

WORLD WAR II HEROES TRIBUTE ISSUE

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The Double Life of the Piper *Cub*: Bazooka Charlie And A Stranger-Than-Fiction History

Dr. Bruce Arlen Wasserman

For a moment, the electrical switch was stuck. And when he pushed the jury-rigged trigger, nothing happened. It was a moment when his heart stopped—for an instant—then raised to a flutter before racing off. The tiny L-4 airplane was tipped on its nose, all 65 of its horsepower fueling a dive that the little Piper shouldn't dream of doing. And then it happened: a loud whoosh and flames followed by the almost lazy contrail of the launched, rocket-propelled bazooka round and the tank below flashed, then erupted in flames. Charlie pulled straight back on the stick, then banked hard right. Everyman's airplane, a J-3 Piper *Cub* dressed up and rechristened in the U.S. Army Air Forces as an L-4 *Grasshopper*, had done the impossible—reaching well beyond the almost innocence of the observation plane's rubber-stamped call to duty—and mimicked a dive bomber, without the protection of armor or the chance for a quick getaway.

The *Grasshopper*, as a dressed-in-fatigues version of the *Cub*, had a lineage originally emerged from the Taylor

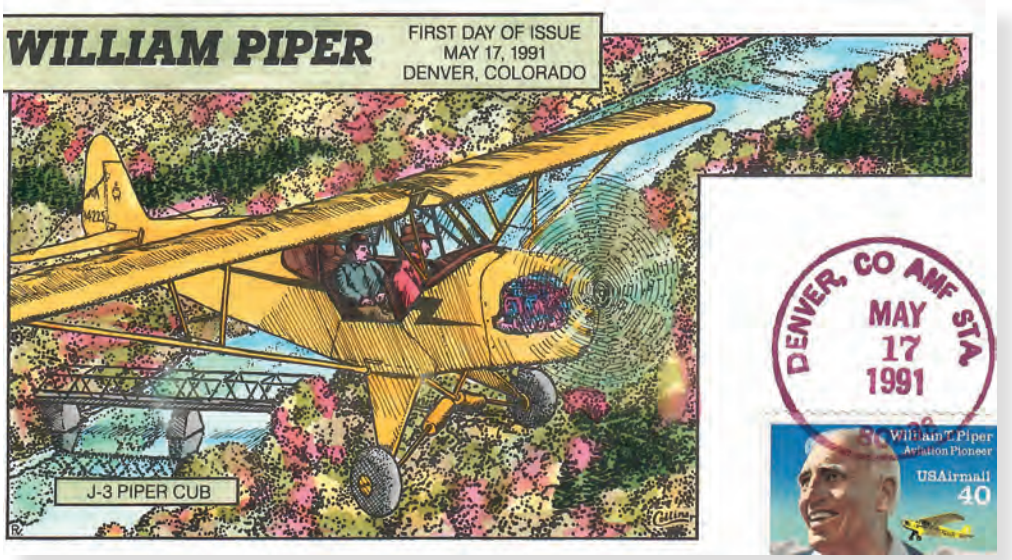


Figure 1: A hand-painted Collins First Day Cover labeled "William Piper" and showing a J-3 Piper *Cub*, created for the USPS Airmail stamp commemorating "William T. Piper, Aviation Pioneer." Issued May 17, 1991. Courtesy of the author.

Brothers Airplane Manufacturing Company in Bradford, Pennsylvania. In 1930 and 1931, Clarence Gilbert Taylor had developed his E-2 Taylor *Cub*, a small, affordable and light aircraft intended for private owners. It was simple and powered by a tiny engine, with a welded steel-tubing fuselage combined with wood for the plane's wings' skeleton, and the entire airframe covered in fabric. It could operate from short fields, had miserly fuel consumption, and was forgiving to fly. But financial troubles plagued Taylor's company.

Enter William T. Piper (Figures 1 and 2), a Harvard-trained engineer and successful businessman who believed aviation would flourish only if airplanes were made accessible to people of ordinary financial means. He was an initial investor in Taylor's company, but despite his continued influx of money, the company was forced to file for bankruptcy in the early days of the Great Depression. When the com-



Figure 2: A maxicard signed by William T. Piper, Jr, on the release of the U.S. stamp honoring his father, William T. Piper. Courtesy of the author.



Figure 3: An airborne J-3 Piper *Cub*. Courtesy of Spartan7W, Wikimedia Commons.

pany's assets were put up for sale, Piper's $761 bid was enough to purchase it. The new corporation was renamed The Taylor Aircraft Company and Piper gave Taylor half of the assets and made him president, with Piper as treasurer. The pair worked on aircraft development and in 1931 received government approval to release the Taylorcraft E-2 *Cub*, a name that would stick through various incarnations of the plane as the small company ramped up production. By 1935 their factory had expanded to 36,000 square feet and production of the Taylorcraft *Cubs* grew to one a day. But all was not well between the two partners, and by that time they were not on speaking terms. Finally, Piper bought out Taylor's share and Taylor left the company in December 1935. Piper immediately took control of the company and made significant improvements to the *Cub,* including the adoption of improved Continental engines. He increased brand advertising, expanded his dealer network, and reduced the price of the plane.

And all was going well until March 1937, when tragedy struck and the factory burned to the ground. After obtaining significant funds from investors, Piper

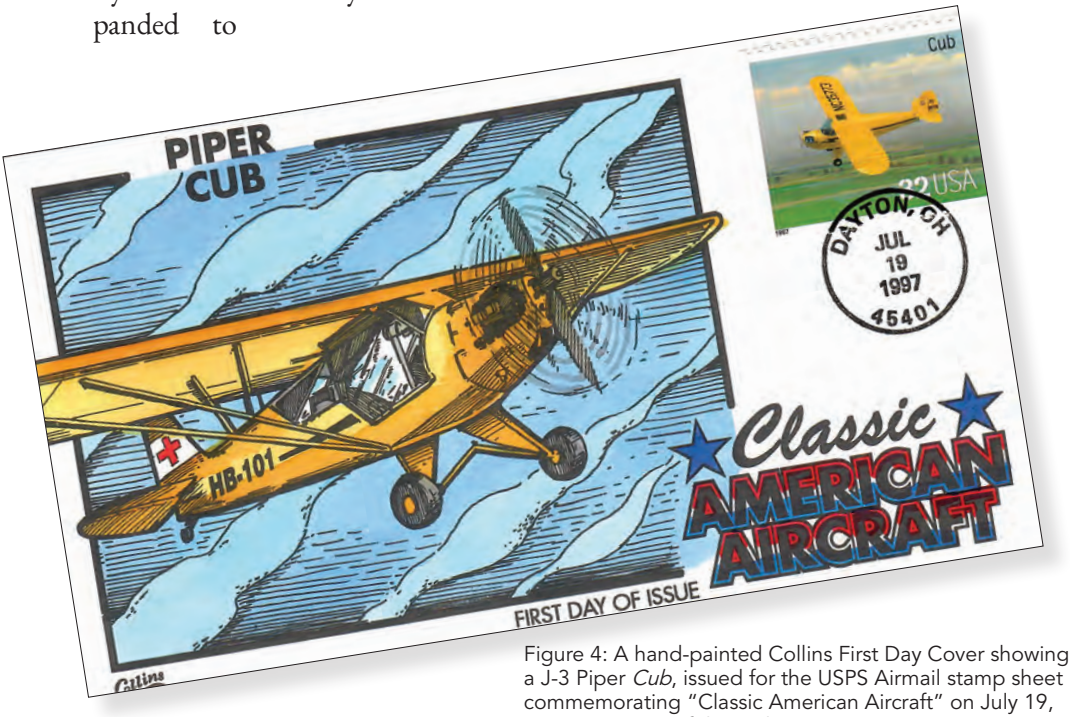


Figure 4: A hand-painted Collins First Day Cover showing a J-3 Piper *Cub*, issued for the USPS Airmail stamp sheet commemorating "Classic American Aircraft" on July 19, 1997. Courtesy of the author.

reorganized the firm as the Piper Aircraft Corporation and built a new factory in Lock Haven, Pennsylvania. With that change, he introduced more efficient assembly of the plane and brought his improved Piper J-3 *Cub* to market that same year. With its distinctive yellow paint and black lightning-bolt trim stripe, the J-3 *Cub* (Figures 3 and 4) quickly became a mainstay in American general aviation and could be considered the equivalent of the "Ford Model T" of the sky. By 1940, a Piper *Cub* rolled off the assembly line every twenty minutes, using efficiency in production no other aircraft manufacturer could claim at that time.

The J-3 was powered by a Continental A-65 engine, producing an underwhelming sixty-five horsepower. The plane cruised at roughly seventy-five miles per hour and stalled at thirty-eight miles per hour. It carried two people sitting in tandem with the pilot normally flying the plane from the back seat. Early *Cubs* lacked electrical systems and had the extremely basic instrumentation of an airspeed indicator, tachometer, combined oil pressure and temperature gauges, an altimeter, as well as a compass in the cockpit (Figures 5 and 6). The engine was started by hand-propping and the landing gear used bungee cords as shock absorbers. The wings were braced by struts and built with wooden spars and ribs. Despite their basic instrumentation, pilots of the plane relied more on seat-of-the-pants flying as well as attention to the sound of the engine rather than watching the instrument panel, and they controlled the plane with a floor-mounted control stick and a pair of T-shaped, foot-operated rudder pedals. The *Cub* had a ceiling



Figure 5: The spartan instrument array in the cockpit of a J-3 *Cub* and the Army equivalent L-4 *Grasshopper*. Courtesy of the Robert Frola Collection, Wikimedia Commons.



Figure 6: A vintage J-3C-65 Piper *Cub* owner's manual—the model of the plane equipped with a 65 horsepower Continental engine as used in the AAF's L-4 *Grasshopper*—issued by the Piper Aircraft Corporation. Courtesy of the author.



Figure 7: An advertisement for the Civilian Pilot Training Program in 1942, featuring Piper J-3 *Cubs*. Courtesy of the author.

of over 9,000 feet and sipped fuel at just three gallons an hour at cruise.

Because of its versatility, the J-3 became central to the Civilian Pilot Training Program (CPTP), a federally supported initiative organized in 1938 to build a reserve of trained pilots for the military (Figures 7, 8 and 9). Thousands of young Americans—seventy-five percent of all CPTP trainees—made their first solo flights in *Cubs*. When the United States entered World War II after Pearl Harbor, those same pilots filled the ranks of the military as aviators in the Army Air Forces, the Navy, and the Marines. In the background and without pretense, the *Cub* had quietly prepared the nation for aerial warfare.



Figure 8: First Lady Eleanor Roosevelt supported the Civilian Pilot Training Program. She is pictured here in a Piper J-3 *Cub* trainer with C. Alfred "Chief" Anderson, a pioneer black aviator and respected instructor at the Tuskegee Institute in March 1941. Courtesy of the U.S. Air Force.

In civilian life, although larger aircraft carried most Contract Air Mail (CAM) on major routes in the United States, the J-3 and later model *Cubs* were often used for short feeder services and island hops. In Maine, for example, where rocky coastlines and scattered islands created difficult access for larger planes, postwar operators like bush pilot Arthur Harjula flew *Cubs* on short routes connecting mainland towns with island communities. Flying between places like Rockland or Camden to settlements in Penobscot Bay, the little Pipers often carried mailbags, newspapers and parcels, and even a single passenger stuffed into the one-available seat, holding a mailbag in their lap. An aerial photo postcard of the lighthouse on Owls Head, Maine—as captured by Harjula on one such flight—is shown in Figure 10. Needless to say, exceeding the recommended takeoff weight was easily done with the lightweight planes and these small carriers often flew their cubs overloaded. Despite that, the short takeoff and landing (STOL) capability that enabled successful operations from random patches of grass in wartime, continued to help civilian *Cubs* to complete their missions, even if overloaded.

Skis could replace the plane's wheels

in winter to allow a *Cub* to operate from frozen lakes or drop off skiers on remote glaciers in the wilderness (Figure 11). In summer, with floats installed, the planes became capable amphibious transport for travel to remote lakes, and even seaplane trainers, as shown in Figure 12. The plane's super-low operating cost and low cruising speed made it a perfect base for small companies like Aerial Photography Services (Figure 13) or for less glamorous uses like crop dusting or the aerial liming program undertaken in the Adirondacks to combat the effects of acid rain in the 1980s, shown in Figure 14. *Cubs* often provided essential lifelines to the communities at the other end of a flight plan and were used to ferry mail and passengers in extremely remote locations like Alaska's bush country where wild terrain replaced any kind of organized runway. In parts of the Rocky Mountains and the Pacific Northwest, the little planes operated as air taxis and mail carriers as well,



Figure 9: A Cover commemorating the opening of Grider Field at the Pine Bluff School of Aviation, part of the Civilian Pilot Training Program, which used J-3 Piper *Cubs* to teach civilians to fly. Dated May 24, 1941, more than six months before the United States entered World War II. Courtesy of the author.



Figure 10: A real photo postcard showing an image of the lighthouse at Owls Head, Maine, taken by pilot Arthur Harjula, a local pilot who regularly carried a mail bag and a single passenger—flying overloaded in his Piper *Cub*—between places like Rockland or Camden to settlements in Penobscot Bay. Published by Augustus D. Phillips & Son. Courtesy of the author.

bridging the distance between remote locations and larger towns. While the two-seat planes were unlikely to be the primary aircraft on any major U.S. Post Office CAM route, they could function as vital, pop-up connectors for mail in secondary routes.

The Piper *Cub's* suitability for such work lay in its simplicity. Mechanics in remote areas could repair small areas of damage to the plane's fabric skin and could work on many of the systems with limited equipment. For example, the landing gear bungee cord shock-absorption system was easy to service and even the diminutive Continental engine could be worked on with lim-



Figure 11: A PA-18 *Super Cub* equipped with skis, on a mountain in Switzerland. Courtesy Mathieu Zwygart, Wikimedia Commons.



Figure 12: A J-3 *Cub* on floats flies over a speedboat in this real photo postcard issued by Browns Seaplane Base in Winter Haven, Florida. The reverse of the card states "We have trained more seaplane pilots than any other facility. Seaplane ratings possible in two days." Published by Browns Seaplane Base. Courtesy of the author.



Figure 13: A real photo postcard showing a J-3 *Cub* in the fleet of Aerial Photography Services in 1975. Because of its low cruising speed, the *Cub* would prove ideal for aerial photography. Published by Aerial Photography Services, Inc. Courtesy of the author.

ited tools that a pilot could stow in the plane. The airplane could carry modest loads and take off and land in extremely short distances. In an era before modern avionics in the cockpit, the plane's bare bones but straightforward instrumentation and stable handling made it dependable for a broad range of piloting skills, including beginners just learning to fly.

As the decades passed, the J-3 *Cub* evolved into new variants, including such models as the PA-11 and PA-18 *Super Cubs* (Figure 15) with a production run lasting until 1994. But even after the last *Super Cub* taxied off the assembly line, numerous clones of the design—like today's *Carbon Cub*, and the Aviat *Husky* planes shown in Figures 16 and 17—filled the market void with offerings of much greater horsepower than the original J-3 and featuring significantly more robust carrying capacity. These updated versions have retained the essential design of



Figure 14: A real photo postcard showing a PA-18A *Super Cub* performing aerial liming in the Adirondacks "to combat the effect of acid rain." Published by Weedmark's Photos. Courtesy of the author.



Figure 15: A Piper PA-18 *Super Cub* in flight. Courtesy of Wikimedia Commons.



Figure 16: One of the new generation of improved planes emerging from the *Cub's* roots, with greater horsepower, higher cruising speed and greater load carrying, while maintaining the *Cub's* superb STOL capabilities—An Aviat *Husky* on Floats. Courtesy of Alex Skiba and Aviat Aircraft,



Figure 17: An Aviat Husky, made in Wyoming and following the long tradition of the Piper *Cub*, painted in World War II Normandy Invasion livery. Note the Invasion Stripes. Aviat's *Husky* has improved on the *Super Cub* concept. Courtesy of Sue Haun and Aviat Aircraft, Inc.

the J-3—they still sport tandem seating and are focused on STOL—but they have incorporated improvements such as modern avionics, more robust airframes to go with their increased loads, and enhancements for STOL operation. Nevertheless, the fundamental DNA of the clones has remained more or less unchanged since the 1930s.

In 1939, the U.S. Army Air Corps evaluated several light civilian aircraft for liaison and artillery spotting duties. Rising to the top of their list and acquired in large numbers by the reorganized U.S. Army Air Forces (USAAF) in 1941 was the J-3 *Cub*. Headquarters saw the plane as a proven concept—it was already in mass production. Not lost on the Army Air Forces was the fact that the plane was inexpensive



Figure 18: A World War II advertisement that discusses the use of L-4 *Grasshoppers* as courier planes for rapid communications. Courtesy of the author.

to acquire and operate, mechanically simple to maintain, and probably the easiest plane to fly in the USAAF, regardless of a pilot's experience. They adopted it as the L-4 *Grasshopper* and earmarked the plane for reconnaissance, air ambulance service, as a supply transport aircraft, and for rapid transport of unit commanders (Figure 18). Structurally, the L-4 remained almost identical to its civilian twin, though the plane was intended to be flown from the front seat—the opposite of the J-3 *Cub*—and an observer could be stationed in the rear. It retained the Continental A-65 engine and the same steel-tube, wood and fabric construction. Modifications included enlarged rear windows for better observation, installation of military radios, and the essential olive drab paint.

Nearly 6,000 L-4s (Figure 19) were placed into duty during the war. They served in North Africa, Italy, France, Germany, and the Pacific Theatre of Operations. Though their primary role was artillery spotting, they also carried urgent communiques (Figure 20) and served as quick transport in a variety of scenarios.



Figure 19: Three L-4 *Grasshoppers* flying in formation. Courtesy of Alan Wilson, Wikimedia Commons.



Figure 20: A World War II advertisement showing an L-4 *Grasshopper* making an aerial pickup of field communications. Courtesy of the author.

Flying low and slow, pilots could observe enemy positions and transmit corrections to artillery units on the ground, enabling more accurate strikes of enemy targets. The L-4 could manage extremely short takeoffs in under 300 feet and short-field landings—enhanced by a stall speed of only 38 mph—which allowed it to operate from makeshift, pop-up strips close to the front lines. It carried no armor and, supposedly, no weapons—remember, it was intended primarily as a set of airborne eyes. The everyday maintenance of the plane was the responsibility of the pilot.

Among the officers assigned to L-4 units was Major Charles Carpenter, a former high-school history teacher and football coach who had entered the Army as an artillery officer. Prior to his enlistment, Carpenter had basic flying experience and in 1940 taught aviation ground school for the Civil Aeronautics Authority. In his



Figure 21: An unused preprinted postcard from the Desert Training Center, the Army's training base for liaison pilots, who learned advanced flying techniques in Piper L-4 *Grasshopper* planes. Major (then a lieutenant and by the time he left, Captain) Carpenter was stationed at the base for several months in 1943. Courtesy of the author.



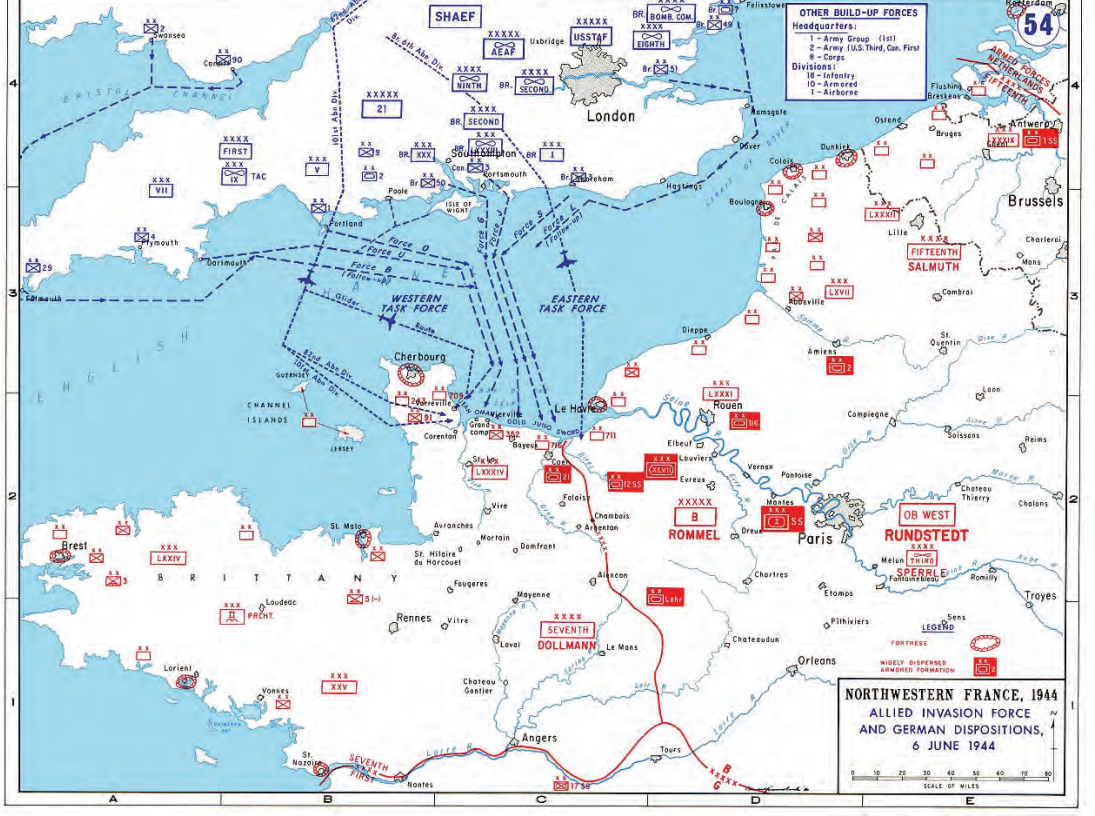
Figure 22: A cover mailed from Major Carpenter to his wife on June 10, 1944. Four days after D-Day he was in Wales, Great Britain, preparing to fly the fleet of L-4 *Grasshoppers* across the English Channel. Auxiliary fuel tanks were installed on each plane to facilitate the crossing. Photo courtesy of James P. Busha.

navigation of the AAF's rigorous pilot training program (Figure 21) which saw a number of dropouts, he found his niche and graduated as a top pilot. Once overseas, Carpenter flew artillery observation missions over France beginning in July 1944 (Figure 22) for the Fourth Armored Division of the Third Army (Figure 23), as Allied forces pushed inland after the Normandy landings. A map of the Normandy invasion on D-Day is shown in Figure 24. German armored counterattacks posed a serious threat to American forces and as he performed his stated duties in piloting the tiny, fabric-covered plane, Carpenter conceived of a truly outlandish idea—because artillery was challenged to accurately strike tanks from a distance, perhaps he could bridge the gap and strike them directly from the air with bazookas fired from his diminutive and slow, unarmored and completely unsuitable-for-air-based-battle L-4 *Grasshopper*.

With assistance from ordinance personnel in his unit and in a project that proceeded with absolutely no approval from his commanders, Carpenter mounted six 2.36-inch bazooka rocket launchers loaded with M6A3 HEAT (high explosive anti-tank) rounds beneath the wings of his L-4H. Three were attached under each wing, secured with



Figure 23: An original cloth uniform patch from the Fourth Armored Division of the Third Army. Courtesy of the author.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Orleans
Etampes
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Melun
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Mons
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Dover
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Hastings
Portland
Plymouth
Exmouth
Poole
Isle of Wight
Guernsey
Jersey
Channel Islands
Lorient
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Loudeac
Chateau Gontier
Angers
Tours
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Nantes
Chateaudun
Dreux
Montes
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Stuttgart
Karlsruhe
Strasbourg
Metz
Saarbrucken
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Le Havre
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Calais
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Flushing
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Ghent
Lille
Charleroi
Mons
Cambrai
St. Quentin
Laon
Compiegne
Soissons
Reims



Figure 25: Armorers attaching bazooka launchers to the wing struts of Major Carpenter's L-4 *Grasshopper*. The flat plates are plywood attached to the plane with U-bolts, something available at any hardware store back home, though in the field this was a brilliant, though flammable, rigging. One of the soldiers is drilling holes with a hand-crank drill, as there would have been no power available from their gasoline-powered generators for this unapproved retrofit. Photo courtesy of James P. Busha.

from the sky, incinerated from the flame shooting out the bazooka tube, or perhaps crashed due to the forces of using an 800-pound airplane as a base for launching rocket-propelled rounds, the commanders would have disavowed Carpenter's efforts as the work of a rogue officer and a SNAFU (Situation Normal, All F'd Up)—a phrase coined in the war to explain the almost constant lack of things going according to plan. The L-4 was never engineered for any weapons carriage. With only 65 horsepower, just the additional drag from the launch tubes reduced the plane's performance significantly. On top of that, the airplane had no armor and no protection for its fuel tank, making any targeted hit to the plane likely to set off a Piper *Grasshopper*-fueled fireworks explosion in the sky. Then there was the fabric skin coated with dope—a very flammable combination—especially when viewed in the light of the instant flame-trail that shot backwards when a bazooka was fired.

Yet Major Carpenter successfully flew his armed missions in the late summer and through the fall and winter of 1944 and he regularly wrote letters to



Figure 26: Major Charles Carpenter standing beside his bazooka-launcher-equipped Piper L-4 *Grasshopper* plane, *Rosie the Rocketer*, somewhere in France. Photo courtesy of James P. Busha.

his wife, detailing his actions with his unique plane (Figure 28). His exploits with *Rosie the Rocketer* became contemporaneous legend, trickling through news streams back home (Figure 29) and even making a splash in wartime magazine ads like the one for Continental aircraft engines shown in Figure 30. In early 1945 heavy snows grounded his plane, and he was later made a staff



Figure 27: An original photo showing the bazooka-launcher-armed *Rosie the Rocketer* in flight in France. Photo courtesy of James P. Busha.





Major Carpenter beside *Rosie the Rocketer* at a makeshift airstrip in France. Hidden in the trees is an early model M4 Sherman Tank, with three of its five crew members standing beside it. Behind Major Carpenter is a field operations tent with a map visible on the table. Outside are jerry cans marked AVG—aviation gas—fuel for his plane. Photo courtesy of James P. Busha.

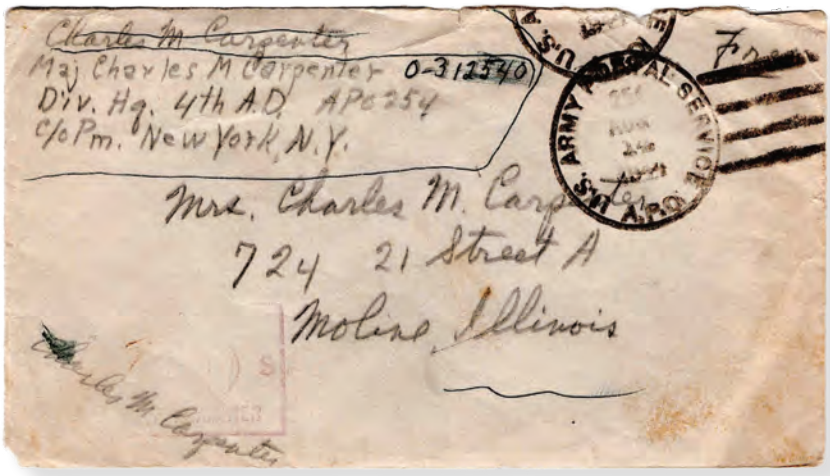


Figure 28: A cover mailed from Major Carpenter to his wife on August 14, 1944. The Fourth Armored had made the crossing in July, and since that time, he had seen significant battle action. In a letter to his wife on August 12, he wrote, "Lately I have been taking quite a few chances… I got one bullet hole through the wing and hit a church steeple with one wheel." (Busha 2023, 138). Photo courtesy of James P. Busha.

officer, which removed any future flying of wartime sorties from his plate. In a letter to his wife in the winter of 1945 he wrote, "I do not like my new job... I know myself well enough now to realize that I am not a staff officer." He had flown during the fighting of the Battle of Arracourt in September 1944 and contemporary reports credited him with destroying or disabling multiple German armored units. Possibly as many as fourteen tanks—plus other vehicles—were taken out by his unconventional airplane, diving out of fogbanks with a proximity and an element of surprise that momentarily caught adversaries

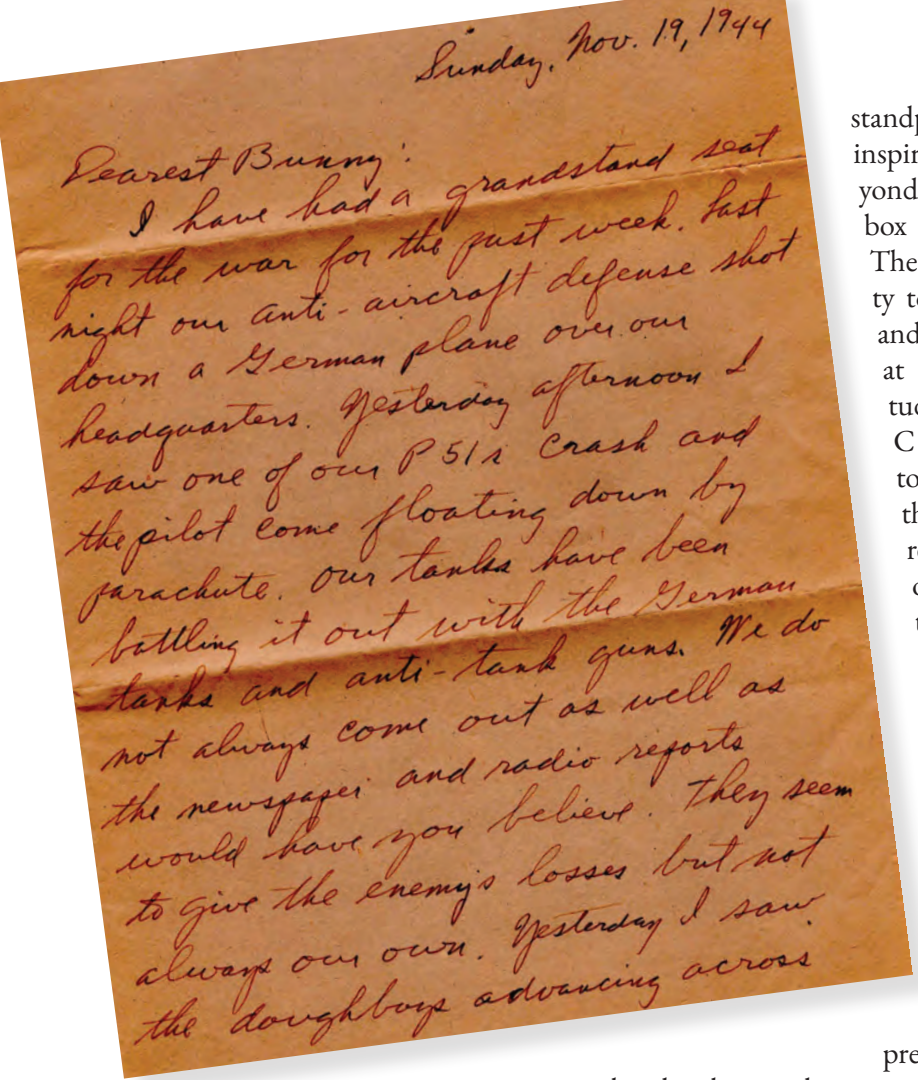


Figure 29: A cover mailed from Major Carpenter to his wife on November 9, 1944. In a letter two days earlier, Carpenter had written, "The picture and publicity about the bazookas still go on. Enclosed is a clipping from the Stars and Stripes…" The enclosed article called Carpenter a "one man air force" which "equals bad news for Panzers." (Busha 2023, 162). Photo courtesy of James P. Busha.



Figure 30: An ad for Continental engines—the engine in Piper J-3 *Cubs* and L-4 *Grasshoppers*—showing a generic drawing of *Rosie the Rocketer* firing bazookas at an enemy convoy. The ad writes, "Bazookas on the wings of "Grasshopper" Planes! What next?" Image courtesy of James P. Busha.

defenseless. In some recollections of his actions in battle, he was described as an aggressive and legendary combat pilot. In a letter to his wife dated November 19, he wrote, "Yesterday, too, I had seven bullet holes patched in 'Rosie.' Once in a while I get in a rather warm spot... I flew the longest two miles of my career yesterday when the Jerries let me get well over their lines before they 'opened up.' I did everything but turn myself inside out before I got across our lines again"


Sunday. Nov. 19, 1944

Dearest Bunny:

I have had a grandstand seat for the war for the past week. Last night our anti-aircraft defense shot down a German plane over our headquarters. Yesterday afternoon I saw one of our P51s crash and the pilot come floating down by parachute. Our tanks have been battling it out with the German tanks and anti-tank guns. We do not always come out as well as the newspaper and radio reports would have you believe. They seem to give the enemy's losses but not always our own. Yesterday I saw the doughboys advancing across

Figure 31: A letter from Major Carpenter to his wife, dated November 19, 1944. Photo courtesy of James P. Busha.

(Figures 31 and 32). All of that while flying a 65 horsepower, fabric-covered, "everyman's aircraft" at 75 mph. The government concurred with the accolades of his peers and the recognition he received from the press, and he received the Silver Star and multiple Air Medals for his actions.

From an engineering standpoint, Carpenter's idea of making the *Grasshopper* an airborne armaments base was intractable, but from a battlefield standpoint it was inspired and beyond out-of-the-box thinking. The L-4's ability to fly slowly and maneuver at low altitude allowed Carpenter to attack the side and rear armor of German tanks and armored vehicles. And according to his own letters to his wife during the war which were preserved by his daughter and are noted in a story in *The Reporting Project*, an online journal, Major Carpenter "repeatedly flew his military version of a Piper *Cub* low over enemy troops—who were firing at him with pistols and rifles—and took out German tanks and other armored vehicles by firing missiles at them." A memoir written by Joseph Haley of the Fourth Armored Division of the Third Army recorded some of the action taken by Major Carpenter with his bazooka-laden plane, saying:

> **Some hot fighting was going on. The *Thunderbolts*, part of the Nineteenth**

> **Tactical Air Corps who provided air support for the Third Army, were working over a column of German vehicles on the road about a half mile away. The planes were diving, strafing and skip bombing the Germans. The Fourth Armored's Piper *Cub* was also aloft, darting between the *Thunderbolts*. Most Piper *Cubs* were unarmed, but this particular one's pilot, Major Charles Carpenter, had rigged bazooks (sic) fastened under its wings. We nicknamed Major Carpenter 'Bazooka Charlie' and talked of him and his Piper *Cub* as 'the Fourth Armored's Air Force' since the Piper *Cub* was the only plane we had.**

Even though the bazooka-fired rockets' recoil could be considered minimal in the broader world of weapons recoil because the projectiles are self-propelled, it is a testament to his skill as a pilot that Major Carpenter returned unscathed from all of his missions and his L-4 *Grasshopper* was neither blasted from the sky, nor did it spiral into an unrecoverable spin in reaction to the bazookas' firing. Carpenter's story remains one of the most bizarre episodes in the history of the Piper *Cub* and stands out in the iconography of World War II's aerial warfare. A book by author James Busha, *Bazooka Charlie: The Unbelievable Story of Major Charles Carpenter and Rosie the Rocketer*, fully unearths Carpenter's brave and bordering-on-insane exploits, as well as the efforts to find and restore his plane in recent years. It now lives in the American Heritage Museum in Hudson, Massachusetts and is shown in Figure 33.

Yet most L-4s did not carry rockets. They served as essential tools of reconnaissance and communication. They evacuated wounded sol-

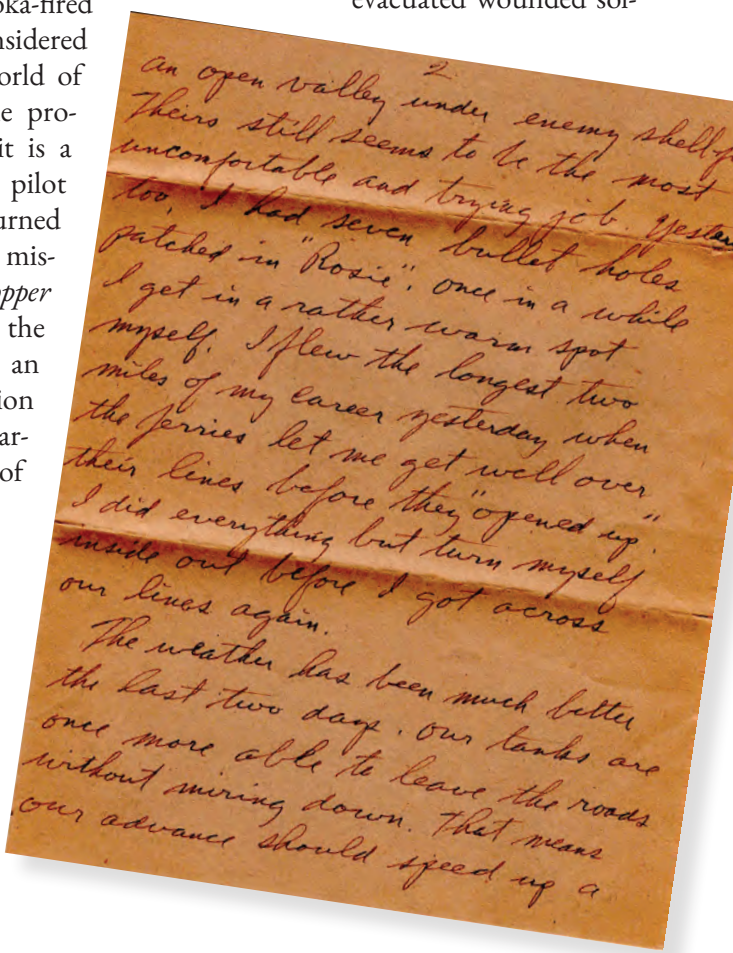

2
an open valley under enemy shell
Theirs still seems to be the most
uncomfortable and trying job. Yesterday
too, I had seven bullet holes
patched in "Rosie". Once in a while
I get in a rather warm spot
myself. I flew the longest two
miles of my career yesterday when
the Jerries let me get well over
their lines before they "opened up".
I did everything but turn myself
inside out before I got across
our lines again.
The weather has been much better
the last two days. Our tanks are
once more able to leave the roads
without miring down. That means
our advance should speed up a

Figure 32: The second page of the letter dated November 19, in which Carpenter wrote, "Yesterday, too, I had seven bullet holes patched in 'Rosie.' Once in a while I get in a rather warm spot… I flew the longest two miles of my career yesterday when the Jerries let me get well over their lines before they 'opened up.' I did everything but turn myself inside out before I got across our lines again." Photo courtesy of James P. Busha.



Figure 33: The restored L-4 *Grasshopper Rosie the Rocketer*, as the plane looks today. The plane is hangered at the American Heritage Museum in Hudson, Massachusetts. Photo courtesy of James P. Busha.

diers when possible, delivered messages between units, surveyed terrain, and transported officers. They operated from roads and fields or anyplace they had several hundred feet of impromptu space that might serve as a runway. German troops reportedly nicknamed them "Maytag Messerschmitts"—mocking the powerplant of the planes as equivalent to the miniscule motor of



Figure 34: A postcard of an airborne 1946 J-3C-65 Piper *Cub*—manufactured during the company's postwar production frenzy—published by Skylark Flight in 1979. Courtesy of the author.



Figure 35: An original photo from 1950 of a reactivated L-4 *Grasshopper* repurposed in the Korean War as an air ambulance. The back of the photo states, "An L-4 Observation plane braves the North Korean winter to evacuate an American, wounded in the fighting with Chinese red forces." Defense Department (Army) photo.

the popular washing machine—in a war where getting a technologic leg-up was critical to the goal of winning.

After World War II, the United States entered a postwar aviation boom, and thousands of L-4 *Grasshoppers* were declared surplus. Decommissioned planes were sold cheaply to civilians, returning to private ownership in the way the plane had begun with its introduction in the mid-1930s. But the reentry of the Army's supply of rechristened L-4s was not enough to satisfy the postwar demand and Piper had to ramp up production, churning out a new J-3 *Cub* every ten minutes (Figure 34) at the peak of its postwar production run. Private flight schools reopened after the war and many returning veterans—already familiar with the tiny plane through their wartime operation of the *Grasshopper*—purchased available war surplus stock or newly minted *Cubs* for personal and small-commercial use. And in rural regions, particularly in the Northeast and the far North, the *Cub* regained purpose carrying mail and single passengers to remote communities on routes unsuitable for larger planes.

When the Korean war began in 1950



Figure 36: An original World War II photo of a Piper L-4 *Grasshopper* in flight, taken by the Royal Canadian Air Force. Most planes like this were demobilized at the end of the war. Courtesy of the author.

the former USAAF, now renamed the United States Air Force, realized that wartime use of the diminutive but Swiss Army knife–versatile L-4 was still more than viable, and a number of the planes were again engaged, both as trainers and in direct action as air ambulances (Figure 35), as well as in other critical roles. Despite that versatility, no other Piper L-4 *Grasshopper* has ever shared the incredible and beyond belief battle actions that Major Charles Carpenter accomplished with *Rosie the Rocketer*.

The arc of the Piper *Cub's* history is remarkable. Born immediately after the Great Depression's severe economic hardship, it trained a generation of pilots to fly, helping them develop skills like taking off and landing from rough, impromptu fields, flying using seat-of-the-pants skills instead of relying on instrumentation. And once the plane made its metamorphosis into the L-4 *Grasshopper*, it served as an airborne observer and—in the hands of Major Charles Carpenter—as an improvised tank hunter. Demobilized, olive-drab-liveried *Grasshoppers* (Figure 36) made their way back to more sedate endeavors like carrying mail sacks, ferrying supplies to bush camps in the expansive Alaskan wilderness, and introducing student pilots to their first solo flights.

Major Carpenter's *Rosie the Rocketer* occupies a dramatic chapter in that narrative timeline but it doesn't fully define the airplane that was the Piper *Cub*. Rather, it illustrates the extreme of adaptability of its design that could accommodate innovation far beyond any of William T. Piper's visions of purpose. The same airplane structure that held six bazookas over France later carried a single passenger, piled up parcels, and even a mailbag—overloaded and stuffed into the remaining seat—over Maine's rocky coast and in other, even more difficult to access locations. Restored

L-4s can still be seen at airshows, often painted in World War II livery. Original bright-yellow civilian *Cubs* continue to fly from grass strips as well as more organized airports across America, some sporting their original 65 horsepower engines which provide adequate power for lift at almost any elevation, as long as you're not in a hurry. The hum of a Continental A-65 remains a sound familiar to generations of plane watchers and the airplane's dope-covered fabric wings still glide through turbulent air as they did over France while navigating unfriendly fire.

The Piper *Cub's* legacy production of nearly 25,000 J-3s and L-4 *Grasshoppers*—over 5,000 of which are still flying—is not measured in speed and definitely not in the firepower bolted to *Rosie the Rocketer*. It is measured in endurance, versatility, and the personal freedom the planes have provided for generations of pilots that "cut their pilot teeth" through gripping the stick of the tiny plane and executing two and three-point landings with the 800-pound taildragger, as shown in Figure 37. Piper proved that an airplane need not be complex to be consequential to history. The J-3 demonstrated that modest power and simple construction, combined with a sound and sturdy design, can serve a nation in both peacetime and war—even in direct battle. The Piper *Cub* has lived many lives. While *Rosie the Rocketer* remains its most dramatic incarnation, the preponderance of the use of the plane in general aviation has shown its amazing versatility—things like the delivery of mail to isolated communities, transporting skiers and training float plane pilots, and even agricultural and forestry uses like crop dusting and aerial liming. The clones that have been birthed, once the *Cub's* fifty-sev-



Figure 37: A J-3 Piper *Cub* in a perfect, three-point landing. Courtesy of Shutterstock.

en-year production reign was completed, continue to show off the functional masterpiece that emerged from William T. Piper's assembly lines.

In the end, the Piper *Cub*—in all its evolved forms—has endured because it was built with incredible clarity of purpose. It was meant to fly simply and reliably, to fill the place of an everyman's and every woman's "Ford Model T" of the sky. That purpose proved elastic enough to encompass war, wild innovation, and peacetime service. The little yellow airplane that once hunted tanks with Major Carpenter stands as one of aviation's most enduring symbols of practical ingenuity in the air and still beckons pilots—in all its glory—today.



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