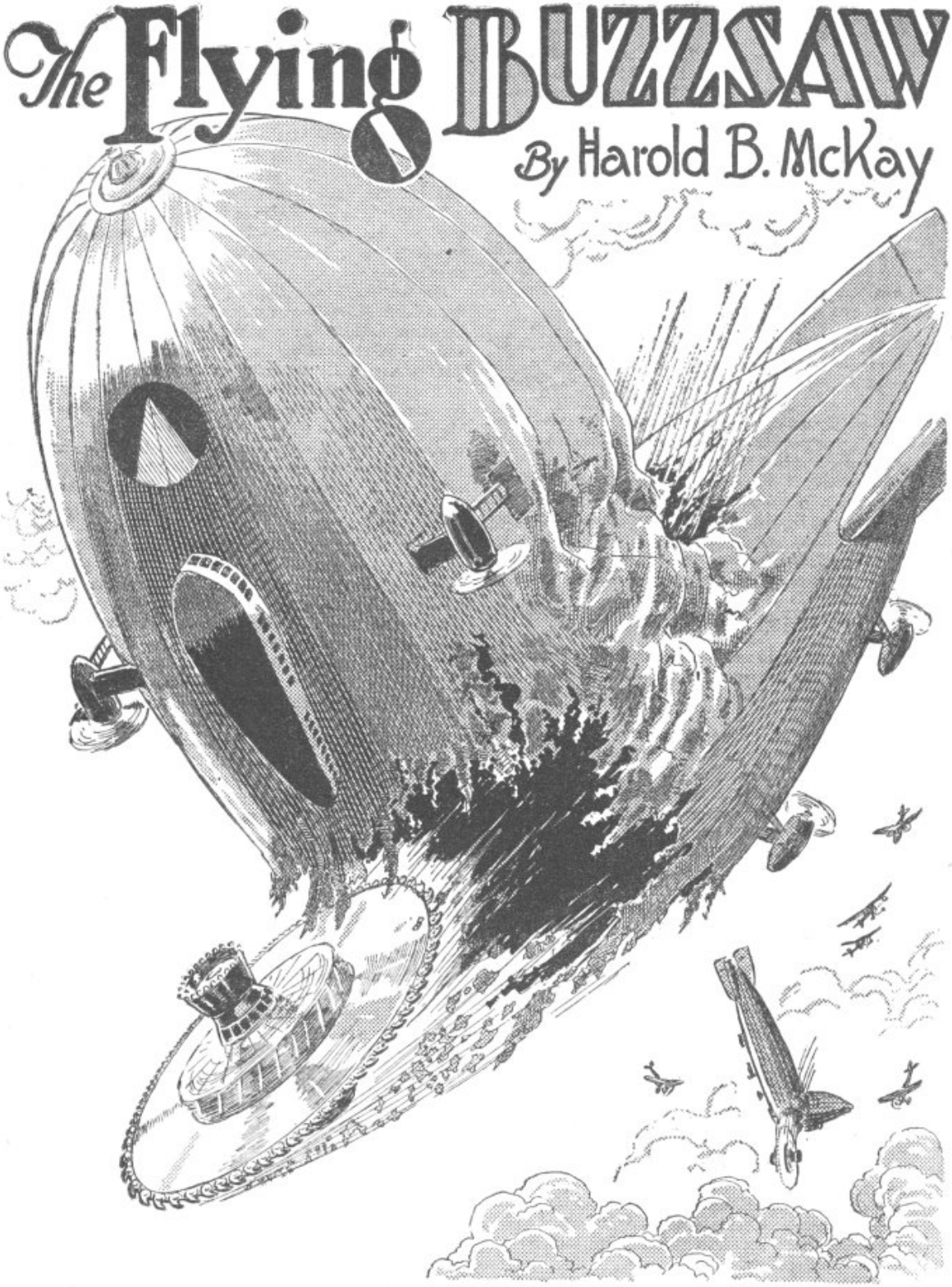
The Flying BUZZSAW

By Harold B. McKay



(Illustration by Paul)

I shot through the dirigible as though it had been of paper. The gas bag buckled in the center, while from a jagged hole protruded mangled girders.

WHAT a weapon it would make! What an engine of death and destruction could be evolved from so simple a machine! It would be invincible.

It was a circular saw that was the subject of my idle musings one day as I worked in the woodwork shop of the Contra Costa Aircraft Company. The cabinet and carpenter work were not exactly new to me, but for some reason the sight of a buzz-saw always held me fascinated. The almost silent spinning blade, so innocent looking, but how vicious! I emphasized this latter thought by shoving the large spruce plank I held full against the saw. With a resonant whang the board was neatly cleft. What a machine! And then it happened. For no reason at all, a piece of the severed board dropped over the rear of the table and fell on the ten centimeter belt that operated the saw. When the block hit the pulley, there was a terrific jerk on the saw table; it was wrenched from its floor moorings and toppled over on its side. Something that it struck broke the saw from its shaft and the great blade flew out into the air horizontally. It described a gradual upward curve, cutting a lamp cord on the way and then suddenly boomeranged and started back. Before I knew what had happened the spinning saw had gashed deeply into my thigh. The sight of the red, gushing blood made me weak; a nausea crept over me—then dizziness. A galaxy of universes swept about me, planets rotating about in their own little systems.... I seemed to be traveling in time itself, onwards....

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I was again at work in the aircraft factory; but with the feverish haste of wartime activity. War! The Consolidated States of North America, which included the entire continent, were faced in this summer of 2014 with an enemy on their very doorstep. The combined military forces of the continent of South America, under the asserted influence of Japan, were struggling with the North American forces in a grim battle for supremacy. On the narrow frontier of the Isthmus of Panama the land forces of the great nations had desperately locked horns. And already had the “Southern” planes made long reaching skirmishes over the “Northern” territory, taking a deadly toll. The Northern forces were seriously handicapped by a lack of fighting planes, having only a hastily equipped fleet of former pleasure craft, befitting a nation of great wealth. That this continent would always be the last to progress in the art of devising scientific and technical weapons of war seemed evident. From the first day the white race reached the Northern American shores, its means of defense against inevitable enemies had always been deficient. But for some reason, perhaps luck, or was it fate, it had always come out on top.

It seemed as if the characteristic luck might be with us again, and in a spectacular fashion, if a certain Dr. Bloomsworthy had anything to say about it, for he was constructing, in the shop of which I had charge, a type of aircraft unrivaled in fact or fiction. The Doctor was a scientist with a peculiar mechanical genius, and it was this genius that was guiding the construction of the monstrosity on which I worked.

In an immense camouflaged shed in Lower California, a dozen huge machines were being built. Intense secrecy surrounded the assembling, and few men were employed. The individual parts had been made in many scattered factories throughout the country. In fact the first machines had been built with private capital, the government having considered Bloomsworthy a maniac. The machines resembled huge discs, forty meters across; they were perhaps more like wheels, having vanes, like fan blades, instead of spokes. These blades were movable, and, when they were horizontal with the rim, made

the machine appear to be a solid disk. In the center of the disc, projecting on either side, was the cabin or control room in the shape of two truncated cones with their base on the disc. They were about six meters across and extended somewhat less than that, on each side, from the disc. The machine looked much like a great thin wheel with a thick hub.

I WAS at work supervising particularly the completion of the control cabins and it was understood that I was to pilot one of the machines in the primary maneuvers in the field. The project was rushed to completion, for already the "big drive" was on. Our frontier was being pushed back daily, while the enemy air forces spread terror in cities far behind the lines. Our brave fliers were going bravely to their deaths in the aerial skirmishes; for they were hopelessly outnumbered.

It is surprising that the general construction of aircraft has not changed in nearly a hundred years. Though the planes used were almost fantastic in their inner construction, they were still worked on the same old principle: an inefficient propeller beating against the air, striving to force an awkward plane into graceful flight. A fight in the air still meant no more than a fight on the ground; just a question of numbers, strategy and endurance.

The day of trial for Dr. Bloomsworthy's great machines was at hand. Each machine was rigidly constructed of steel throughout. There was no evidence of frail, flimsy parts so characteristic of the usual airplane. But our ship was a destroyer of the air, a killer. Driven by powerful internal combustion motors, they were stabilized by two great gyroscopes in an equatorial mounting. The gyroscopes operated from small electric motors run by auxiliary batteries so that in event of failure of the engine, a safe landing could be made. The vanes in the discs were mounted on steel rods and arranged so that they could be opened or closed.

The control cabin was built with simplicity throughout. Below the disc, in the truncated cone room, was most of the operating machinery. The roof of this engine room was the floor of the control cabin, and was situated below the disc. A continuous window of bullet-proof glass surrounded the cabins on either side of the disc. It was thus possible to see in almost any direction from the control room. Due to the machinery necessary for handling the operation of the vanes, the cabin was small, not two meters across, and it was surrounded within by a continuous circular seat, so that the pilot had but to slide around to face in any direction. This was necessary because the hub of the machine was prevented from turning by gyroscopes, so that when the craft took to a different direction, the pilot had to move.

The control method was simple; a handle, like the gear shift of an ancient automobile was set in the middle of the floor; on it was a ball that could be slid up or down. The machine was designed to move in whatever direction the handle was pushed on its universal joint, while moving the ball caused the giant wheel to rise or fall vertically. All movement like this was to be done in one plane, the direction being determined by the way the vanes were opened.

A pillar projected from the ceiling almost down to the "gearshift" handle, and a few levers mounted on this controlled such auxiliary functions as releasing the main motor clutch, banking the disc by bearing on the gyroscopes.

Perhaps the most startling function of one of these levers was to cause a number of great steel teeth to appear at the edge of the disc. The teeth were to be the fighting claws of this, the Flying Buss-saw. Trials proved the machines to be great successes, and in spite of the seeming bulk of the things, their efficient means of propulsion caused them to be highly

successful and there was no wasted wing-space: every inch of those great vanes was active.

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IT was on the first day of December, 2014, that Dr. Bloomsworthy's fleet of privateers took to the air. Each machine was manned by a pilot and a mechanic, and carried no guns. Before the departure, the doctor addressed his detachment of some two dozen men.

"Gentlemen, I need not stress the importance of your present duty, for you are aware of that; I need only urge you to be merciless; remember, our success depends on a concerted, reckless drive. You must literally slaughter your enemy; show no mercy; have no conscience; it is them—or you. Now then, up and at them."

That morning there arose a fleet of the weirdest engines that had ever been devised. As they rose from the ground they must have looked like great needle-bugs, with the edge of the thin disc as the outspread wings. I was at the controls of the first ship in our little formation. As I cleared the ground with the disc of course horizontal, I altered the blade pitch for vertical speed. Acceleration was accomplished only by turning the vanes, the motor being governed at even speed. At the three thousand-meter level I shoved the control stick south. My acceleration meter, an ingenious spring and weight device, went to the end of the scale. This meter was quite essential in manning the craft, for by means of it we could tell just what we could do in a maneuver, as well as the direction of our motion, and whether we were freely falling, or driving down. My speedometer steadily mounted, till at the 500-kilometer mark, it hovered, and my acceleration registered zero. I decreased the angle of the vanes to cut down air resistance, and increase speed. At different speeds the vanes must be altered just as the engineer moves the "links" on a steam train. Again my acceleration showed positive, and before long we had reached the thousand-kilometer mark.

The great discs cut through the upper air like large tin can covers. Their own natural gyroscopic effect made them immune to transverse winds and air pockets. They were invincible! After an hour or two we were over the frontier and in the center of Mexico. We had hoped, for a first encounter, to meet up with large bombers or the like, but over the field we found only a myriad of small planes, terrorizing our infantry with machine gun fire. At higher levels several skirmishes were in progress between individuals of both forces. We dropped down to try our luck at scattering the lower bunch, and were surprised in the act by a squadron of the enemy battle planes that approached from the east.

Their first move was to circle about us, as if to determine our excuse for existence; perhaps they were awed by our peculiar appearance.

BY this time we were hanging motionless over the trenches not 500 meters up. Though our squads could communicate by radiophone, it was generally understood that in battle we would act on our own. With a sudden decision, I looked for a victim. A hundred meters above me a monoplane rounded into a bank; I pulled the ball to the top of the stick and my great ship rose like a hydraulic elevator. As I reached my opponent's level, he nosed over to drop, and as he passed, a harmless rattle of machine gun fire sounded on the slanting sides of my cabin.

The battle was on! I shoved the ball down, and there was a shudder of the machine, as its motion reversed and the vanes turned for downward flight. My first hit was more accident than skill, for as my opponent rounded out of his dive, he found that I had dropped to a position squarely in front of him.

I saw the great nose of the monoplane head straight for the vicious teeth of my giant wheel, and a second later there was the screech of rending metal, and his big motor was ripped from the plane and tossed into space. The plane was severed laterally from tip to tail, and the debris flung fiercely from the disc. It must have been a terrible death for my enemy. But fighters soon become hardened to anything.

The others of our squad had done equally well, and soon the air was filled with shattered craft dashing crazily to earth. The lust for blood was creeping on me; a morbid glory in slaughter; I must get bigger game! No sooner said than done; far above and to the northwest appeared a squad of giant bombers of the Excelsior type, apparently returned from the shelling of some Northern city. I strained the controls to reach them, and soon was on their level. Several of my comrades followed, while the remainder took to aiding the Northerners in the "duets" above. The Excelsiors were not to be taken unawares, however, for, try as we might, we could not get them in line with our "teeth." A chance hit was scored, though, when one bomber, in banking, lost a wing to our cause, and subsequently slid out of the fight.

It was time to try a new type of maneuver. I withdrew about a kilometer, and then charged forward. As I reached a speed of 300 kilometers per hour, I disengaged the motor clutch; and then pulled back the stick to reverse. As the disc was merely idling, the reverse wind resistance stopped it quickly, without checking my headlong flight. When the disc is stationary, its natural gyroscopic effect is neutral, so that it can be banked, that is, the plane of flight is changed by rotating the whole machine about the internal gyroscopes. I turned the big wheel vertical and then threw the vanes wide open to climb. Inasmuch as the machine was vertical in the air, climbing was then done by pulling the stick "up" in reference to the earth, instead of using the ball. Traveling in this fashion calls for skill, because the power of the motor must sustain the disc, no wing surface being effective against falling. Climbing would have been slow this way but for my running start. I charged upwards to the stomachs of the great Excelsiors. Several gunners peppered me with their light aircraft artillery. My answer was to laugh.

I was beginning to feel the glow of battle, the warm blood pumped madly through my veins.

I QUICKLY worked levers and stick, making my ship flit crazily in every direction to confuse the pilots of the bombers. I was successful—two of the bombers collided trying to avoid me, and went down in flames. And then, in a strategic point, "I gave her the gun." Ri-i-i-pp Crash! Three planes, in quick succession, felt the cold, sharp steel and like lumps of butter were neatly sheared in two. A big motor of one plane struck one of my teeth, and I was obliged to temporarily withdraw them to prevent my machine from shaking out of equilibrium. Looking around at that moment I saw that others of my fleet had brought down the rest of the bombers, and now, to my surprise, not a single one of the enemy was left in the air. All those that had not been forced down had fled in terror. We were masters of the air! The victors! The sense of triumph was intoxicating; we had not suffered a single casualty.

We knew, however, that it was but temporary; soon the enemy with his almost limitless forces would retaliate, blow for blow.

After some communication by radiophone we decided to reconnoiter for a while. We had, for the time being, given the enemy something to think about. Some hours later, while on the way back to our sheds, we met a small scout plane of the Northern Army, who radioed to us that we were to report to the

Commander-in-chief of the Northern forces. Accordingly, we picked up Dr. Bloomsworthy at our shops, and then, with three others of our fleet, reported to the War Office in Denver.

After explaining briefly the operation of his ship, Dr. Bloomsworthy offered to work with the Air Forces in a concerted "big push" on the morrow. Obviously, it was too late to start the construction of more of the ships, so it would be necessary to fight with the few machines we had and those that were being rushed to completion. After a conference that lasted far into the night, we retired to our sheds, and after a short rest prepared for active service the next day. We were to carry bombs, so that we could make ourselves troublesome to the ground forces of the enemy also.

At ten o'clock the next morning, word came through the government lookouts that the enemy was mobilizing a great air fleet; possibly with the idea of crushing us by sheer numbers. We took to the air with the spirit of battle in every man, aye, even our great engines seemed to thrill to the impending struggle! A half hour out, and we were met with a fleet that fairly filled the horizon before us. It composed the bulk of the Northern air forces, just sent out from Vera Cruz. They were all fast ships, and joining them at a thousand kilometers an hour, we were soon sighting the enemy.

Although the Northern fleet had impressed me as being big, it seemed puny when I viewed the enemy fleet that rode out to meet us. Their craft fairly blackened the sky. Hundreds of bombers and many huge dirigibles stood out against an almost solid background of smaller planes. Even with the discs, our chances looked slim, for we must have been outnumbered ten to one.

How serene the two vast fleets looked as they flew towards each other; it impressed me as being like two trains unwittingly rushing toward each other on a single track. Speeding serenely on—to destruction. Every man in our army must have been as tense and silent as were the knights of old, riding their steeds to fatal tournaments.

IN a few agonizing minutes the battles were on. Like two swarms of locusts flying through space, the rival fleets clashed to practically melt together in the heat of a great conflict. Fighting with our ships was comparatively easy. In maniacal frenzy we dashed in every direction, leaving twisted wrecks behind. The Northern scout planes skipped around mosquito fashion, on the edge of the war zone, getting all enemy planes that tried to maneuver out of the mess. After a time my lust subsided; I was jaded from the thrill of the vibration of my giant buzz-saw as it tore engine from plane— muscles from body. I grew suddenly weary—and then, I saw a plum in the pudding.

The huge hulk of a Zeppelin hove before me. Again a lust—a greed—a passion for destruction filled me. Such a prize! I drew quickly up and described a long boomerang arc. I mentally calculated the motion of the dirigible and then tore madly downward leaning about forty degrees out of the vertical. My speed was reckless, but my aim was perfect. A quick glance showed my acceleration to be that of gravity, my speed five hundred kilometers an hour! and then zip!—I shot through the dirigible as though it had been paper. As I slugged the controls to check my precipitous fall, I stole a glance back at the giant gas-bag. It had buckled in the center and was slowly falling, while from a jagged hole in its middle protruded mangled girders. I climbed for a period, and then, with all the force I could use in an uphill climb, I plunged into the bag from the bottom. As I was obliged to close the vanes when cutting through anything, my ship stopped its upward flight in the entrails of the dirigible. The saw teeth were still working, however, and I was at a height of morbid enjoyment. There,

floundering around in the dark, only the heavy throbs of my cabin told me of the girders that were being wrecked.

Soon I saw light again, for the great ship had broken in two, and I dropped some distance until I could again get my vanes to work. Just as I checked my flight, I noticed that the enemy were again in full retreat, scampering southward with a flock of relentless buzz-saws chasing them, cutting into them as they went.

At this moment, part of the nose of the Zeppelin, with a single immense cabin attached, floated down toward me from above, a great parachute open above it. It seemed as though it were about to drop on top of me, and as I looked, I saw two of the crew, alive, in the cabin. I had a bloodthirsty desire to cut through them as they slowly slid past. But to all things an end must come for they were not a hundred meters away when they both opened fire with a ten centimeter artillery piece that was left in their doomed cabin. One of the heavy shots struck full in the machinery room of my ship, another ripped out several of the vanes in my wheel. My ship described a dizzy eccentric helix, and floundered earthward. Of a sudden the damaged gyroscopes below me tore from their bearings, and the body of my mechanic ripped through the steel floor. The cabin, without the gyro control, assumed the motion of the disc, and soon the centrifugal force held me fast against the wall. The earth rushed up at sickening speed. I was going to hell with no brakes! An hysteria came over me, consciousness vanished and returned as though a myriad of tiny stars flew past as I fell. Time was fleeing, my ears were filled with the drone of ever-changing harmonics. Then came a terrific crash. I had landed—on the wooden floor of the aircraft carpenter shop. Some one was tightening a bandage to my side. And I heard as from a distance a voice that said: “I wonder what he means, ‘Did we win the war?’”