



Call them sausages, *drachen*, or observation balloons—they played an important though now all-but-forgotten part in World War I. Here a veteran balloon company commander looks back at one of yesterday's proud air arms . . .

# WHEN SAUSAGES BLAZED IN THE SKY

By Samuel Taylor Moore

**H**AIL and farewell to the blimps. Like the best of us, they blazed across the firmament for but a brief moment in history. Now they are gone. The Air Force said good-by to lighter-than-air craft before Pearl Harbor. The Navy recently deflated the last of its big balloons.

I am not here to plead, as some have, for a stay of execution for these great, prehistoric monsters from flying's past. But I think we ought to give the grand old balloons a decent burial. They fought a good war in their heyday, World War I. I flew in them—I and other officers and men in an Air Service force that totaled eighty-nine balloon

companies and 17,000 personnel at home and abroad by the time the Germans laid down their arms.

A few years ago I read in *A History of the United States Air Force* that "balloons played an important, if unspectacular, role in the first war." I gulped. The words represented a really long view of wartime ballooning. One day over the Argonne I received a shorter-range and more restricted impression.

On that occasion, eight red-nosed Fokkers of Hermann Goering's squadron ganged up on my elephantine, sausage-shaped balloon and me. In my observation basket under the belly of the gas bag, I didn't see the attackers. Actually,

a balloonist seldom saw an attacking plane. The cable that anchored the balloon to the ground, where a winch operator stood by, posed a threat to a plane's wings and propeller. It was thus considered dangerous for a fighter to come in from underneath. The bulging bag screened from view any attackers coming down on top.

One was made aware of attack by a general din. From the ground came a chatter of protective anti-aircraft machine guns, their tracers visible and audible, and high explosive AA 75s detonating within 150 feet. Fragments from the explosions whirred about like a covey of quail. From above came the

sharp whine of enemy incendiaries. The winch operator at the other end of the cable hauled down furiously, the only "evasive maneuver" of which the balloon corps was capable.

The tactical boss of the operation for the man in the basket was the maneuvering officer down below. He was far better able to tell how matters fared upstairs than were the one or two men in the basket. The maneuvering officer sent his orders to the balloon by telephone.

The order this time was the one I was waiting for under the rather warm conditions. I receipted it, whipped off my headset, and went over the side in a motion, making sure en route that my parachute static line and the basket ropes were not fouled.

After the parachute blossomed, five of the eight Fokkers moved back in. They followed the chute down from 1,500 feet, Spandau guns spitting. The other three enemy planes circled above guarding against Allied fighter counter-attack. Miraculously, not one of the Germans rated a cigar for a hit on my helpless hulk. They did riddle the parachute, assuring that the landing would be hard on in-steps and teeth. I looked back up after hitting and saw my gas bag burning and on the way down.

I doubt whether, in the perspective of history, my experience that day was important. But it seemed spectacular enough at the time.

The 7th Balloon Company, AEF, which I commanded in action for some four months before the war ended, recorded twenty-one escapes by parachute under air attack. There was a total of 120 such jumps among some sixteen balloon companies which ascended along American battle lines in France through the war. Several observers had to jump twice or more. Our ace in reverse was Lt. Glenn Phelps, who had to bail out five times.

Forty-eight US balloons, in all, were downed by German planes. Our fighters blasted seventy-three German balloons—*drachen*—out of the French skies.

The Air Corps retained observation balloons in its arsenal for two decades after World War I. Never again, however, were the hydrogen-filled sky whales to provide standstand seats for an active war.

Hap Arnold wiped out all Air Force lighter-than-air activities around 1940. The craft had become obsolete for Air Corps purposes. General Arnold willingly gave to the Coast Artillery Corps all responsibility for barrage balloons. Air Corps blimps were turned over to the Navy for antisubmarine work.

Observation balloons had been used by the US Army in two previous wars. The ten or so balloons which appeared in Civil War skies during the first two years of that conflict operated in charge of civilian aeronauts (see "*To Spot the Camps of Rebel Scamps*," July '61, AIR FORCE). Because of attendant friction between civil and military authority, that Balloon Corps had been disbanded on the very eve of Gettysburg. The single US observation balloon which represented the entire air phase of the Spanish-American War was riddled beyond repair when a brave but inexperienced commander ascended from the front lines before San Juan Hill. Rifle fire and shrapnel immediately sieved it.

From the beginning of World War I, Allies and enemy alike utilized balloons. Battlefield balloons had by then attained the familiar blimp shape rather than the rounded, circus-balloon appearance in use earlier and in today's high-altitude test and research balloons. The front lines through much of the war were marked by two uneven rows of balloons generally about half a mile up. Assigned one to each infantry division, they stretched in rows from Alsace to the English Channel — like giant Japanese lanterns strung over the muddy fields of battle.

Direct telephone communications from the air to ground commanders provided a rapid tactical intelligence and artillery direction. Radio was then in a primitive stage of development limited to Morse code signals.

Instances of valuable balloon performance were many. During the Allied Marne counteroffensive, an infantry battalion was assigned to take important high ground that probing operations had indicated was lightly held. Minutes before the planned H-hour, a balloon observer saw a sudden reinforcement of defensive positions by an enemy regiment swarming with machine

guns up the reverse slopes to defend the objective. At the last moment, the operation was canceled, saving 1,000 men from certain decimation. Later the high ground was taken at nominal cost in altered plans for intensified artillery preparation plus reinforced infantry.

The best day our 7th Company experienced was during the St.-Mihiel offensive. From our position at the left hinge of the salient between dawn and dusk we spotted and directed artillery fire to knock out seven enemy batteries. We also directed fire to destroy a loaded ammunition train operating on a narrow-gauge railroad and gave continuous reports on tactical developments in the battle.

If a balloon observer spotted smoke issuing from chimneys of a deserted village in the enemy rear at dawn, it meant that under cover of night new troops had arrived in that area. If the movement did not mean reinforcement for an offensive, it at least indicated that a division in line was to be relieved by a rested unit. Intermittent harassing artillery fire on longitudinal roads and crossroads behind the lines through the night often wrought havoc on the enemy. Observations at daybreak could estimate the toll despite frantic enemy efforts to clear evidence of damage.

Camouflage over roads along the fronts provided fair concealment for daylight troop movements, but clouds of dust rising above camouflage panels indicated rewarding targets. Often we surprised them.

Ground haze, rain, fog, and high winds constantly frustrated balloon observation, frequently when it was most needed. But one good day's work could compensate completely.

To a neophyte fighter pilot making his first flight over the lines, enemy balloons seemed to be inviting targets. That was pure delusion. Antiaircraft guns on both sides were concentrated around balloons and usually well manned. An additional enemy ground-to-air defense weapon, lacking in the Allied arsenal, was "the flaming onion." The projectile, the size of a ping-pong ball, was heavily coated with phosphorous. The gun sent the projectiles up in series. "Every damn onion seemed to have a direct personal message for you," an American fighter pilot  
(Continued on page 87)

balloon-buster once told me. "They really scared us." in addition, the enemy pursuits invariably appeared at their best in air-to-air defense.

The incendiary coating on Allied aerial guns' bullets burned off quickly. Our *drachen*-buster planes had to close on the target to about 100 feet to be sure that the balloon's hydrogen would ignite. Otherwise, mere bullet holes might be quickly patched with insignificant loss of gas. In the closing months of the war, most American units equipped one plane in each squadron with a special antiballoon weapon known as "the elephant gun." Its projectile was approximately an inch in diameter with a heavy incendiary coating. Its greater range and effectiveness were somewhat offset by a slow rate of fire.

Statistics are lacking on the number of American pilots and planes lost during *drachen* attacks. Properly such figures should include losses in air-to-air combat during interception dogfights in addition to losses from ground-to-air defense.

The confirmed score of our balloon machine-gun defense totaled exactly two enemy aircraft. Both were credited to machine gunners of a single unit—the 6th Balloon Company. But I am sure enemy aircraft losses actually were several times greater. Our machine gunners had limited marksmanship training, but they quickly became proficient.

Our Allied air commanders were reluctant to reduce their offensive potential by major effort in aerial defense of American balloons. Each of our balloons received protection from a lone pursuit ship patrolling the balloon beat. This was often a punitive assignment for the pilot. In consequence, if the enemy attack was a solo sneak, the German waited until the patrolman was at one end of his beat before he dove against a "sausage" at the opposite end. If a German formation was committed to the attack, it was common practice to precede the major operation by using a single enemy plane to decoy our lone protector from his patrol.

Contacts at the front between American airplane and balloon men were good enough. But always we were conscious of some patronizing



The observation basket of a World War I balloon was not the best place in the world to be when the balloon was under attack, as this German observer hastily decided after Allied aircraft set fire to his *drachen* along the Western Front, 1918.

from hot pursuit pilots toward men who got into the air at the end of a string. They tolerated us principally because we were prime sources of confirmations for dogfight and balloon victory claims. Visits to our positions for that purpose were quite frequent.

The confirmations I remember best took place September 29, 1918, and were for the final sortie of the greatest *drachen* buster of them all, Lt. Frank Luke. Luke, credited with a total of four enemy planes and fourteen balloons shot down, flew to his death and the immortality of the Congressional Medal of Honor that day. In support of a planned Allied advance, he attacked and

destroyed three German balloons while under attack by eight German planes. He finally went down. We watched his three *drachen* victims trailing black smoke as they fell.

The airplane fraternity may have been inclined to patronize balloon troops. Their attitude, however, seemed like boundless admiration compared to our complete rejection by combat ground troops who perforce were our neighbors up front. During air attacks on balloons, wild enemy bullets and fragmentation from AA artillery fell on the hapless ground sloggers. The enemy intermittently shelled our ground position. On occasion he would seek to  
(Continued on following page)

pick off a balloon in the air with time-fuzed high explosives. We could make the balloon a difficult target for ground-to-air shelling by changing altitude or by moving the motorized winch. There was no way to prevent the fragmentation from falling among the infantrymen. Balloon companies were unpopular along the line as a result. When seeking a new base of operations we met hostility from every side.



—Photo courtesy the National Archives

**Frank Luke, the greatest *drachen* buster of them all, won fame and the Congressional Medal of Honor for bagging fourteen German balloons and four enemy planes in only seventeen days of combat, before he was finally killed on September 29, 1918.**

Like innocent bystanders from the beginning of time, our neighbors often seemed to suffer higher casualties than we did when the enemy attacked us.

It required 180 enlisted men and seven officers to keep a single 35,000-cubic-foot sausage in the air. We had to be mobile. Motorized equipment consisted of a balloon winch and winch-tender, seven heavy-duty trucks, three light trucks, three motorcycles with sidecars, and a personal car. In the Argonne, the 7th Company traversed some eighty miles in seven weeks from one position to another, keeping up with the infantry. Every move entailed laying and maintaining approximately twenty-five miles of telephone wire. Separate lines to divisional intelligence, and to such specialized artillery batteries as were assigned to counterbattery work, fugitive targets, and anti-aircraft kept a signal section busy night and day. We also had a small radio de-

tail for emergency use, but the one time in my experience it was needed—telephone line out and a fine fat fugitive target within easy range—no one was listening on the artillery reception headset.

Six men trained in identification of enemy and friendly aircraft surveyed the skies. Six machine gunners, with assistants to load the guns, also were deployed on the perimeter. Hydrogen specialists ferried the heavy compression cylinders back and forth from supply dumps and supervised inflation. A maneuvering detail handled the balloon on the ground, including the building of balloon beds with windbreaks and camouflage. Other specialists were balloon maintenance men, parachute riggers and packers, a basket detail, and an egghead section in a trailer chartroom that kept a log during every flight and processed all observations transmitted from the basket. This section also prepared tricky maps used in the basket with allowances for distortion of perspective. Additionally, normal administrative detail required company clerks for payrolls and requisitions, cooks and KPs, regular QM men for supplies and clothing. Each balloon outfit was a maverick despite a higher echelon of command—the Wing consisting of four companies. That balloon company that selected its best thieves for the ration detail also ate best. We got competent medical service only when we seduced or kidnapped a medico from the nearest infantry or artillery unit to tell three enlisted pill dispensers what to do.

Casualties were about the same as those suffered by field artillery units. Several observers were disabled in rough parachute landings or by being thrown from baskets

when slammed to the ground in high winds, but miraculously only one American observer was killed. Lt. Cleo Ross had with him in the basket a neophyte observer when his balloon was fired in a sneak attack by a lone Fokker. Lieutenant Ross gallantly delayed his jump to make sure his companion got away safely. Ross's parachute opened OK, but the flaming balloon touched it. The chute burned in a moment. Two observers, Lts. George Hinman and Roland Tait, became prisoners of war in a believe-it-or-not accident. Their principal mission had been to direct the fire of a fourteen-inch naval gun mounted on a railroad carriage against an enemy railroad center. The two ascended at daybreak in high winds only to find rain and fog reducing visibility to zero. As they came back down, the balloon cable snapped. The balloon skyrocketed upward and strong wind carried it toward the German lines. A noise like a freight train suddenly deafened them; they realized that they were traveling in the trajectory of shells from the naval gun they had expected to direct. After a rough landing in enemy terrain, they were taken prisoner by Russian prisoners of war who were working under German guards.

At the time of the Armistice, the US balloon effort was going strong, training substantial new manpower and developing new techniques. The guiding spirit behind these efforts came from Col. Charles de Forest Chandler, who had also been the first Commander of the Signal Corps's Aeronautical Division when it was founded in 1907. More power to his memory from the veterans of one of yesterday's proud air arms, today no more remembered than its chief.—END

*The author, Samuel Taylor Moore, retired as an Air Force colonel in 1953 after having served in three wars. He covered the Mexican Punitive Expedition of 1916 as a war correspondent and in World War I became a balloon pilot and commander of the 7th Balloon Company, serving fifteen months in France—the experience he describes in this article. After World War I he became a free-lance writer, and in 1941 was recalled to duty as an adviser on barrage balloons. In 1942 he was sent to the CBI where he flew eleven combat missions and landed in Burma behind enemy lines with Wingate's Chindits. Recalled to TAC in 1948, he organized the USAF Air-Ground Operations School in 1950 and was its first commandant, and he served a short tour in Korea before his retirement.*

