WASHINGTON'S "WILD SCOTSMAN":

The early aeronautical adventures of L. Guy Mecklem, 1897-1910

DONALD D. EKLUND

Occasional Paper #2

Center for Pacific Northwest Studies,
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EDITOR'S PREFACE

The death of L. Guy Mecklem in Bellingham, January, 1973, removed from the Northwest scene a colorful personality who had been one of the true pioneers of air transportation in the region. It is fortunate that his personal story of those early days was recorded a short time before his death by Dr. Don Eklund of the Department of History, Western Washington State College. Its retelling, replete with first-hand memories and quotes and accompanied by a series of contemporary photographs of the events covered, make it a fitting memorial to a pioneer whose early life was so adventurous and so exciting.

It is appropriate that this short monograph be published in the series of Occasional Papers sponsored by the Center for Pacific Northwest Studies--an arm of Western Washington State College dedicated to fostering interest in and in encouraging original research on the Pacific Northwest region. The original research herein displayed will undoubtedly evoke a great deal of interest in an aspect of the region not especially well publicized.

The author and the Center are indebted to Mrs. Anita Johnson of the Department of Geography for the time spent in the typing and retyping of the manuscript.

James W. Scott,
Director

I

APPRENTICE FLYER

Oily black smoke trailed the ascending balloon. On the trapeze of a parachute suspended beneath, sat a small boy rethinking his recent audacity. What he hoped to do, when the aerostat reached its maximum altitude, was to activate a mechanism which would allow the parachute to float gently earthward. Minutes passed. He pulled the release rope but found it snarled in the shrouds. Feverishly he worked as the hot air device cooled and quickly dropped. No time left! Rider, parachute, and balloon plunged into the cold waters of Lake Washington.

That was back in 1897, according to L. Guy Mecklem. "I was fifteen, a high-school drop-out, working in the boathouse out at Leschi Park on the Lake Washington end of Yesler Way."[1] He recalled that the Seattle Amusement Center was operated by the streetcar company and featured a zoo, bandstand and dance hall. To draw larger crowds, and swell company receipts, a carnival or some other special attraction was often hired. "I got the chance to ride the balloon when the aeronaut burned himself while throwing gasoline into a furnace used to inflate the bag."[2] A volunteer was called for, so Mecklem stepped forward, envious of those who drew the applause of crowds and the playing of bands. "I was lucky in regard to the unfortunate end of that first flight. A launch was waiting nearby and took me back to shore."[3]

Despite the short-lived success, Mecklem said he enjoyed the sensation of flight and decided to make a career of balloon-riding and parachuting.

He filled out the remainder of the contract of the owner-aeronaut who, for a long time, was confined to a hospital. "I performed ascensions and parachute drops three times a week, weather permitting, over the next five months."[4] The park was only about a mile from home and Mecklem's parents, after watching the event from afar, often commented upon the foolishness of the aeronaut. It was only after the season ended that he told them it was their own son. Otherwise "I figured they would put a stop to it."[5] He received two dollars and fifty cents for each ride and the park proprietor gave him a ten dollar bonus, hopeful that he would perform again the following summer.

II

GOING INTO THE BALLOON BUSINESS

Such was not to be the case. Mecklem took a number of different jobs over the next few years until the turn of the century found him driving a delivery wagon for the Connor Brothers' Grocery Store on Second Avenue. It was hard work for one who weighed so little. "I had to get up at five o'clock in the morning, feed and harness the horses, haul heavy loads of groceries including 100 pound sacks of potatoes, and go until after dark every day."[6] He continued through the winter and part of the following spring but then decided to build a balloon and go into business for himself giving aeronautical exhibitions at fairs, carnivals or any other place that desired such attraction.

Mecklem bought a sewing machine, a huge quantity of cotton cloth, and went to work, only to find that he lacked the technical ability necessary to construct an aerostat. He attended night school and was soon able to design a model of the desired balloon. Using the latter as template, he was able to lay out and cut the gores which, when sewn together, formed a large bag thirty-five feet high and twenty feet through at its greatest diameter.[7]

Plans for a parachute were also required and shortly thereafter secured from a New York aeronaut who advertised in Billboard Magazine. The drawings indicated a construction far different from the packed silk or nylon free-fall affairs of today. In those times parachutes were generally made of the same materials used in the construction of balloons. The canopies usually measured twenty-two to twenty-four feet in diameter with

a hole or air-vent in the center. The size of the vent could be changed by a drawstring arrangement which allowed the operator to further enlarge it for a quicker, more direct descent to a good landing place, or he could make it smaller for a slower but only partially determined line of fall. Guiding was accomplished by pulling in the shrouds on one side and side-slipping towards favorable terrain.[8]

Mecklem also specified that the aeronaut or jumper was not harnessed to the parachute in any way but would usually ride upon a trapeze or line-bar some twenty feet below the canopy. There, while the balloon ascended, he would perform stunts as an added attraction. The extent of the acrobatics depended upon the imagination and daring of the individual performer.

A cut-off block was used to free the parachute from the balloon once the latter had reached its maximum altitude. This was a block of wood about four inches square and eighteen inches long, one end of which was attached to four quarter guys at the bottom of the bag. The parachute was secured to the block by a rope which ran from the canopy-top up and through the cut-off device which was hollow inside. The rope would be severed by a razor-sharp blade pivoted or hinged in a slot within the block. The operator would activate this by pulling sharply on a release cord which ran from the trapeze through the vent in the canopy to the blade mechanism above. The cutting action plus the pull of the aeronaut's weight would cause the parachute to float gently away from the aerostat.[9]

Another item needed to make the act successful was an additional block of wood or small sandbag attached to the top of the balloon to insure its turning over and releasing the hot air inside. If this did not

happen, the bag might continue to rise and float miles away before dropping back to earth. This could be costly as it required an extensive search and long haul back to the scene of operations. Too, it might land in the water which required a number of days to dry out before the next event. Mecklem said that the softest place a parachutist could land was also in the water but so doing caused a loss of profits as a boatman had to be hired for rescue purposes. There was also the same problem in drying the parachute as there was with the balloon.[10]

III

FIRST ENGAGEMENTS

Mecklem finally assembled his newly constructed equipment and advertised for employment. He was hired immediately by realtor C. D. Hillman who wanted to attract people to his latest development, Hillman City, near the south end of Lake Washington. Pay was $150.00 per ascension and parachute drop; the aeronaut was to work four consecutive Sundays.[11]

He took the job, hired a helper and endeavoured to inflate the balloon. He explained that a trench, some eighteen feet long, two feet wide and two feet deep, was dug to initiate the procedure. The trough was covered with boards and earth with a raised chimney, constructed from a hollow metal barrel, placed at one end and a fire pit left open at the other.[12]

On both sides of the chimney, at a distance of twelve feet were erected "gin-poles" approximately twenty-eight feet tall. At the top of each was a pulley through which a rope was threaded. The rope was also passed through a ring attached to the top of the aerostat. By taking up the slack, the bag was lifted and its mouth placed over the chimney. A fire was started in the pit and the draft, made possible by the trench, caused the hot air to rush upward through the smokestack and into the balloon.[13]

At this point, a helper or "striker," armed with a circular board or pail of water, was stationed inside the expanding bag. He was to stop ignition of the cloth as gasoline or kerosene was thrown on the fire to make certain the balloon filled properly. It was a dangerous job both for the man inside and the one "firing" the embers at the other end of the trench.

When inflated, however, the rope holding the balloon between the poles was pulled free and the craft was ready to rise. The parachute was attached and the act began.[14]

According to Mecklem, there was another important aspect to the technology of hot air ballooning. He said that a new craft made of cotton cloth had very little lifting power the first few times it was inflated because the fabric was porous and allowed most of the heat and smoke to seep through. An aeronaut had to work hard to seal the pores of the bag with oily soot, another use for the gasoline or kerosene applied in the "firing." The dirtier or grayer the bag, the better the balloon as far as its lifting qualities were concerned.[15]

People were disappointed the first time Mecklem tried to master the skies. The balloon was not sufficiently "sooted" although it had been fired the previous day. Though fifteen gallons of gasoline were applied to the fire the aeronaut remained earthbound. Hillman warned that he would not tolerate another failure.

By smoking the bag during the next week, turning it black in the process, Mecklem was able to make a flight of some ten to twelve hundred feet the following Sunday. To make up for his initial failure, he performed acrobatics on the trapeze as the balloon ascended. At one point he hung by one foot, head down, although he had a loop around his ankle which secured him to the line-bar. This was not obvious to the crowd, and so appeared a good trick. Seconds later, he released the parachute and drifted down, successfully establishing himself as an "Aerial Daredevil." Hillman only paid half the promised fee at the end of the engagement, but

other contracts were soon offered.[16]

Mecklem's next job was at Spokane, Washington, where he twice missed landing in the river. Glad to leave that city he proceeded to Tacoma where he met the "Great Sylvon," another balloonist from Victoria, British Columbia. The latter was a dapper little fellow who sported two upper front teeth fashioned of gold, each set with a large sparkling diamond. He was widely traveled having worked in London as both aeronaut and escape artist. With a carnival in Washington he combined his acts to thrill spectators.

Mecklem gained a contract from a local improvement association and synchronized his ascensions with those of Sylvon's. The Canadian went up locked in handcuffs and leg irons. These were secured to him by volunteers selected from the crowds. One one occasion he was placed in a straight-jacket and chained to the trapeze. Nevertheless, he escaped in time to free the parachute.[17]

Sylvon was fierce competition. Mecklem tried to offset it by creating loud explosions in the air. He accomplished his objective by reeling out, from the trapeze, a line fifty feet long. Five sticks of forty to sixty percent grade dynamite were attached to the loose end. These were ignited before being dropped and, seconds later, produced a powerful blast that rocked the aeronaut. The "Great Sylvon" won the battle of Tacoma, however, and Mecklem never saw him again. "I heard that he failed to escape the handcuffs at Calgary or Lethbridge and was badly injured when his parachute dragged him along the ground."[18]

After months of use, Mecklem's balloon was worn and rotten. He purchased another from an aeronaut who claimed he had worked in the South,

specifically in Alabama. Frank Woods acquired a store in Renton and was giving up the aeronautical profession. Mecklem, under contract to jump at Portland, Oregon, took the craft there but, on performing the first dynamite blast, found the concussion had split the bag across its bottom. He had quickly to ignite another package of explosives before parachuting into a swamp.

The crippled balloon came to rest in a woman's chicken yard. She demanded compensation for all the broken eggs and upset hens before letting the aeronaut recover the damaged aircraft. "I was so muddy, so disgusted over losing the next day's profits plus being gypped into buying an old bag not as good as the one discarded, that I just left the whole outfit right where it lay. I often wondered, though, how Woods got that old balloon so clean and white that he fooled me into believing it was almost new."[19]

1. Mecklem ascending with balloon and parachute.

2. Mecklem on the way to performing a parachute jump.

IV

A NEW START

Once again Mecklem quit ballooning and instead took work on a trolley line in Seattle. He had been there over a year when he awoke one morning to find himself partially paralyzed by rheumatism. During the following months he sought relief, traveling as far away as Mexico City. He finally settled in Los Angeles, California, where, upon recovery, he joined a Bernarg McFadden gymnasium to take a course in body building. It was in the late spring of 1903, when a friend approached saying: "Hey, you used to ride balloons didn't you? Well, there's a guy over at Chutes Park who has a monster. He's afraid to go up in it and wants to hire somebody to take his place. I told him about you and he wants me to bring you over to talk with him."[20]

Chutes Park was an amusement center at about Twelfth and Main Streets in what is now downtown Los Angeles. It offered a roller coaster, fun house, side shows, concessions and a "Shoot the Chutes" from which the park derived its name. There were also a few ostriches and some mangy animals prowling around the grounds.

Upon finding the owner of the large aerostat, Mecklem confronted a portly bartender who had recently envisioned himself a daring aeronaut. He had signed a contract with the management of the park to make three ascensions and parachute jumps a week. Now he wanted to be free of the obligation. "He said he would give me half of what he got if I would ride the balloon."[21]

Mecklem went over to look at the bag already suspended between the gin-poles, its mouth over the furnace chimney. Advertised as the "largest hot-air balloon in the world," it reached a height of seventy-five feet and was pointed at the top to make it rise faster and higher. It was certainly impressive, recalled Mecklem, but he didn't see how the rocket shape would make it any better. He also emphasized that the parachute, fashioned from silk, was extremely large, measuring some twenty-nine feet across its canopy.

After reaching mutual agreement, Mecklem made his first ascension in the huge craft the very next day, a Sunday afternoon. He borrowed the bartender's $75.00 pair of green tights which had to be taken up considerably. Once freed, the balloon shot skyward moving erratically and swinging the parachutist from side to side in a violent manner. Finally it straightened out and the rider heard the signal below, a pistol shot that told him to cut loose and start down. The large parachute oscillated wildly, however, as Mecklem's weight was not sufficient to keep it steady. It descended slowly in a direct line depositing him on a sloping cottage roof, an event that caused the bartender to laugh uproariously. Just then, Mecklem slid over the edge ripping the valuable tights on a protruding shingle nail. The bartender turned sour while the crowd continued laughing.[22]

That same season, at Chutes Park, Mecklem performed some sixty parachute jumps. Landings, however, were often hazardous, with the rider being rescued off telephone wires, from the waters in Westlake Park and from distances fifteen to twenty miles out in the country. Nonetheless, he enjoyed the work, the excitement, the crowds, the balloon which rose higher

than ever once "sooted up" so that it held hot air longer. Never did it cease to ascend in a peculiar manner, but Mecklem did not have to worry about inflation, recovery, or any other details. All he had to do was grab the trapeze, soar aloft and then descend with the amazing parachute. "It was so large in proportion to my weight that several times it would ride on an updraft and actually ascend hundreds of feet higher than the balloon had taken us."[23]

In the evening Mecklem offered a different act. Billed as the park's "Human Meteor," he rode a heavily weighted bicycle down the chutes and then plunged headlong into the water. The "gimmick" was an asbestos pad sewn to the back of his shirt. This was soaked with a pint of gasoline and ignited just as the ride began. With a roar and some twenty-feet of flame blazing behind, the performer thrilled the onlookers. It was an event more dangerous than the balloon-ride although assistants armed with fire extinguishers stood along the slippery-wet slides.[24]

V

EXPANDING THE CIRCUIT

Once the season ended at Chutes Park, Mecklem obtained employment the following year as a balloonist-parachutist in the beach towns of Venice, Playa del Rey and Santa Monica, usually as an attraction to herald the opening of real estate developments. He recalled that, no matter the point of take-off, danger prevailed since there was always the possibility of landing in Santa Monica Bay, famous for its rip-tides and undertows. Sometimes an offshore wind would blow the balloon far out over the water and then, at a higher altitude, another air current would blow it back over land. It was always a gamble whether one would land in the ocean or not.[25]

He also recounted that his most hectic experience as a parachutist came during the course of this tour. At Santa Monica, while performing before an old soldier's reunion, the aeronaut descended into the boughs of a large pepper tree, adornment to a nearby residence. Beneath the tree stood the owner who warned him not to land on top of an all too available greenhouse. Just then a gust of wind caught the parachute and the jumper found himself ankle-deep in flowers and broken glass. "I only received $25.00 for the jump, but that gal wouldn't let me leave the premises until I agreed to give her all of it."[26]

To brighten his act, Mecklem decided to make ascensions while literally hanging by his teeth. Taking the idea from circus performers, he had a mouth-piece fashioned from leather and practiced holding it in a gymnasium where he worked to strengthen his neck muscles. After some weeks he felt

prepared. The mouth-piece was attached to a swivel which, in turn, was fitted to the parachute's trapeze. He hoped to spin around while the balloon ascended, an event certain to please the crowds.

That it did! The aeronaut went spinning around until he became exceedingly dizzy. He was barely able to pull himself back on the trapeze in time to cut loose from the balloon. For the next few days he could hardly turn his head or eat normally so sore were his neck and jaws. Eventually, he eliminated the swivel and performed more comfortably while hanging fairly stationary below the parachute and balloon. The act was thrilling. It brought headlines and good publicity but, after a few rides, the daredevil gave it up, hopeful of a more fruitful and longer life.[27]

VI

ENCOUNTER WITH BALDWIN

While Mecklem toured north, the dean of American aeronauts arrived at Chutes Park. "Captain" Thomas Scott Baldwin had become known for his reinstitution of parachute exhibitions back in 1887 after certain European innovators had quit the business due to certain well-publicized tragedies. Baldwin was also a world famous balloonist and the creator of the California Arrow, today considered America's first successful airship. He had finished that aircraft at Oakland, California, during the summer of 1904 and was fresh from exhibiting it at the St. Louis World's Fair. There he succeeded where Alberto Santos-Dumont had failed, although it was the latter who, in France, had proved dirigible balloons practical as early as 1901. The Brazilian in effect influenced the Captain.

Although Baldwin subjected the California Arrow to test flights over Oakland, it refused to carry him into the skies above St. Louis. The aeronaut was a heavy weight and the hydrogen generated at the fairgrounds was of poorer quality than that produced in California. At that point, Roy Knabenshue, a wiry balloonist, offered his services and achieved the anticipated success. Afterwards, Knabenshue flew the aircraft out of Chutes Park on Christmas day and during the early weeks of 1905. By that time, however, Baldwin had decided to sell the airship since it would not lift him and thereby allowed his student to receive major credit for the invention. The California Arrow passed into the hands of a group of New York stockholders and eventually became the possession of A. Leo Stevens,

another airship constructor and competitor to the Captain.

Baldwin needed money to build a larger, more powerful airship. Profits from the sale of the California Arrow had barely covered expenses and prizes promised by St. Louis Exposition officials for successful lighter-than-air flights at the fair never materialized. The fifty-year-old aeronaut proceeded to build an experimental dirigible but, when finished, it refused to lift both engine and operator. And so, since the Captain detested dieting and Knabenshue had left to build airships of his own, another lightweight pilot was needed to fly the craft and turn a profit. At this juncture, Mecklem returned to the Los Angeles amusement center. As usual he was looking for a job.[28]

Baldwin immediately hired the younger aeronaut and the two men went to work on the new aircraft which proved to be an unusual machine. It featured a silk gas bag thirty-eight feet long and sixteen feet across at its greatest circumference. The bag or envelope was fully rounded at the front but tapered to a point at the rear. The tail was really the inflation neck or valve and was folded over and secured with large rubber bands once the bag was filled with hydrogen. The hope was that, in case of over-expansion due to hot sun or high altitude, the rubber bands would pop off and release some of the gas thereby acting as a safety valve, a primitive device to say the least. Otherwise, a light kayak-shaped framework of bamboo was suspended beneath the bag and on the top of this gondola were mounted a pair of "air-oars" made of bamboo handles with silk fans fastened to the ends. Power was to be provided by the operator who would row the airship through the air.[29]

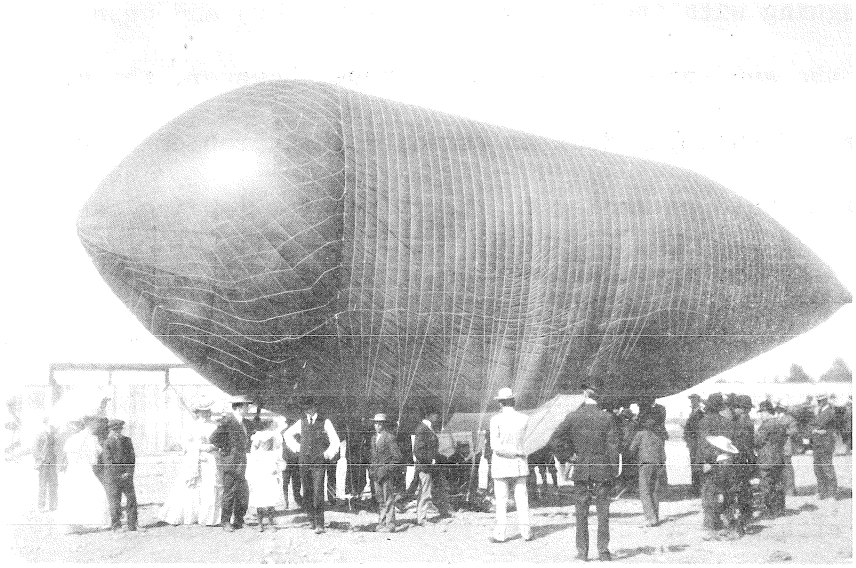
The first flight was less than perfect although the airship was ballasted within one or two pounds of ascensive power, the theory being that as the day grew warmer, the craft would carry Mecklem upwards and he could then govern its altitude by disposing of sand from a canvas ballast bag tied near his seat. The sun turned hotter than expected, however, and the hydrogen in the bag expanded considerably causing the airship to rise higher and higher with the safety-valve not working at all. Mecklem also broke an "air-oar" in attempting to govern the machine after it eventually leveled off at 2000 feet. At the mercy of the winds, the dirigible drifted slowly inland over the Puente Hills only to descend when the sun went down and the gas contracted. "We landed gently in an orange grove at Pomona."[30]

That night Baldwin recovered the airship; the next day he and Mecklem strung a wire between two tall poles set about 300 feet apart. To this the aircraft was suspended by a lock-ring fastened to the topside of the gas bag. The Captain then directed Mecklem to row the craft back and forth on the line as a form of training to lessen the possibility of future mishaps. The young pilot practiced two weeks before attempting another tetherless ascension and in the course of this time he became proficient at controlling the aircraft.

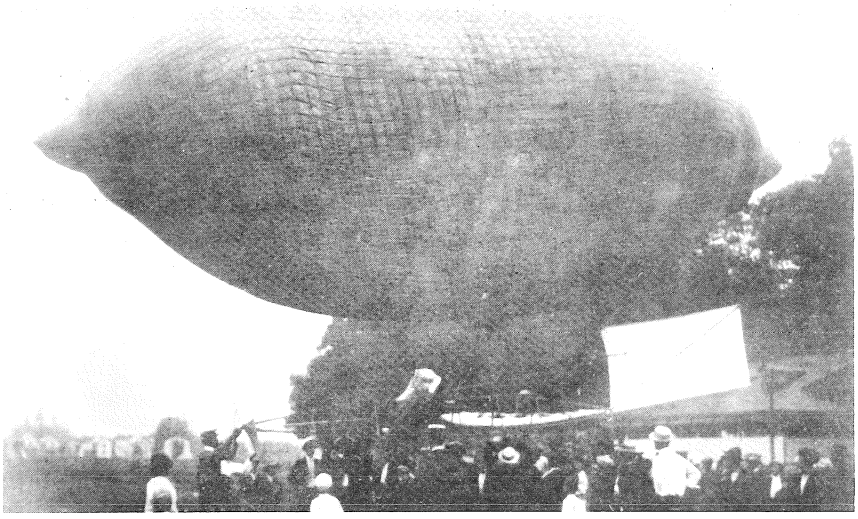
Afterwards, Mecklem made many colorful free flights. On exceptionally calm days he would take the airship to an altitude of some two to three hundred feet and row about over Chutes Park. Top speed was four miles-per-hour. Sometimes he would throw a handkerchief overboard then paddle down to retrieve it. On other occasions he would row the nose of the bag towards the face of a pretty girl seated in the grandstand. When she dodged, he

would back away laughing with the crowd. Bags of popcorn and peanuts were also showered upon the audience. If any wind arose, however, the machine became unmanageable. Eventually Mecklem remedied that problem by carrying a weighted line which could be reeled to the ground for landing assistance. Overall, it proved a remunerative attraction.[31]

When not flying, Mecklem carried acid and shoveled iron filings into the one-barrel gas generator that supplied hydrogen to the airship. He said he learned much about gas generation from the Captain but knew little about his personal affairs. At the time, Baldwin was involved in a legal dispute with John Joseph Montgomery, a Californian, who had been restimulated into working with gliders by the more famous aeronaut. The Captain was also responsible for directing Glenn Curtiss into aeronautics having ordered the engine to his California Arrow from the New York motorcycle manufacturer. Otherwise, at a later date, he would sell the United States government its first powered, navigable, airship and work to design the Navy's first dirigible. Nonetheless, Mecklem said he considered himself a "flunky" at the park and left when the unattended, oar-powered, airship exploded one night. What had caused the accident no one knew but it effectively concluded this episode in Mecklem's career. His relationship with Baldwin had lasted approximately six months.[32]



3. Baldwin's "air-oared" airship, Chutes Park, Los Angeles, California, 1905.



4. Powered airship, Baldwin design.

VII

DESIGNER AND BUILDER

From Los Angeles, Mecklem returned to Seattle where, during the summer of 1906, he entered the "automobile profession." He joined the Northwest Auto Track Association and, over the next two years, raced in eighteen different cities. He drove his famous Franklin "Spider" to innumerable victories and established several new track records in the lightweight class.[33] The car weighed 998 pounds. When the 1907 season ended, the "Wild Scotsman" turned towards the realization of another ambition, one engendered by both Alberto Santos-Dumont and Baldwin, his most recent mentor.

Mecklem envisioned designing, building, and flying his own airship. In the fall he contracted with Charles A. Looff, proprietor of Luna Park at Duwamish Head in West Seattle, to give aerial exhibitions there the next season. He commissioned his brother Ray, storekeeper aboard a ship operating between the Pacific Northwest and the Orient, to purchase 360 yards of Japanese silk. Frank Jacobs, owner of a dependable schooner trading with the Society Islands, was also asked to acquire pure Pará gum from Moorea, that area being known for having the finest. Fred Newell, prominent mill owner, agreed to rent a hall in South Seattle as site for construction. Meanwhile Mecklem labored over a paper scale model, prototype to the projected aircraft.[34]

The materials arrived on schedule and Mecklem hired two seamstresses with sewing machines to construct the gas bag. Several months later the large silken envelope took shape, extending to a length of fifty-eight feet.

At that time, the first layer of dope was applied and allowed to dry. The sizing liquid was a combination of the Pará gum and naptha and was used to seal the pores in the fabric. Applying the dope, however, was a tedious and dangerous job as the fluid had to be heated in a double boiler. There was always the possibility of fumes being ignited by sparks from the wood stove or from static electricity produced by friction of anything against the cloth.[35]

After several applications, the bag was inflated with air from a blacksmith's forge blower. It filled out to the perfect spindle-shape the designer desired, the reduction of drag being highly important. It was eighteen feet across at the greatest circumference and required seven additional coats of dope to make it gas-proof. When dry, it was completely covered with fish netting to support the framework suspended below. It was also fitted with an inflation neck and a gas relief-valve of Mecklem's own design.

The framework, constructed of spruce, marked an advance over contemporary designs. Triangular in shape, it incorporated a car in the center for both motor and operator. More interesting was the fact that it broke down into pieces eight feet long, all able to telescope into the main or center section for easy shipment. In addition, although the assembled frame reached a length of thirty-six feet it weighed but thirty-eight pounds. The car was also exceptionally light, its dimensions being two feet by three.

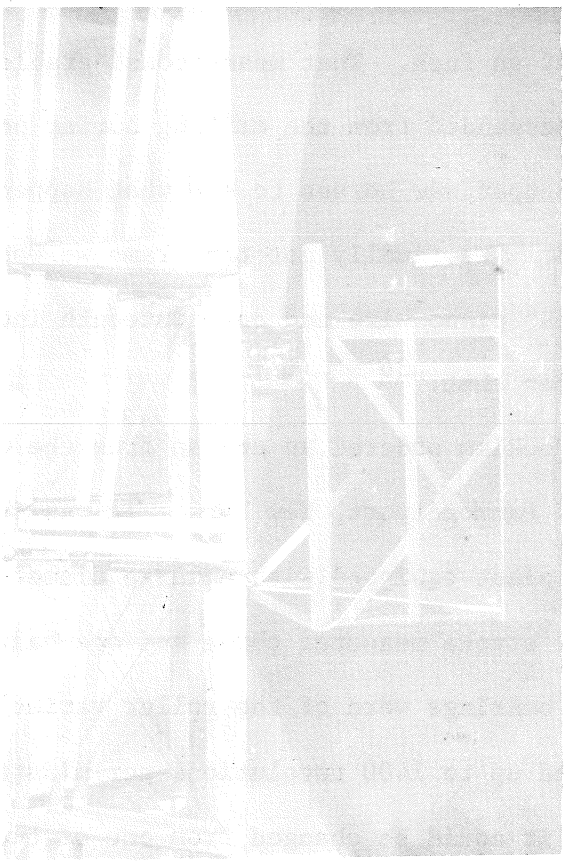
Mecklem said it took four or five constructions to develop the frame he wanted as it had to be strong enough to support the engine yet light

enough to be lifted by the gas bag. The various sections were held together by T-bolts as the total structure could be allowed to sag no more than three-eighths of an inch. That meant considerable experimentation, with the framework suspended from the ceiling during power tests or positioned with its ends upon saw horses to see what happened when the operator climbed on board. "We finally got the frame we wanted by strengthening it with 200 pound-test piano wire and one-sixteenth inch turn buckles. It was rigid enough after that."[36]

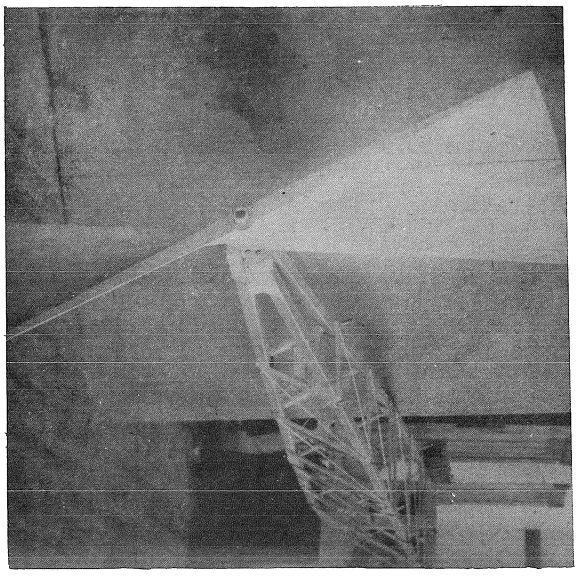
As for power, Mecklem ordered an engine from the Glenn Curtiss Manufacturing Company of Hammondsport, New York. It was an air-cooled, two-cylinder, v-shaped, plant equipped with a large diameter lightweight fly wheel. The bore and stroke measured three and one-half by three and five-eighths inches; the bearings were of the roller variety. It developed ten horsepower and turned up to 1400 revolutions-per-minute. The propeller was unusual in that it could be changed from one of two broad blades to one of four narrow fans. It measured four and one-half feet in diameter and was mounted at the nose of the frame.

An additional item, a friction cone clutch was provided by Joe Anderson of the Seattle Automobile Company, one that Mecklem claimed had only been utilized on Zeppelins to that time, at least as far as airships were concerned. The clutch allowed the operator to disengage the propeller driveshaft from the engine and to hold the craft stationary in the air. Together the component parts of Mecklem's dirigible could be packed into two boxes with a combined weight of less than 500 pounds. In brief it was an efficient and easily transportable design.[37]

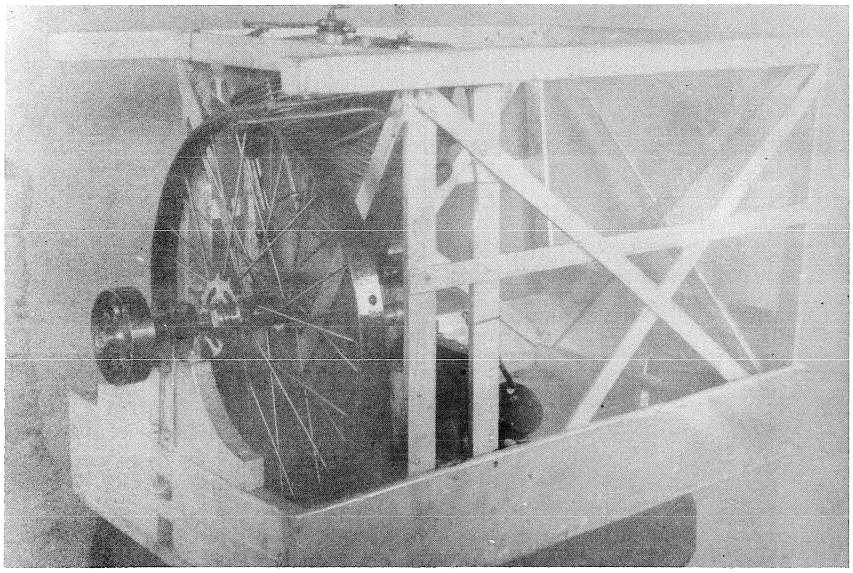
PHOTO PLATE III



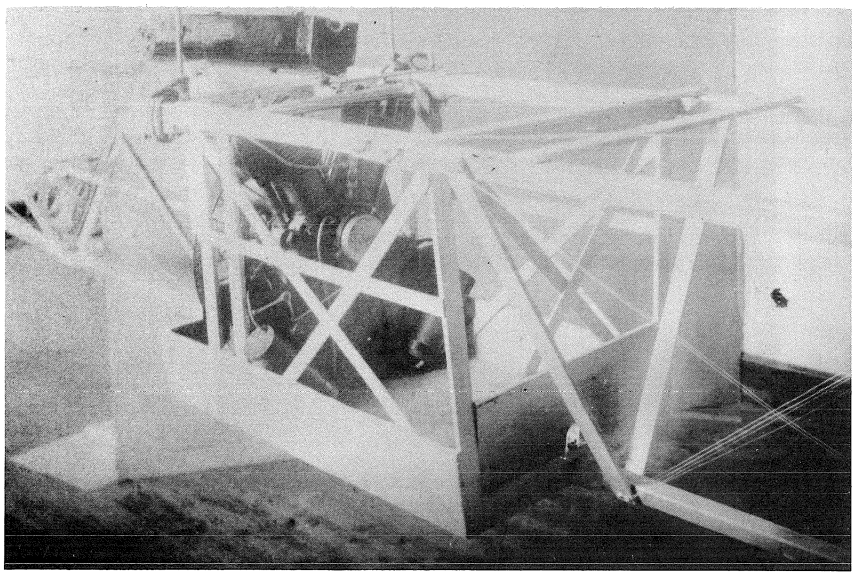
6. Frame of Mecklem's first airship, telescoped for shipment.



5. Propeller arrangement, Mecklem's first airship.

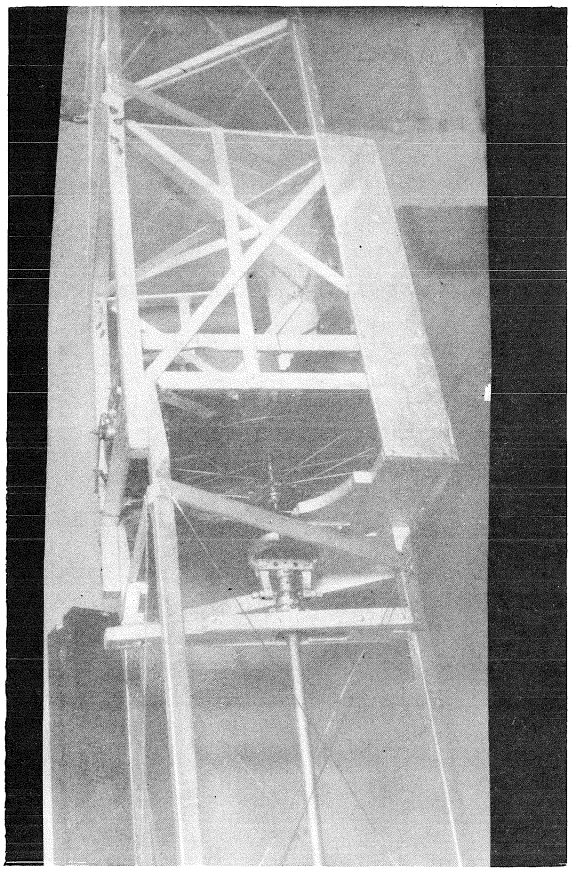


7. Motor box, Mecklem's first airship.



8. Motor arrangement, Mecklem's first airship.

PHOTO PLATE V



9. Clutch arrangement, Mecklem's first airship.

VIII

TRIALS AND TRIBULATIONS

When the summer of 1908 arrived, the aircraft was moved to Luna Park, where the usual collection of concessions, rides and shows were built on pilings over the water. The aircraft was placed in a specially-constructed canvas hangar seventy feet long, thirty feet wide and thirty feet high, especially notable for having been completed in two days. The gas plant, obtained from a New York manufacturer was erected nearby and preparations made for the first inflation.

As Mecklem recalled, the hydrogen-generating plant consisted of two 400 gallon wine casks lined with carbon, one fifty gallon ice barrel to cool the hot gas as it emanated from the generating casks and one twenty-five gallon tank full of unslaked lime to absorb the excess acid or impurities from the newly created hydrogen. Impure gas, if allowed to enter the silk bag would rot the fabric. He also estimated that to generate the 7500 cubic feet of hydrogen demanded by the airship would require 2000 gallons of sulphuric acid, 2500 pounds of clean cast iron shavings, 300 pounds of ice, a barrel of lime and forty-eight to sixty hours time. The acid and iron shavings combined slowly to produce the hydrogen.

With everything in order, the aeronaut ordered two 1600 pound drums of sulphuric acid from the Stewart and Holmes Drug Company of Seattle; they were delivered to Luna Park by a horse-drawn wagon operated by the Eyres Transfer Company. Once on the premises, however, the driver and his swamper did not utilize a plank to roll the casks down to the deck. Instead, they simply rolled them off the back of the wagon and stood aghast

as the heavy lead-lined drums crashed through the planks and buried themselves in the mud below. It took chain hoists, innumerable railroad ties, four days and over $100 to get them back on top. Such unforeseen expenses sent Mecklem to Joe Anderson, the automobile mechanic who, when asked for a loan of $400, pulled open a workbench drawer and presented twenty $20.00 gold pieces. "Here, if this ain't enough, come back."[38]

That problem solved, Mecklem hired a young man by the name of Frank Uker. Together they began gas generation by combining the necessary elements and putting a charge in the plant. Uker returned to Seattle for the night and Mecklem retired to his cot at one end of the hangar; for him, however, the evening was just beginning.

It was about midnight, he recalled, that "I was awakened by a terrific thumping noise."[39] It came from the generators which were synchronizing or "tramping," fairly dancing up and down in perfect rhythm. First, one would belch out a large bubble of gas and then, a few seconds later, the other would do the same. "It was really scary."[40] Nevertheless, wooden safety plugs were inserted in the tops of the barrels and these were supposed to blow out in case of too much pressure. Remembering that, and afraid the casks were about to explode, Mecklem grabbed a hammer and knocked the plugs out, an act which caused him to be immediately covered with the hot acid which shot high into the air. He ran for the end of the dock not bothering to consider tides and, fortunately, found water as he dove into the bay. The salt, however, did anything but soothe the painful burns he had received on his head and shoulders. A few seconds later, after swimming around, he discovered a ladder and climbed back to the deck where several

park people had assembled, attracted by the noise. Someone rubbed him down with vaseline and the affair ended. While recovering, "I continued generating gas but used only one generator."[41]

After a few days, the bag was filled and tested for lift. It was determined that the airship would carry not only the aeronaut, but also twenty pounds of ballast, in this case, sand in a canvas bag. A trial flight was advertised for June 27 and, on that day, a large crowd gathered as the trim dirigible was taken from the hangar.[42] It was time to prove the innovation, some months of construction and tinkering having gone by.

Mecklem trimmed the airship so that it would neither rise nor sink by the removal of ballast. After a few minor adjustments he climbed into the little car, started the motor and told the men holding on to "Let her go!" As they did so the ship ascended beautifully pointing its sharp nose toward the heavens that appeared a natural home. The ship responded well to the rudder and the pilot found that he could govern horizontal altitude precisely by merely leaning backward or forward in the car, so well balanced was the aircraft.[43] Other aeronauts of the time, it might be noted, usually walked back and forth on the gondolas or frames of their dirigibles to accomplish the same control. Evidently, Mecklem had an edge. He circled the park several times and headed toward Seattle.

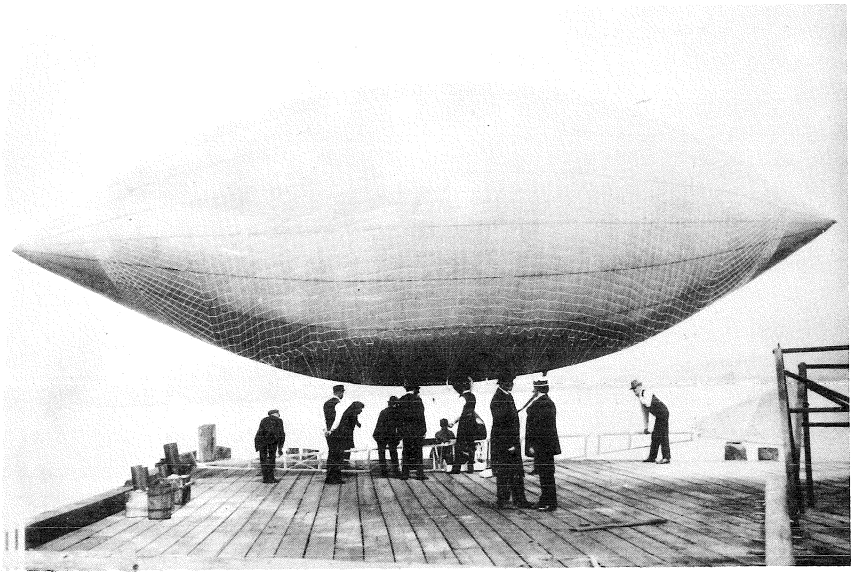
In quick time, the airship, according to the aneroid barometer in the car, reached an altitude of 2000 feet. The aeronaut valved gas but the craft continued to rise. At that point, the engine began to misfire, carburetor trouble due perhaps to the difference in air density. While Mecklem was adjusting the mechanism, the hot sun continued to heat the bag

causing the hydrogen to expand further, so much so that, before he could again valve gas, the bag burst open along a bottom seam and poured out its contents within a few feet of the running motor, flames shooting from the open exhaust.[44] It was a precarious situation.

Mecklem remained calm and grabbed both sides of the tear to keep the bag from splitting further. Simultaneously, he kicked the ignition switch and stopped the engine. He then stood on the frame and punched holes in the silk with his jack-knife. Seconds later he cut some cord from the rigging and tied the rent together, an action that probably saved his life although the distressed airship hit the water hard near Queen Anne Hill. Fortunately, the bag still contained enough gas to keep the frame afloat and Mecklem only suffered wet feet, although the dirigible was considerably damaged. The tugboat Leroy, which was standing by, towed the aeronaut and craft back to the park.[45] As Mecklem recounted: "Why the gas did not ignite, I will never know as I could feel it on my head and body. The only explanation possible is that it must have turned upward within inches of the exhaust and just missed firing."[46] In its account of the event, The Seattle Sunday Times reported that the aeronaut had held the torn fabric together with his teeth while sewing up the tear.[47] Mecklem laughed when reminded of that story.

PHOTO PLATE VI

10. Mecklem's gas generator.

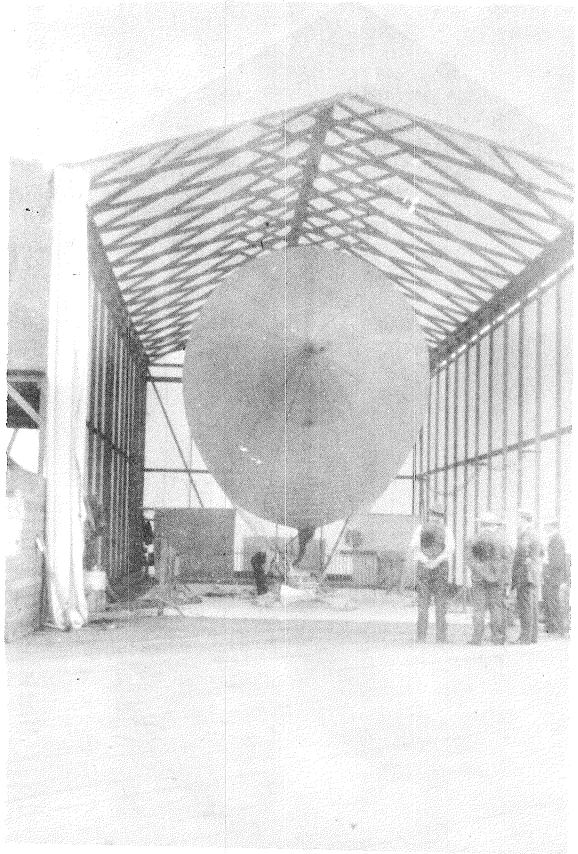


11. Mecklem's first airship in completed form.

12. L. Guy Mecklem and rigging arrangement of his first airship.

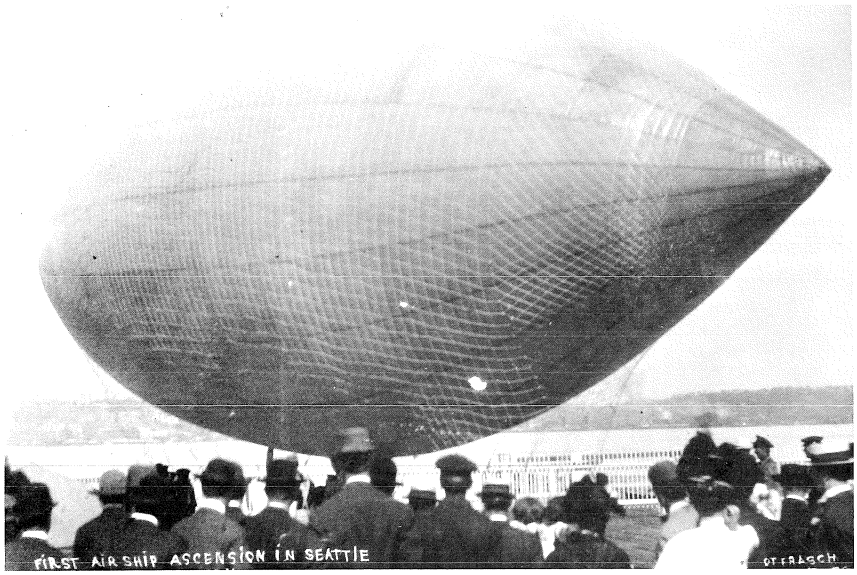
13. Seamstress and rigging arrangement of Mecklem's first airship.

14. Mecklem and seamstress, Luna Park, Seattle, Washington, 1908.

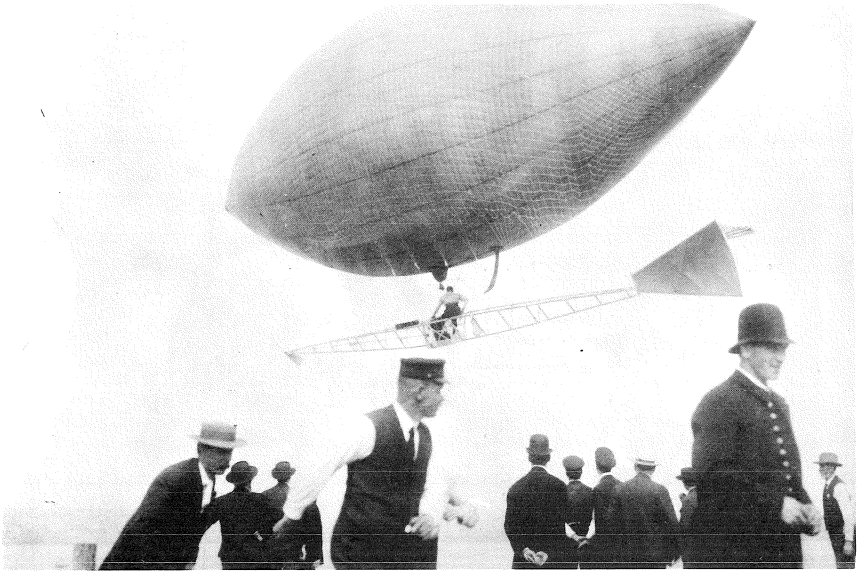


15. Mecklem's completed airship in hangar, Luna Park, Seattle, 1908.

PHOTO PLATE IX



16. Mecklem preparing to ascend, first airship flight in Seattle, Luna Park, 1908.



17. Mecklem underway, first airship flight over Seattle, June 27, 1908, from Luna Park.

IX

SUCCESS

Undeterred, the young innovator hired two girls to repair the bag. Since it required hand-stitching, one seamstress fell sick as a result of the gas fumes; in time the other became his wife. Meanwhile the car and frame had been reconstructed and a second flight was advertised for the Fourth of July. Completely confident in his aircraft's capabilities Mecklem agreed to race it against two automobiles.

The course was to be the ten miles distance between Luna Park and the Meadows, a race track for horses, and today the site of Boeing Field. Driving one of the Franklins would be H. P. Grant, head of the Seattle Automobile Company with as his passenger, Dr. Frank A. Bryant, manager of the New York Dental Parlors on First Avenue. In the other would be H. E. Schmidt and Bert Daniels, both experienced "autoists." The event was billed as the world's first contest between airship and roadcar; a crowd of 12,000 people turned out to witness the competition.[48]

Off to a good start, Mecklem's airship functioned perfectly with the carburetor offering little trouble. The aeronaut, however, held the craft to an altitude of only 500 feet, unwilling to risk the machine in thinner air. Minutes later, when crossing the valley south of Seattle, at Oxbow, he found himself above the automobiles and so shut off the engine while talking to Grant who asked where he was going to land. When Mecklem indicated the Meadows, the Franklins started out again by way of Georgetown expecting to beat the airship to its destination. Mecklem, however, flew a

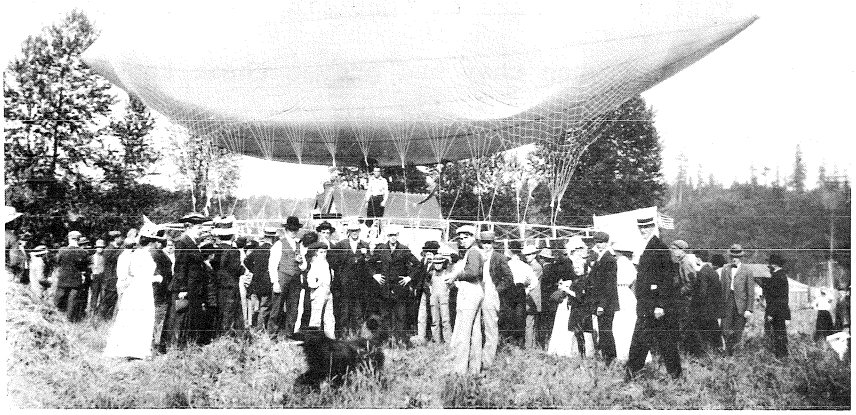
straight line and when near the race track, ahead of his competitors, eagerly valved gas while making a landing approach. Unfortunately, the Duwamish River beckoned. Seeing the water, "I released all the sandbags I had along for ballast, tossed overboard my tools and even threw away my shoes."[49] At that it was close and the airship barely made it to a Japanese garden where it descended safely with the aid of jockeys and other spectators. According to the Seattle Sunday Times the following day a group of Japanese gardeners, on seeing the dirigible approach, climbed to the roofs of their houses where they watched the landing in amazement. "We no see such thing before," said one of them.[50] The automobiles arrived two minutes later.

That night the airship was tied to the top of a motor launch and taken down the Duwamish to Elliott Bay and Luna Park. According to Mecklem, this was one of the most dangerous trips he ever made for it was the nation's birthday and many people were shooting fireworks off along the riverbanks; skyrockets came close to the hydrogen filled bag. A ball from a Roman Candle actually scored a direct hit but bounced off harmlessly. Further concern arose, however, when it was realized that the drawbridge tender had gone home for the night. Fortunately a nurse from a nearby hospital saw the strange apparition and ran down in time to open the span.[51]

Proud of his victory, Mecklem put his dirigible back into the air on July 8 to see if the holiday competition had caused any major problems. Not many people witnessed this third flight, which in reality was a short affair, no more than a trial run.[52] The aeronaut made money by keeping the craft in the hangar and charging ten cents admission to see it. He

remembered the Fourth of July race, however, as "the time I pioneered the air over Boeing Field."[53] The honorary title of "Captain" was also bestowed upon him after that event by Frank Uker.[54] At the time, it might be noted, many aeronauts went by the name of "Captain" or "Professor" although they were only so addressed when they had proven their knowledge and daring. Mecklem had earned the rank.

PHOTO PLATE X



18. Mecklem's 4th of July flight, landing at the Meadows, present site of Boeing Field.

19. Mecklem with jockeys, the Meadows, July 4, 1908, after race against two automobiles.

X

FURTHER TRAVELS

With the end of a rainy summer season in sight and again bothered by rheumatism, Mecklem decided to exhibit his airship inland. Too, some of the ride operators and show people at Luna Park were going to play the fall fairs in the Southwest; the aeronaut wanted to be with his friends. Eventually, by answering an advertisement in Billboard Magazine, he and Uker secured a contract from state fair authorities at Dallas, Texas, and, en route, attempted a thirty minute flight at Butte, Montana, the occasion there being a mining celebration. Poor gas and worse weather, however, made it impossible to fly even though $800 had been promised as payment. Out $500 for inflation materials, transportation and hotel bills, the two men deflated the ship and entrained for Texas where better fortune awaited them.[55]

Weather was ideal at Dallas. Mecklem and Uker established themselves on the fairgrounds and inflated the bag only to discover that the gas they had obtained at Butte had rotted holes in the fabric. They had to deflate once more and coat the silk with two layers of hot dope. This brought rewards in that, once refilled, the airship and aeronaut performed a series of fine flights although the wind made it frequently impossible to return to the point of departure. This necessitated being towed back to the fairgrounds by horse and wagon. Nevertheless, Mecklem had great fun when he found that the shadow and noise produced by the low-flying dirigible frightened local cattle and sent them running about in all directions,

creating huge clouds of dust. The pleasurable stampeding stopped, however, when an irate rancher sued both pilot and management for weight loss on the part of the steers. The case was settled out of court and "I stayed away from the cattle after that."[56] Besides, three bullet holes were discovered in the gas bag.

From Dallas, Mecklem and Uker traveled to El Paso for a one week engagement. Strong winds kept the airship grounded every day but one, and that flight produced another bullet hole in the fabric. "Deciding that the hospitable Texans were just a bit too free with their guns, we again packed up and looked around for another contract."[57] Word soon arrived that an airshow was to be held at Los Angeles.

In 1908, San Dominguez Field, present day site of Compton, California, was nothing more than a stretch of sandy desert. The event, advertised as the "First Air Meet to be Held in the United States" featured a few captive and free-flight balloons, three dirigibles and four airplanes.[58] One of the latter, unable to fly and previously viewed by Mecklem at Dallas, tended to reinforce his belief that the future of aeronautics lay with airships.[59] Within a few days he would change his mind, but before that happened he agreed to participate in the attraction by racing his aircraft against two of the other dirigibles. Initially he had planned to attend as a spectator only.

On his first flight, before a large crowd, the wind caught Mecklem's aircraft and drove it against a flagpole atop the grandstand. The pole impaled the bag allowing the gas to escape. Suddenly the aeronaut found himself clinging to the framework twenty feet above an excited crowd.

Firemen rushed ladders to the rescue and "I made an ignominious descent much to the joy and ill-concealed satisfaction of the other aeronauts and pilots."[60] Damaged beyond immediate repair, the dirigible was crated and shipped back to Seattle.[61]

PHOTO PLATE XI

20. Mecklem's airship on tour, possibly Dallas, Texas, 1908.

21. Air Meet, Dominguez Field, Compton, California, 1908-1909 (Possibly 1909-1910).

XI

FLYING A BIPLANE

Although his part in the show appeared over, Mecklem remained on the grounds becoming more enamoured of the airplane as time passed. One heavier-than-air craft, a Farman, owned and operated by the French flyer, Louis Paulhan, was very efficient. It was a pusher-type biplane in which the pilot sat on a small seat in front of the leading edge of the lower wing. It featured a fifty-nine horsepower Gnome rotary engine, the cylinders of which revolved around a stationary crankshaft, an unusual mechanism. Very stable, with its elevator mounted forward, the craft resembled a huge box kite.[62]

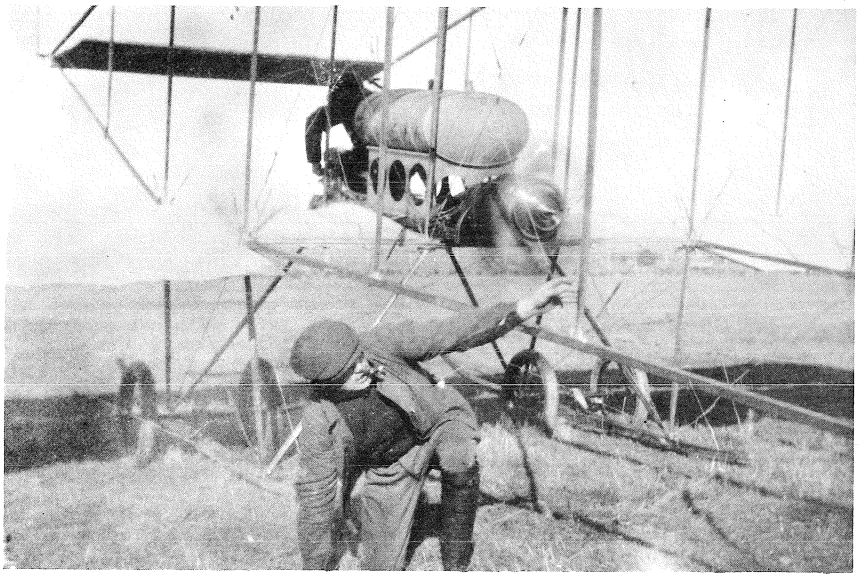
With nothing to do, Mecklem befriended Paulhan who joked good-naturedly about the flagpole fiasco. In reality, the Frenchman appreciated Mecklem's knowledge of gasoline engines and constantly explained to him the advantages of the Gnome motor as well as the control system of the Farman. It was natural, therefore, that the airship builder would want to fly the biplane as Paulhan performed thrilling flights in it every day.[63]

The chance came when, toward the end of the meet, Paulhan developed a fever and could not fly. Since the big Farman was the whole show, the plight of the sponsors and the Frenchman's manager was quite serious. Mecklem volunteered his services and, after considerable argument, Paulhan was persuaded to let the lesser known aeronaut take the aircraft aloft provided he did not ascend more than three feet above the ground.

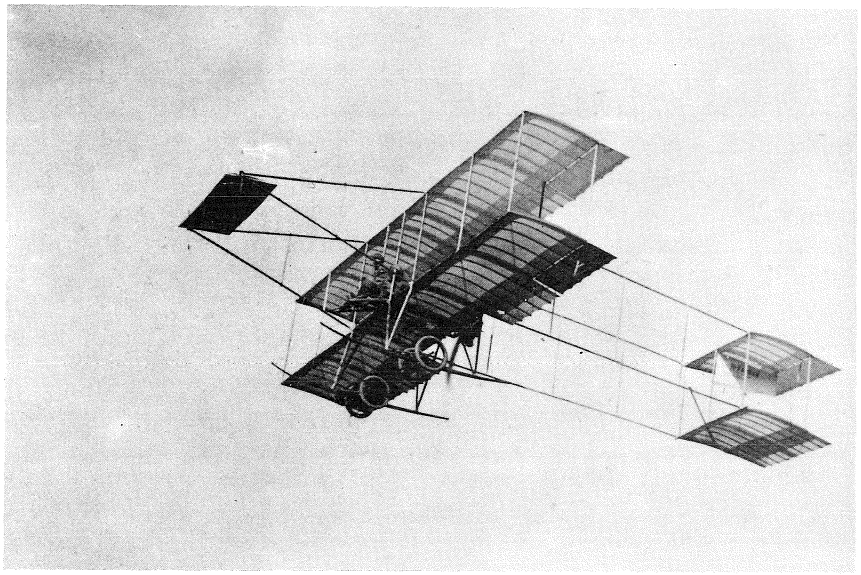
That day the crowd moaned disappointment when it was learned that

Paulhan could not perform. Seconds later, cheers filled the air when the management announced that a famous "Scotch auto racer and airship driver" would act as substitute and make the most dangerous type of flight possible, one only a few feet above the earth.[64]

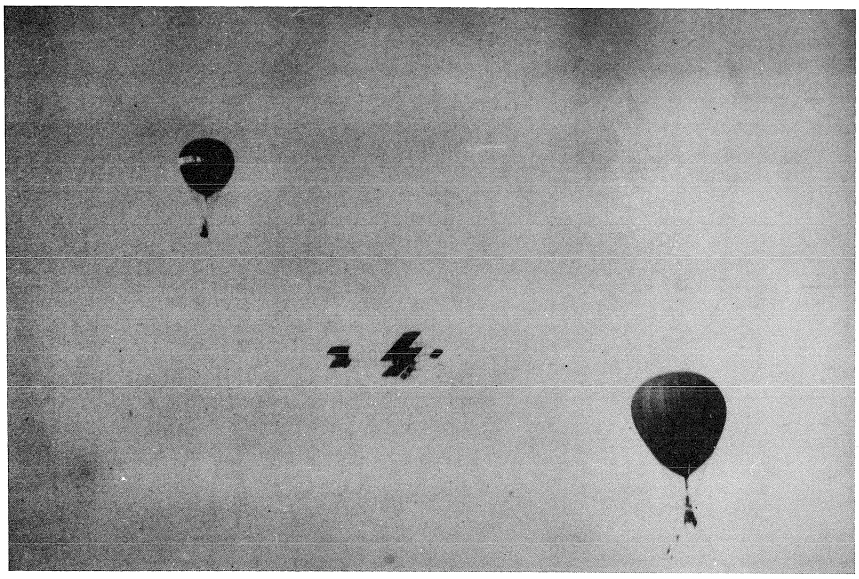
The Farman was taken to the end of the field where Mecklem examined it carefully. He climbed aboard and, after testing the motor, motioned away the men holding the wings. Within seconds he was airborne finding that the machine literally flew itself. He passed in front of the grandstand, wheels barely off the ground, turned at the end of the field and came back the same way. Elated, and some minutes later, he made a second flight ascending to the altitude of 200 feet, flashing by the crowd at the furious speed of forty miles an hour. On the return lap he flew with his hands off the controls just as the owner had done; the ship remained "steady as a box-car." Although hardly the show the Frenchman put on, it pleased the crowd and the management was satisfied. Even Paulhan, although still sick, was overjoyed and let Mecklem finish the engagement. The Scotsman was invited to become part of the French entourage but he turned that honor down.



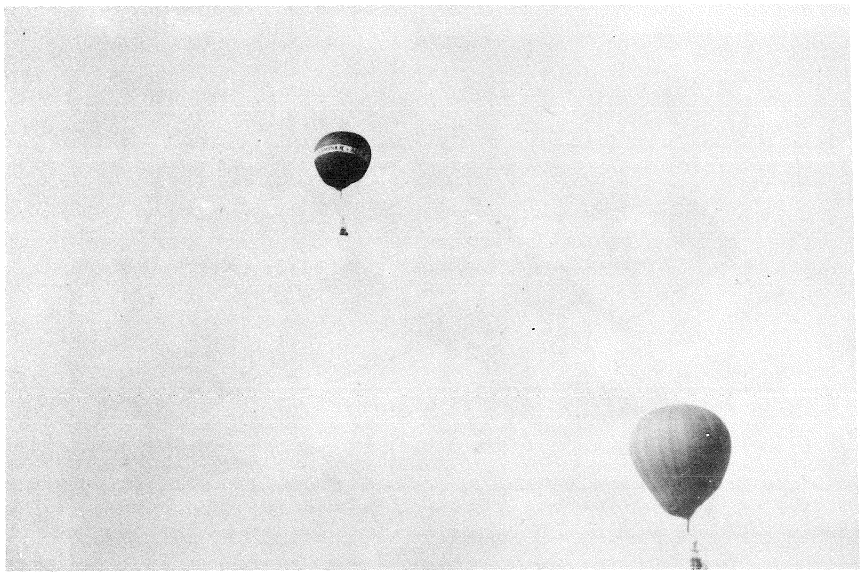
22. Louis Paulhan's Farman biplane, Dominguez Field Air Meet. Note motor arrangement.



23. Paulhan's Farman in flight, Dominguez Field Air Meet.



24. Paulhan's Farman and balloons, Dominguez Field Air Meet.



25. Balloons, Dominguez Field Air Meet.

XII

FINAL ADVENTURES

After the show concluded, Mecklem purchased a second airship from a Los Angeles aeronaut who had had poor luck in getting it airborne at Dominguez Field or any other place. Apparently constructed by A. Leo Stevens of New York, the craft was offered "at a ridiculously low price, so I bought it."[65] Costing only $1200, Mecklem hoped to make good money by fulfilling an engagement the former owner had secured in Santa Barbara.

That coastal city, surrounded by mountains and subjected to prevailing winds from the ocean, was a poor place to operate an airship. Mecklem, with Uker's help, made only one flight there, enough to prove that the ship was unmanageable and its motor temperamental. The only good thing about the acquisition was that the hydrogen generator was much better and of greater capacity than Mecklem's original. He lost money on the Santa Barbara contract as it was on a "no-fly no-pay basis."[66] Shortly thereafter, Mecklem took the craft to San Francisco, but unable to receive favorable employment, he decided to resell the unwieldy machine. It was purchased by a fellow aeronaut who took it to Fresno and perished in an attempt to fly it. Many spectators were burned as the result of the fiery explosion; some later died.[67]

Returning to Seattle, Mecklem repaired his old dirigible and then sold it to a man who used it as a captive balloon with large advertising signs attached to the sides. The new owner decided to use coal gas for inflation and had the idea that one could smoke while filling the bag.

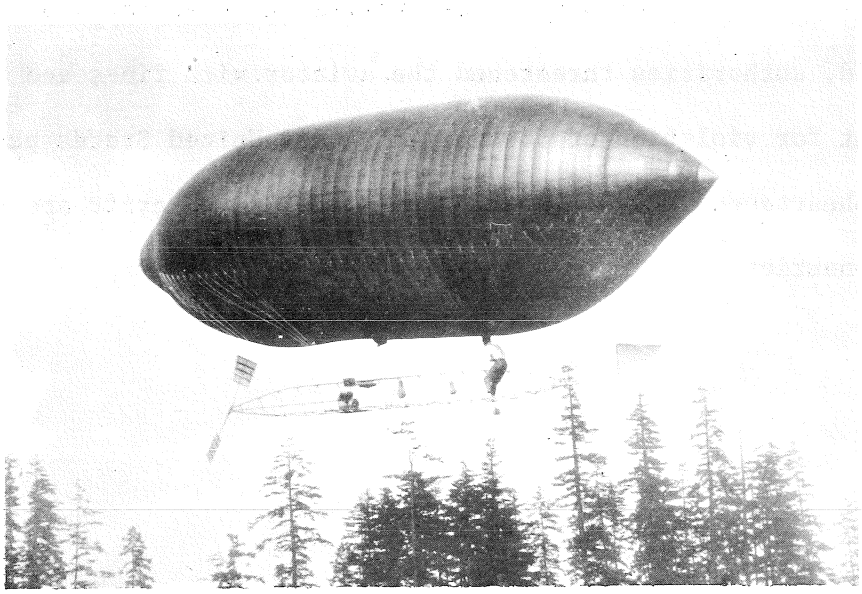
One day he struck a match to light his cigar and that was the end of the aircraft.[68] Somehow he escaped death from the powerful blast.

As for Mecklem, he purchased a third airship in Twin Falls, Idaho, but quickly disposed of it when the engine proved faulty. And so, with the exception of a free-flight balloon ride, undertaken with his bride during the course of the Alaska-Yukon-Pacific Exposition in Seattle during the summer of 1909, his lighter-than-air work was over.[69] Summarizing his career to that stage, he stated that he usually received $1,000 for a circular airship flight of twenty minutes duration, $500 for a good flight but one which did not end at the point of departure, and nothing if he failed to get airborne. "I didn't collect $1,000 very often," he noted.[70]

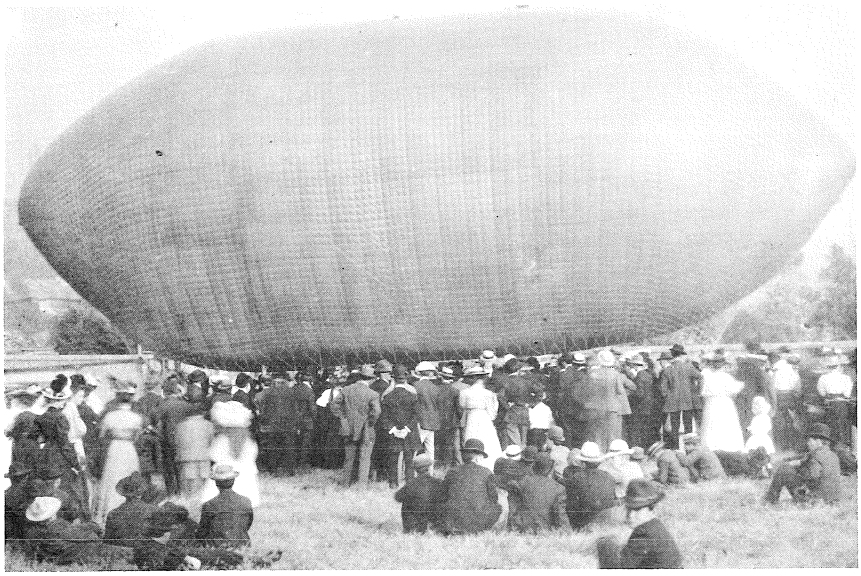
From airships, Mecklem turned to heavier-than-air craft. In late 1909 he purchased a half interest in a Hamilton biplane. It was similar to a Curtiss production in design but not in performance. "Every flight I made in this machine ended in a crash. Once I flew it across Lake Washington but had to land in a strawberry patch back of Bellevue."[71] Grossly underpowered the aircraft was finally demolished by the other party.

Mecklem remained undaunted. By this time he had become an experienced flyer and eager to capitalize on the "airplane fever" sweeping the country. Other former airship men including Thomas Scott Baldwin, Hillery Beachey and J. C. Mars were flying fast biplanes and competing successfully with the Curtiss and the Wright brothers' exhibition teams. As a result, Mecklem acquired a used Curtiss and, in 1910, began to fly the northwest circuit. His contracts included the western provinces of Canada and summer found him performing in Calgary, Lethbridge, Jasper, Edmonton and "four or five

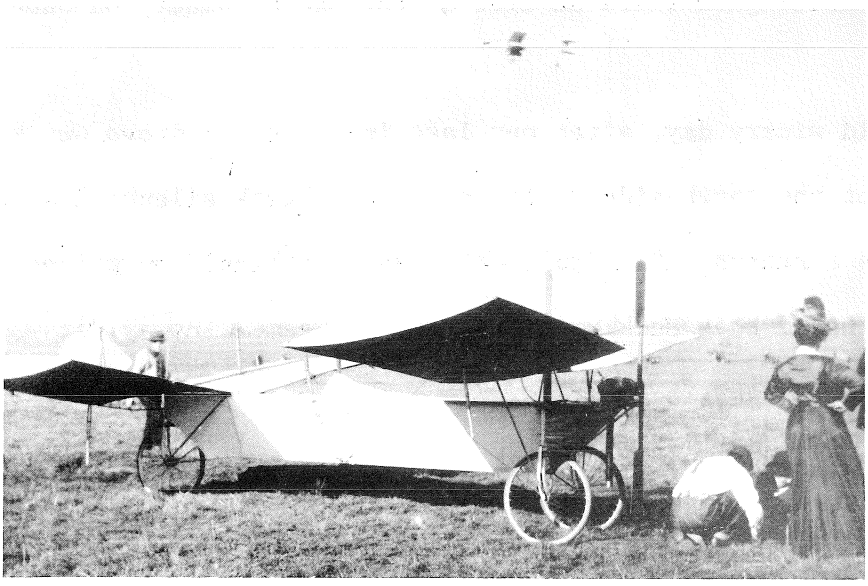
other places."[72] The tour was not as profitable as expected and, at some remote field, authorities threatened the aviator with fines and possible imprisonment for violation of both Canadian and United States patents. Totally disheartened, the "Wild Scotsman" sold his aircraft and stepped out of aeronautics.[73]



26. Airship purchased by Mecklem after Dominguez Field Meet. Perhaps built by A. Leo Stevens of New York.



27. Airship purchased by Mecklem in Twin Falls, Idaho. Site here is Portland, Oregon.



28. Experimental Aircraft owned by one of L. Guy Mecklem's friends, 1909.

XIII

POSTSCRIPT

After various other experiences as a carnival acrobat and deep-sea diver, L. G. Mecklem turned to a more sedate occupation. For twenty-eight years he and his wife operated a berry farm near Everson in Washington state. After her death and upon retirement, the former daredevil took up residence in Bellingham where he died at the age of ninety on January 20, 1973.

On a cold wintry day, after our last interview, I drove Guy Mecklem to his room on the north side of the city. To break silence I asked what he called his airships. "I didn't call them anything," he grinned. "Should have named them Mecklem's Follies, I guess. Anyway, it was sure fun chasing those cows."

Footnotes

[1]This and the following facts are pretty much the story told by L. Guy Mecklem in a series of interviews held with the author during the latter part of 1971 and the early months of 1972. Less formal conversations continued after that, during which time a local camera shop recreated some of Mecklem's priceless photographs. The conversations, of course, also helped to fill in background. Otherwise, and hereinafter, footnotes will indicate specific interviews and cite mainly those few written sources which corroborate Mecklem's aeronautical career, i.e., Mecklem's unpublished Autobiography, Parts I and II, plus other documents, articles and newspaper stories. Copies of the photographs, autobiography, interview notes, etc., are all on file as The Mecklem Collection in two places: the Center for Pacific Northwest Studies, Western Washington State College, Bellingham, Washington, and in The Lighter-Than-Air Society Museum Archives, Akron, Ohio.

[2]L. G. Mecklem to the author, Bellingham, Washington, November 15, 1971.

[3]Ibid.

[4]L. G. Mecklem, Autobiography, Part I, p. 7.

[5]Ibid.

[6]Ibid., p. 10.

[7]Ibid., p. 11.

[8]Ibid.

[9]L. G. Mecklem to the author, Bellingham, Washington, November 9, 1971.

[10]Mecklem, Autobiography, Part I, p. 11.

[11]Ibid.

[12]L. G. Mecklem to the author, Bellingham, Washington, November 18, 1971.

[13]Ibid.

[14]Ibid.

[15]Mecklem, Autobiography, Part I, p. 12.

[16]Ibid.

[17]Ibid.

[18]Ibid.

[19]Ibid., p. 13.

[20]Ibid., p. 19.

[21]Ibid.

[22]Ibid., pp. 19-20.

[23]Ibid., p. 20.

[24]L. G. Mecklem to the author, Bellingham, Washington, November 9, 1971.

[25]Mecklem, Autobiography, Part I, p. 21.

[26]L. G. Mecklem to the author, Bellingham, Washington, November 15, 1971.

[27]Mecklem, Autobiography, Part I, p. 21.

[28]The material on Thomas Scott Baldwin is from the author's, "Captain Thomas S. Baldwin: Pioneer American Aeronaut" (Unpublished Ph.D. dissertation, University of Colorado, 1970). See particularly chapters 11, 12, and 13. Also see: The Quincy (Illinois) Herald-Whig, August 7, 14, 21, 28 (1949) and September 4, 11, 12, 18 (1949) for City Editor Dave Tuffli's T. S. Baldwin biography.

[29]L. G. Mecklem to the author, Bellingham, Washington, November 9, 1971.

[30]Mecklem, Autobiography, Part I, p. 22.

[31]Ibid.

[32]L. G. Mecklem to the author, Bellingham, Washington, December 9, 1971.

[33]L. G. Mecklem, "Seattle Man Soon to Fly," The Seattle Sunday Times, April 12, 1908, Magazine Section, p. 3.

[34]Mecklem, Autobiography, Part I, p. 22.

[35]Ibid., p. 23.

[36]L. G. Mecklem to the author, Bellingham, Washington, November 9, 1971; December 9, 1971.

[37]Ibid. See also Mecklem, Autobiography, Part I, p. 23.

[38]Mecklem, Autobiography, Part I, p. 24.

[39]Ibid. See also, Clark Squire, "His Daredevil Aerial Feats Thrilled Seattle Residents 49 Years Ago," The Seattle Sunday Times, June 23, 1957, Magazine Section, pp. 4-5. Hereinafter cited as "His Daredevil Aerial Feats."

[40]L. G. Mecklem to the author, Bellingham, Washington, November 9, 1971.

[41]Mecklem, Autobiography, Part I, p. 24.

[42]Ibid.

[43]L. G. Mecklem to the author, Bellingham, Washington, November 9, 1971.

[44]Mecklem, Autobiography, Part I, p. 25.

[45]The Seattle Sunday Times, June 28, 1908, p. 3.

[46]Mecklem, Autobiography, Part I, p. 25.

[47]The Seattle Sunday Times, June 28, 1908, p. 3.

[48]Squire, "His Daredevil Aerial Feats," p. 4. See also, The Seattle Daily Times, July 6, 1908, p. 10 and Mecklem, Autobiography, Part I, p. 25.

[49]Squire, "His Daredevil Aerial Feats," p. 4.

[50]The Seattle Sunday Times, July 5, 1908, p. 2.

[51]Mecklem, Autobiography, Part I, p. 26.

[52]L. G. Mecklem to the author, Bellingham, Washington, December 9, 1971.

[53]Ibid. See also Mecklem, "Pioneer Racing Driver," p.2, unpublished article in Mecklem Collection, Center for Pacific Northwest Studies, Western Washington State College, Bellingham, Washington.

[54]Mecklem, Autobiography, Part II, p. 28.

[55]Ibid.

[56]Ibid., p. 29. See also Mecklem, "Pioneer Racing Driver," p. 2.

[57]Mecklem, Autobiography, Part II, p. 29.

[58]Ibid.

[59]Mecklem, "Seattle Man Soon to Fly," p. 3.

[60]Mecklem, Autobiography, Part II, p. 30.

[61]Ibid.

[62]Ibid.

[63]Ibid.

[64]Ibid., p. 31.

[65]Ibid., pp. 31-32; L. G. Mecklem to the author, Bellingham, Washington, January 24, 1972, and September 18, 1971.

[66]Mecklem, Autobiography, Part II, p. 32.

[67]L. G. Mecklem to the author, Bellingham, Washington, January 24, 1972.

[68]Mecklem, Autobiography, Part II, p. 32.

[69]L. G. Mecklem to the author, Bellingham, Washington, January 24, 1972.

[70]L. G. Mecklem to the author, Bellingham, Washington, November 9, 1971.

[71]Mecklem, Autobiography, Part II, p. 32.

[72]L. G. Mecklem to the author, Bellingham, Washington, January 24, 1972.

[73]Ibid.