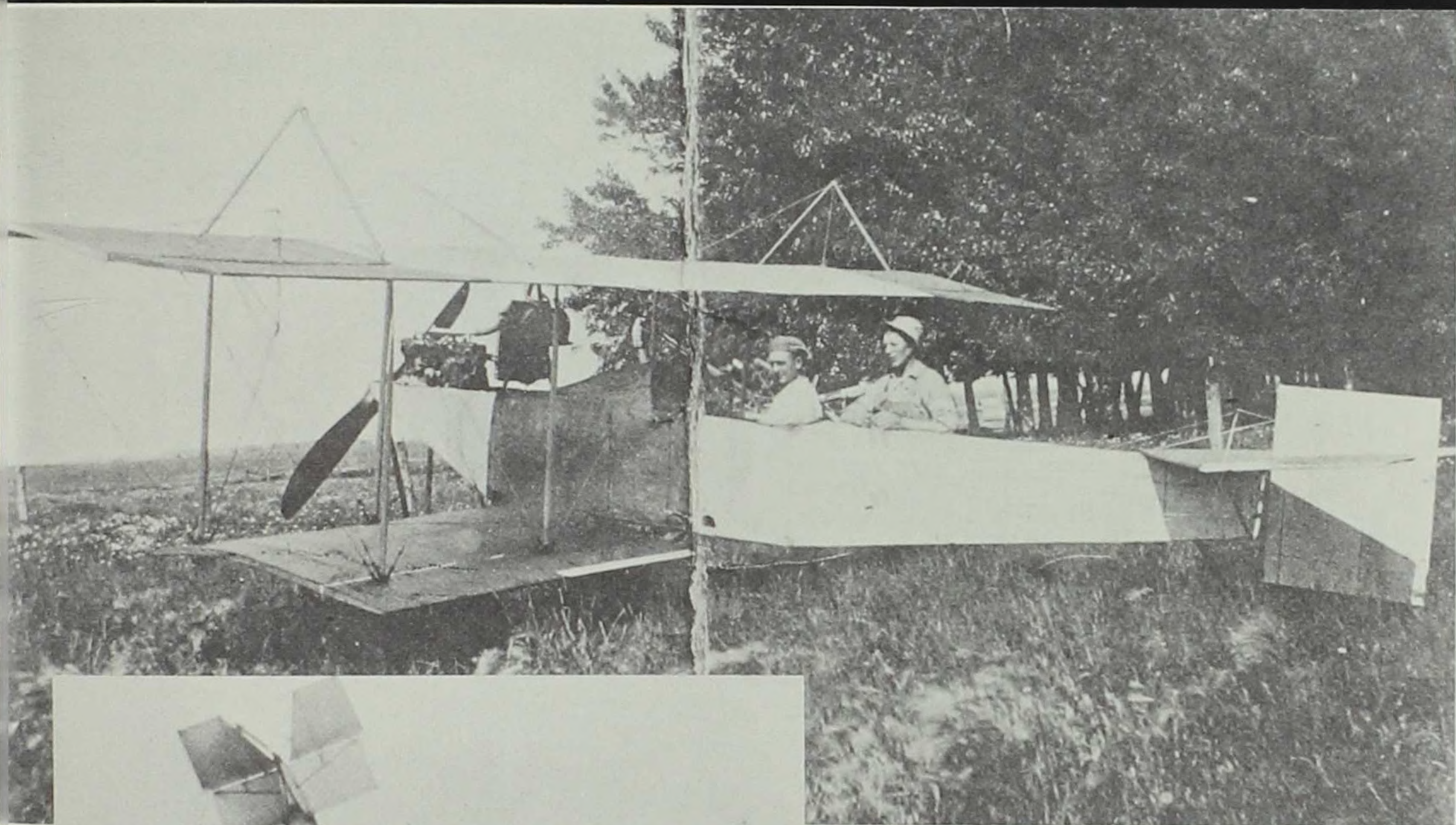
Note on Sources

This article was written mainly from sources drawn from the collections of the Aeronautics Division of the Iowa Department of Transportation. Newspaper sources included the *Des Moines Register*, the *Des Moines Tribune-Capital*, and the *Stuart Herald*. Information was also drawn from: Richard M. Wood, "Carl H. Duede, Stuart's Pioneer Aviator," in *History of Stuart, Iowa, 1870-1970*, comp. by the Stuart Centennial Book Committee (1970).

The editor wishes to thank Mr. and Mrs. Richard Martin Wood of Stuart, Iowa for their assistance in the preparation of this article.

About this time, Bill Couch returned to Stuart from a flying school in Cicero, Illinois as a trained pilot with his own flying machine. Couch had purchased it on a deferred payment plan and had been giving flying exhibitions to pay for it. Not long after his crash, Duede decided to store the remnants of his plane and return to Chicago with Couch in hopes of their becoming flight instructors.

Europe had become mired in World War I, however, and airplanes were beginning to appear over the battlefields. The War Depart-



Carl Duede and an assistant aboard their homemade aircraft, circa 1913. Like all experimental craft, Duede's homemade planes often surprised their pilot in performance (inset). This one, equipped with an old Velie automobile engine and a Ford radiator, required a good deal of rebuilding, including replacement of its propeller. Duede himself escaped this crash uninjured. (courtesy the author)

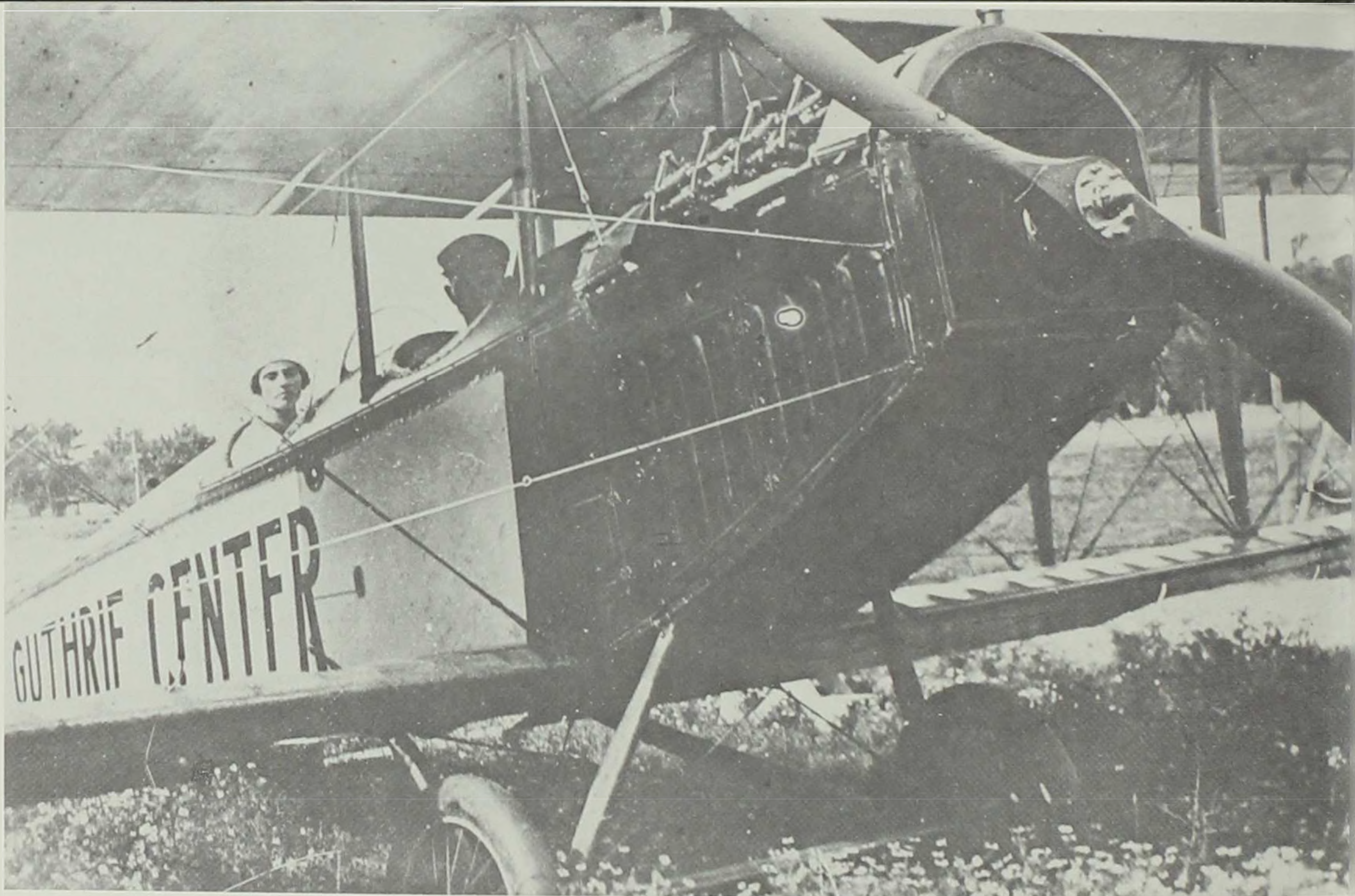
ment in Washington soon sent out a call for civilian flight instructors to supplement the small number of army officers who had flight experience. Duede and Couch answered the call and became part of the 150 pilots who volunteered to train the army pilots.

During the war years, Duede served as a flight instructor at seven different army flying facilities, logging over 2,000 hours in the air — mostly in Curtiss JN-4D Jennys — and flew over 175,000 miles as an instructor and test pilot. One of the sidelights of Duede's career as an army pilot was his work in support of the government's Liberty Loan drives. Flying over four towns in Illinois, Duede and Couch dropped seventy-five pounds of leaflets promoting war bond purchases. To increase the public's interest, three fifty-dollar bonds were included in the literature that fluttered down on the towns

from their plane. The promotion was repeated when Duede was stationed at Wright Field in Alabama, but this time at night. Duede's plane had electric lights attached to the wings so that people on the ground could follow its flight over Montgomery, and he landed in the glare of auto headlights and the light from two bonfires.

Though all of Duede's wartime assignments were in the United States, the Army's flight training programs proved hazardous enough. Of the 150 civilian pilots who had originally volunteered as flight trainers, only 39 lived to return home. The rest were killed in air accidents during the war. One such accident claimed the life of Bill Couch while he was stationed at Lake Charles, Louisiana.

The signing of the Armistice in November 1918 sharply reduced the Army's need for pilots. Duede received his discharge as a civil-



With funds provided by the people of Guthrie Center, Duede and George Barnett purchased the Curtiss Jenny pictured here in Toronto in 1919. The pilots delivered the plane to Iowa in a flying time of fourteen hours and forty-five minutes. In this photograph, Mrs. Duede sits in the rear cockpit. (courtesy the author)

ian flight instructor, and he returned home to Stuart. He continued his ties with the Army, however, as a lieutenant in the reserve arm of the U.S. Air Service and its successor, the U.S. Air Corps, for the next fourteen years, during which he continued to advise and train young pilots.

The publicity that the fledgling air forces of the warring nations had received during World War I — along with the glamour that surrounded the fighter aces in their dogfights high above the battlefields — had changed America's image of the airplane from that of a dangerous toy for foolhardy youngsters to that of an exciting and practical invention. In response, civilian pilots — “barnstormers” — brought the airplane to all areas of rural America in daring exhibitions of their flying skill.

The town fathers of Guthrie Center became caught up in this enthusiasm for flight, and they hoped to prepare a place for an aviation industry in their town. As a modest beginning, they hired Duede and George Barnett, a former officer in the Air Service, to be their pilots and sent them to Canada to purchase an airplane from the Canadian government.

Duede and Barnett went to Toronto in May 1919 to pick up a Curtiss Jenny, which had become the favorite of the postwar barnstorming pilots. Leaving Toronto at 1:15 PM on June 2, the two pilots stopped in London, Ontario at 4:36 the same day and flew to Detroit that evening. They left Detroit the next morning and arrived at Fort Des Moines the same day, completing the Toronto-to-Des Moines flight in a flying time of only 14 hours and 45 minutes.

Newspapers broadcast Duede's feat far and wide, and some predicted that in the distant

future mail would be carried by airplane. It was just six days later that Duede made his sixty-five-mile airmail flight from Fort Des Moines to Guthrie Center, delivering the hundred copies of the *Des Moines Capital* in less than an hour.

With Duede's second triumph, optimism blossomed in Guthrie Center concerning the proposed aviation center. The *Guthrie Times* described Duede as one of the best aviators in the land, and the newspaper noted plans for the organization of an aviation school. Preparations for a proper landing field and an aircraft hangar were already underway at the local fairgrounds.

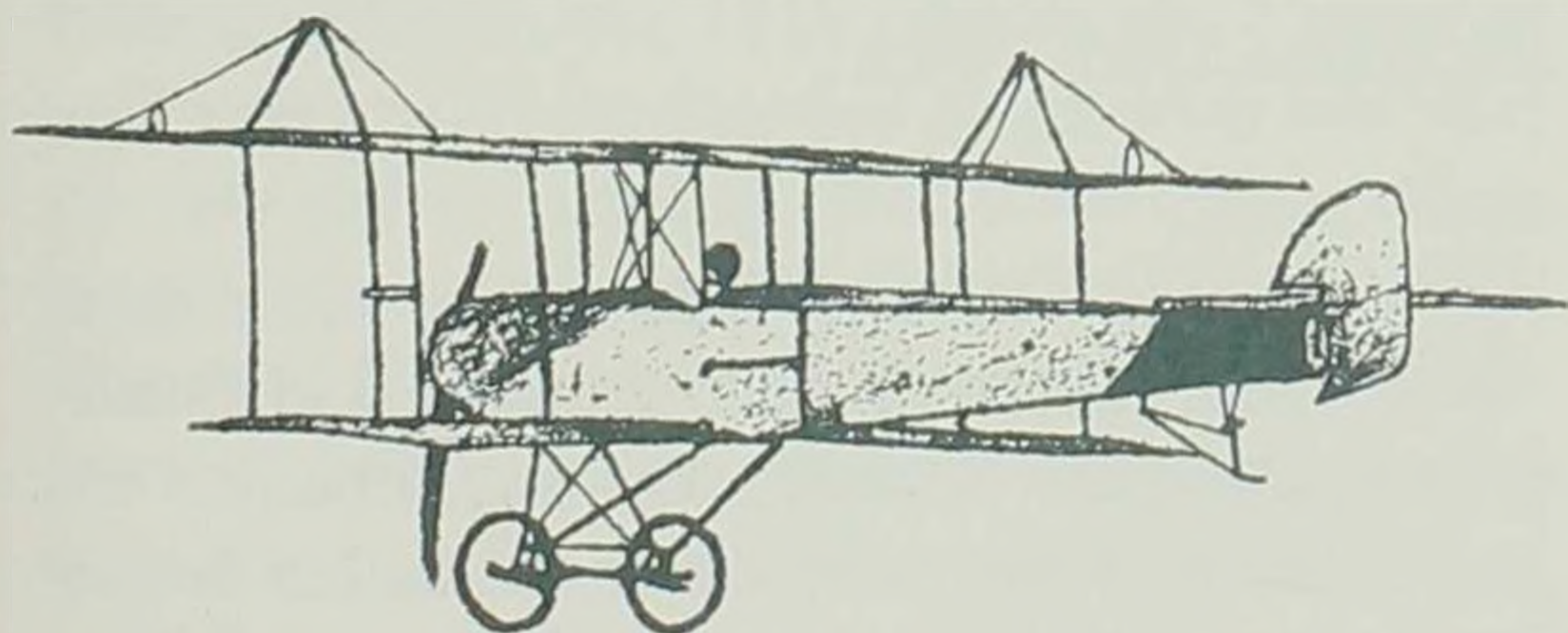
A machinist, Emil Gustafson of Chicago, was brought in to put the airplane in shape. For an exhibition, Duede and Gustafson took the plane up to over 3,200 feet in an ascent that local people compared to the path of a great bird. The local newspaper reported that the aviators "performed many tricks . . . such as loops, tail spins, steep banks and reverses, and Immelman Turns." Duede finished his exhibition with a dead-stick landing to the exuberant adulation of the crowd at the field.

Duede later barnstormed with the Jenny around southern and central Iowa, giving flight exhibitions and offering rides to interested spectators for \$1.00 a minute. But Duede's career as a pilot evidently came to an end soon after this. An obituary published

after his death in 1956 noted that health precluded his flying in later years. He evidently never flew a plane again after 1919.

When he gave up flying, Duede returned to his first love — glider construction. He designed and built a number of gliders over the ensuing years. A note in the *Stuart Herald* in 1930, for example, observed that Duede had recently left for Murphreesboro, Tennessee to assemble a new glider he had designed and built for Interstate Airlines, Incorporated. The glider carried two people and was used in training students for exhibition flying. In the summer of 1930, the *Des Moines Tribune-Capital* pictured Duede with another of his gliders, touted as one of the smallest and lightest gliders in the country, with a wingspan of 28 feet and a weight of only 110 pounds. The craft also featured shock-absorbing landing gear.

After pursuing his career as an aviation experimenter, pilot, designer, and builder, Carl Duede died on September 11, 1956 in the house in Stuart where he had been born. In 1957, Evert Weeks, an aviation history collector, began to piece together an example of Duede's work. Following up on an old friend's lead, he found a gas tank and throttle controls in an old Stuart machine shop, perhaps the shop owned by Theodore Diebold, one of the few Stuart residents who professed any faith in Duede's early experiments. Weeks found both steering and landing gear in a shed on the Duede farm. Finally, he also located a fuselage and wing struts. He and Mrs. Duede donated the collection of aircraft components to the Iowa Department of History and Archives in Des Moines, now the Division of Historical Museum and Archives. Today, visitors to the museum can see the airplane that was reconstructed from the various parts — the oldest Iowa-built aircraft in existence. □



A Curtiss Jenny soars above the Iowa landscape (SHSI)