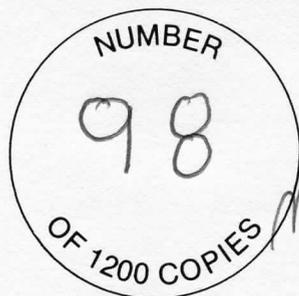


Down One Diamond

by
MICHAEL FAIRBANKS

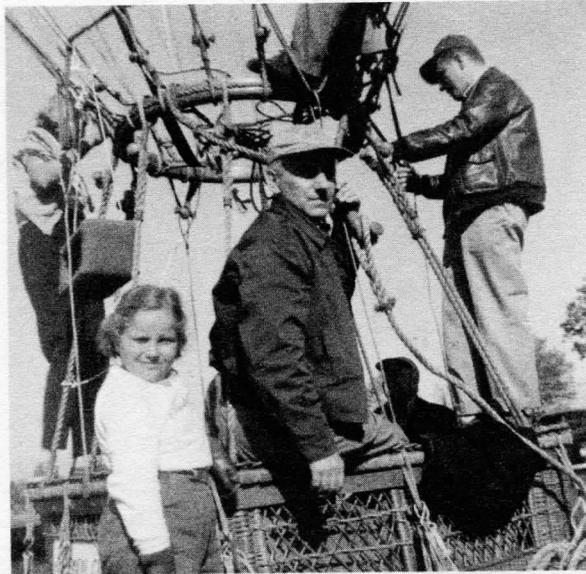


Michael Fairbanks

Limited edition of 1200 numbered copies. First fifty signed by Anthony Fairbanks and the author, Michael Fairbanks.

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To my father, Anthony Fairbanks,
who has kept alive sport ballooning
and has been a quiet inspiration to countless balloonists,
this book is dedicated.

Acknowledgments

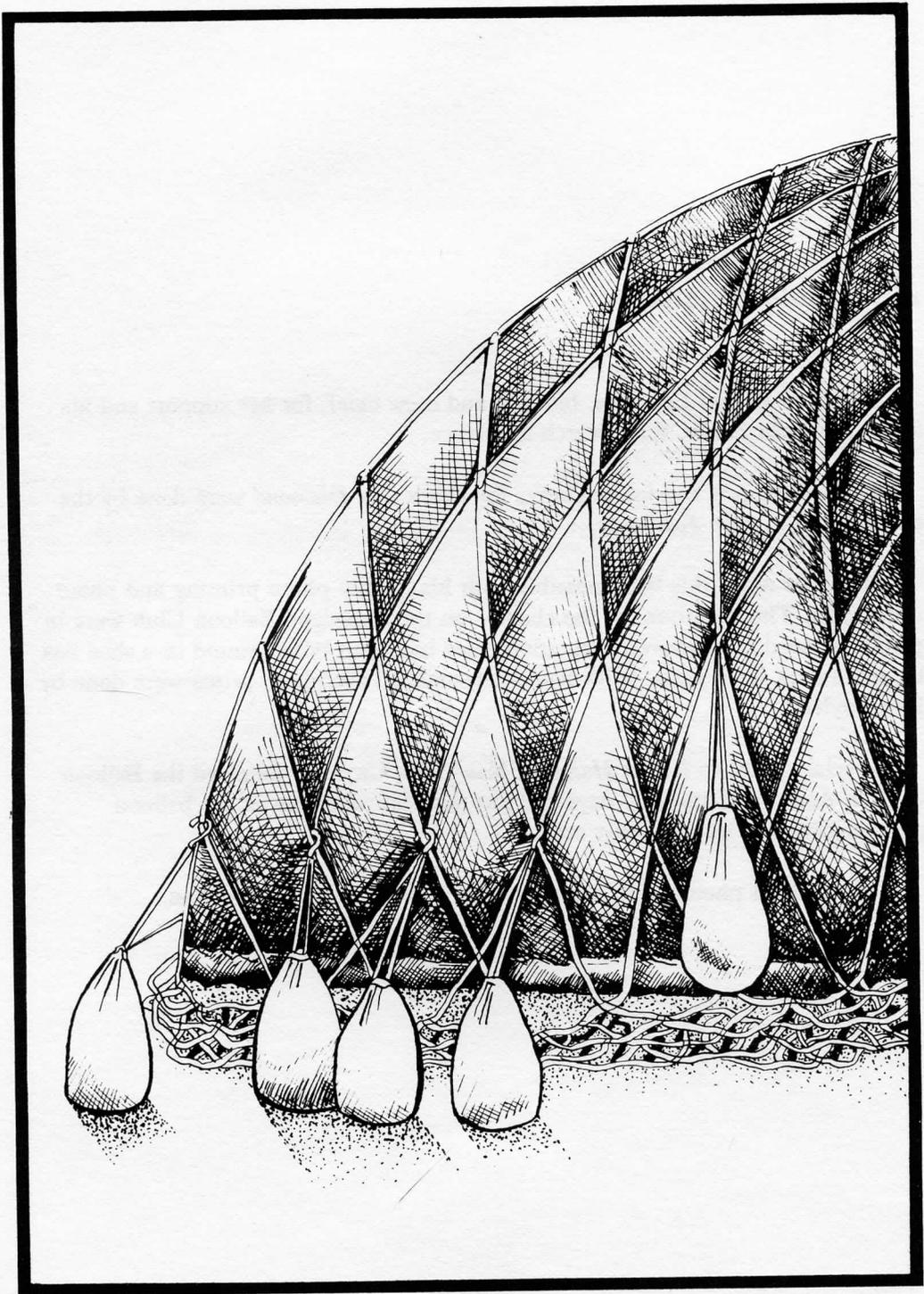
The author thanks *Lois Ann*, his wife and crew chief, for her support and his sister, *Antonica Louise*, for research assistance.

All seventeen pen and ink drawings for *Down One Diamond* were done by the author's sister, *Jean Fairbanks*.

Dan Boyles made this book possible with his quality photo printing and photo restoration. The negatives for the chapter on the Cleveland Balloon Club were in particular need of extensive restoration; they had been lying around in a shoe box for more than forty years. With few exceptions, all the photo prints were done by Dan Boyles.

A special thanks to *Robert Halmi* of New York City. He followed the Balloon Club of America in its early days and has the best collection of gas balloon photography that we have ever seen.

All uncredited photographs are from the Fairbanks family collection.



The pilot gives the command to his crew: "Down One Diamond."

Introduction

Gas ballooning is almost nonexistent in the United States. As a result of the present high cost of hydrogen and helium, the handful of gas balloons licensed to fly in this country seldom take to the air.

Several years ago, I found a shoe box in my dad's cellar which was filled with old negatives from his ballooning days with the Cleveland Balloon Club in the thirties. This book is a result of attempting to preserve the gas era of the thirties and to tell the story of our father's effort to keep the art of gas ballooning alive in the fifties.

A gas balloon flight is a beautiful thing to see or to experience. The envelope is laid in a round circle like a deflated beach ball with the exact top directly over the exact bottom. A wooden valve is then attached in the small hole which is the top of the envelope and will be used by the pilot to release gas during the flight of the balloon. The inflation sleeve is attached to the appendix, which is the bottom of the envelope, and gas is pumped into the balloon through this sleeve.

A cotton net is laid over the rubberized cotton envelope, and as the balloon is filled with gas, the envelope slowly becomes larger and larger as thirty-pound bags of sand are lowered down the net diamonds.

As the balloon becomes firm within the net the pilot gives the command to his crew: "Down One Diamond."

It will take from three to five hours to completely fill the balloon with gas, depending on its size. Balloons range from small (19,000 cubic feet) to large (80,000 cubic feet).

As the balloon becomes full of gas the net diamonds lead to larger hemp ropes, which become sixteen "footropes." These are attached to a large thick "load ring" circle of wood. The load ring is over the head of the pilot in flight, and the eight basket ropes are attached to the load ring.

By this time the pilot and crew, along with ten to fifteen sandbags, occupy the basket. The pilot discharges one-half bag of sand and the balloon quietly and majestically rises into the sky.

The pilot will seek an altitude above the ground where the balloon is flying level and steadily. A few handfuls of sand are occasionally thrown overboard as the pilot attempts to maintain a level path through the skies. If unstable air currents cause the balloon to rise and fall, the pilot must release gas and drop sand to check the up-and-down movements of the balloon and then the flight is shortened by the loss of the gas and the precious sand.

When the decision has been made to return to the earth; and open fields are ahead of the flight path, the pilot pulls the rope which goes straight through the balloon to the wishbone valve on top. Gas is spilled upward and

the massive balloon begins the downward glide to (hopefully) a gentle landing.

Enough sand is saved to keep the balloon at a slow rate of descent and also to allow the pilot to return to a higher altitude should the flight path be blocked by wires or a building.

The two uncertain variables for the pilot are the area to which the fickle winds will carry the balloon and the exact weather the pilot will experience when the time to land the balloon has arrived.

Ballooning is a calm wind sport. To have a successful inflation and lift-off, very low winds are a must. If the winds are other than calm or light at the location of the inflation, the flight will be postponed until another day.

Once the balloon has lifted off, the winds are not a factor until the landing. If the winds are high, the landing could be uncomfortable for the passengers.

A balloon in flight is riding on the tip of the wind and even in an extremely strong wind the balloon flies easily. The pilot could light a match without it blowing out because the pilot and the crew have become part of the very wind itself.

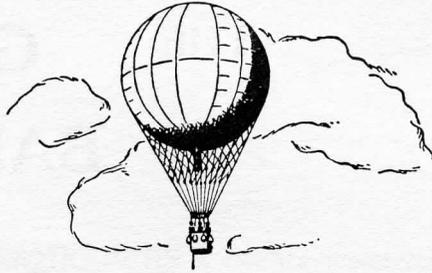
The crew might not even be aware of the wind speed until they are descending for a possible landing and the ground below appears to be moving at a very fast pace.

The pilot must then locate the largest field in the flight path of the balloon, level the balloon so it is flying about twenty to thirty feet above the ground, and begin to pull the red rope which is attached far above to the rip panel. The red rope pulls the rip panel out of the side of the envelope, and all the gas is released within the following sixty seconds. A good rip panel landing is when the wicker basket falls over on its side without bouncing off the ground and drags less than one hundred feet before stopping.

The flight has ended. A few more people have had the unique privilege of experiencing a gas balloon flight.

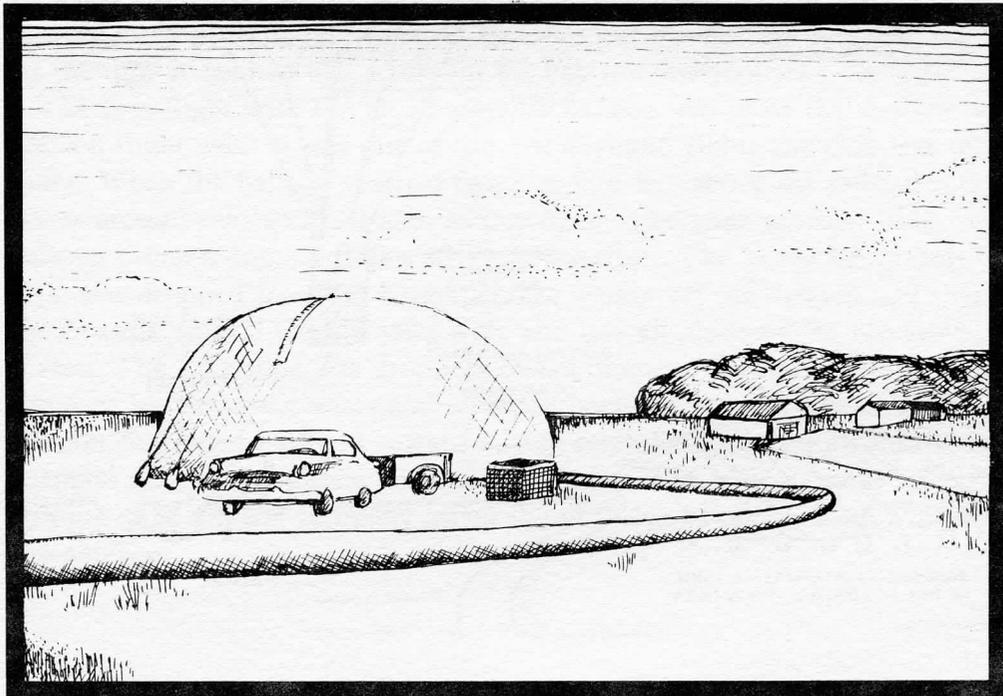
MICHAEL FAIRBANKS
January, 1979

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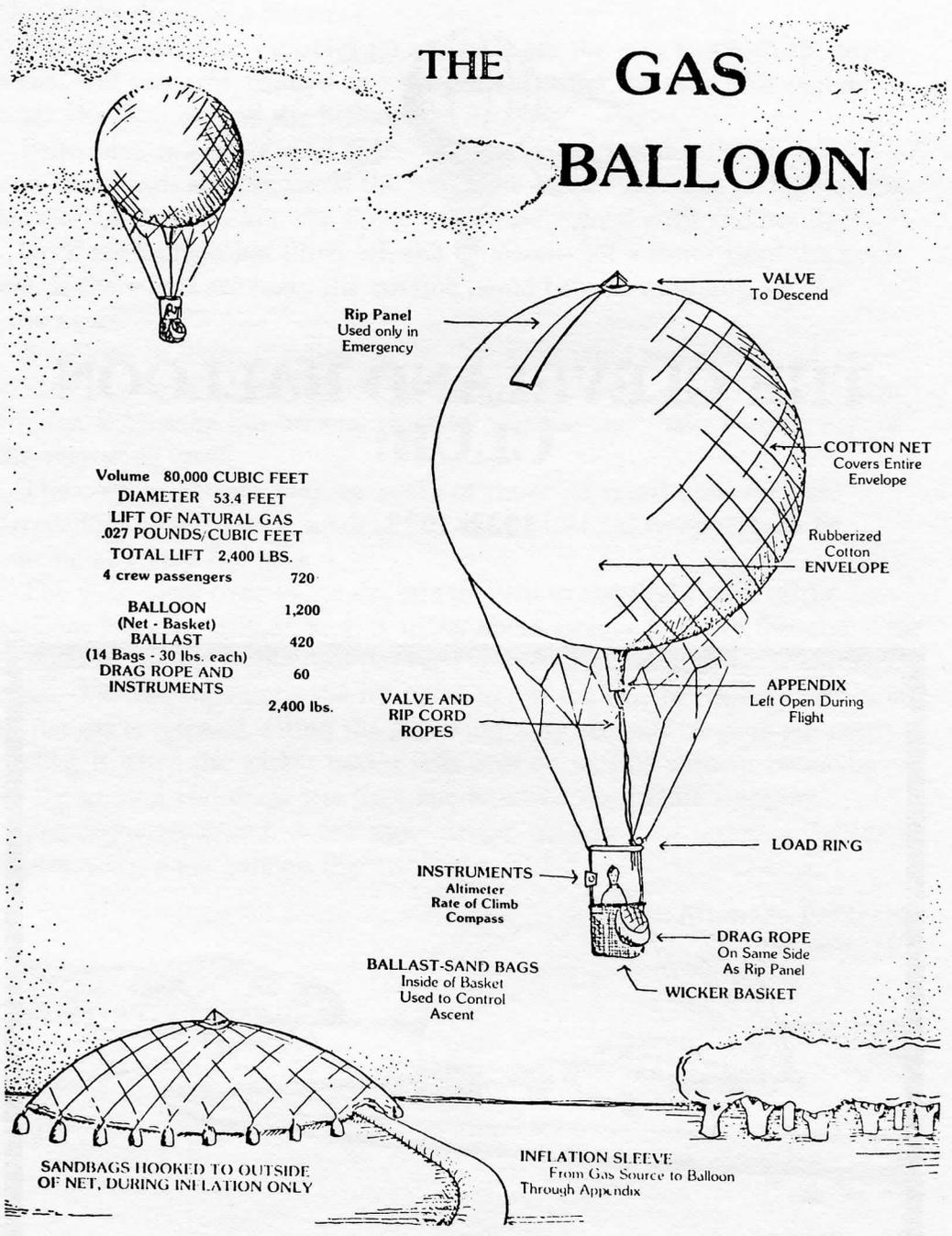
THE CLEVELAND BALLOON CLUB:

1932-1939



On the Field.

THE GAS BALLOON



Volume	80,000 CUBIC FEET
DIAMETER	53.4 FEET
LIFT OF NATURAL GAS	.027 POUNDS/CUBIC FEET
TOTAL LIFT	2,400 LBS.
4 crew passengers	720
BALLOON (Net - Basket)	1,200
BALLAST (14 Bags - 30 lbs. each)	420
DRAG ROPE AND INSTRUMENTS	60
	2,400 lbs.

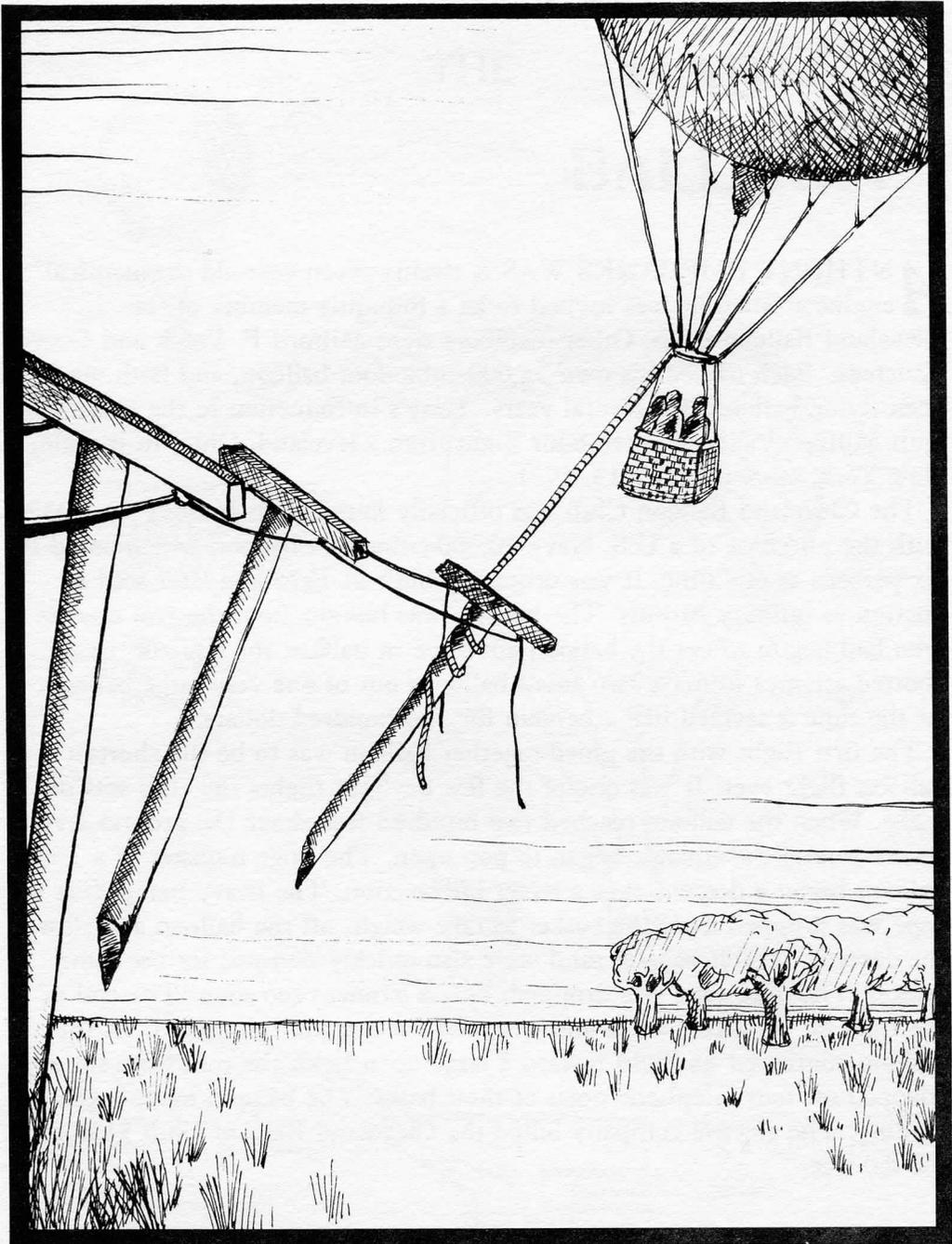
SANDBAGS HOOKED TO OUTSIDE OF NET, DURING INFLATION ONLY

INFLATION SLEEVE
From Gas Source to Balloon
Through Appendix

ANTHONY FAIRBANKS WAS A twenty-seven-year-old aeronautical engineer when he was invited to be a founding member of the Cleveland Balloon Club. Other members were Milford F. Vanik and George Hineman. Each owned his own 35,000-cubic-foot balloon, and both men had been flying balloons for several years. Tony's introduction to the sport was with Milford Vanik on a ten-hour flight from Cleveland, Ohio, to Buffalo, New York, on September 13, 1931.

The Cleveland Balloon Club was officially founded on January 19, 1932, with the purchase of a U.S. Navy 80,000-cubic-foot balloon which could fly six persons at one time. It was originally built in 1920 and later sold at auction as military surplus. The balloon was bought from the two owners who had begun to cut the balloon envelope in half, at the equator, in an aborted attempt to make two small balloons out of one very large balloon. At the time it seemed like a bargain for two hundred dollars.

The first flight with the glued-together balloon was to be the shortest balloon flight ever. It was one of the few daylight flights the club was to make. When the balloon reached two hundred feet above the ground several seams around the equator began to pop open. The huge monster of a balloon began a descent over a street intersection. The heavy hemp drag rope was dropped from the basket to take weight off the balloon and slow the descent; several bags of sand were also quickly dumped for the same reason. The drag rope was dropped; but, a moment too soon. The end of the rope hit the street wires and wrapped itself around the wires. As the balloon continued its flight toward a large open field, the pull from the rope snapped off four telephone poles at their bases. The balloon made a gentle landing. The electric company billed the Cleveland Balloon Club \$150 for the damage.



The pull from the drag rope snapped off four telephone poles at their bases.



Tony Fairbanks looks with consternation at the massive balloon envelope just after the crash.

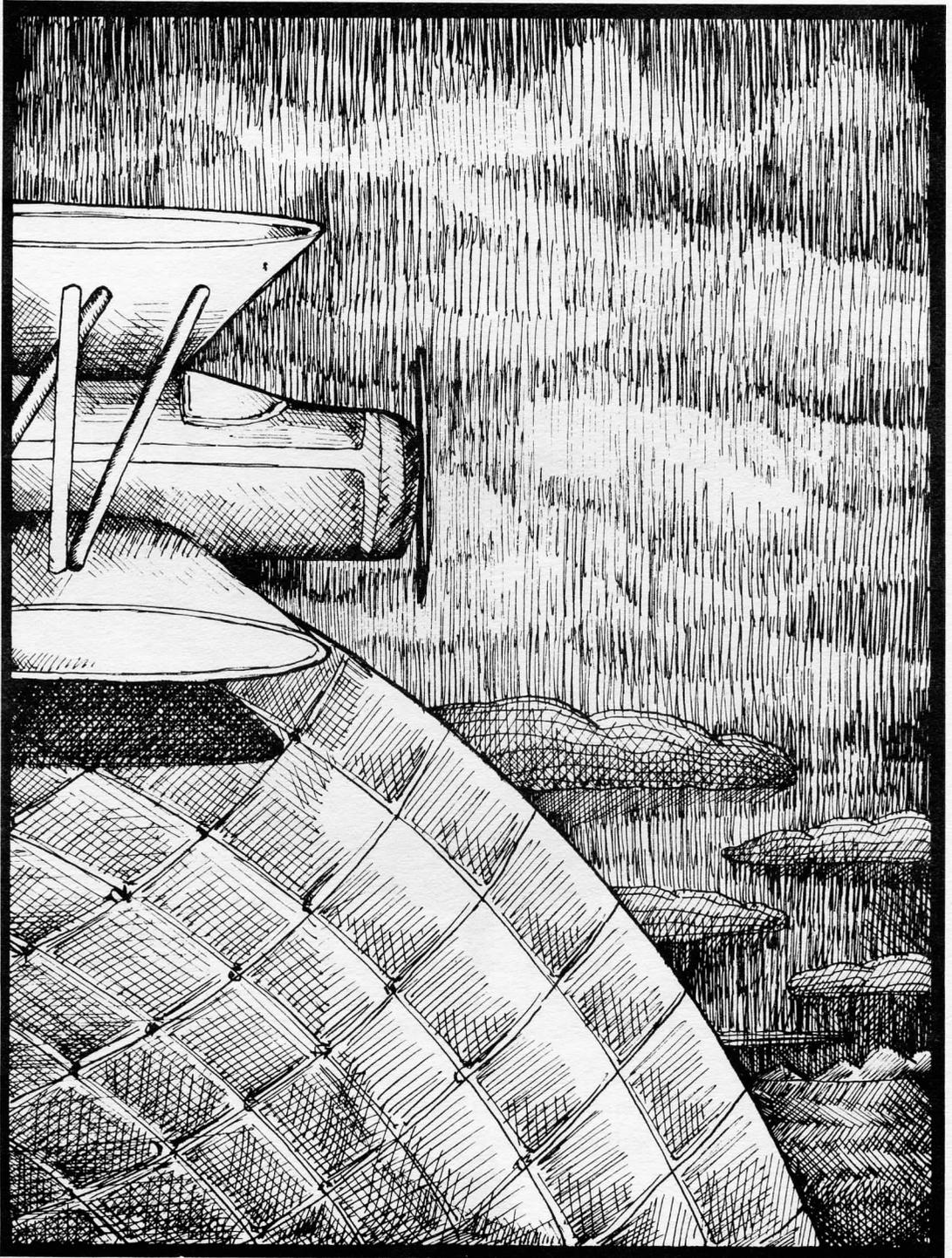


Above, the founders of the Cleveland Balloon Club after a landing in 1933. From left to right, John E. Copeland, Tony Fairbanks, George Vanik, George Hineman, J.D. Hartshorne, and H.K. Daniels.

Members of the Cleveland Balloon Club included two sets of brothers, Milford and George Vanik and Anthony and Edmund Fairbanks.

At right is the newly-glued-together 80,000-cubic-foot balloon taking off on the first club flight. At about 200 feet the seams around the equator began to pop open. A crew member can be seen standing on the side of the basket and looking upward at the balloon.





June, 1932. The mailplane barely cleared the top of the balloon envelope.

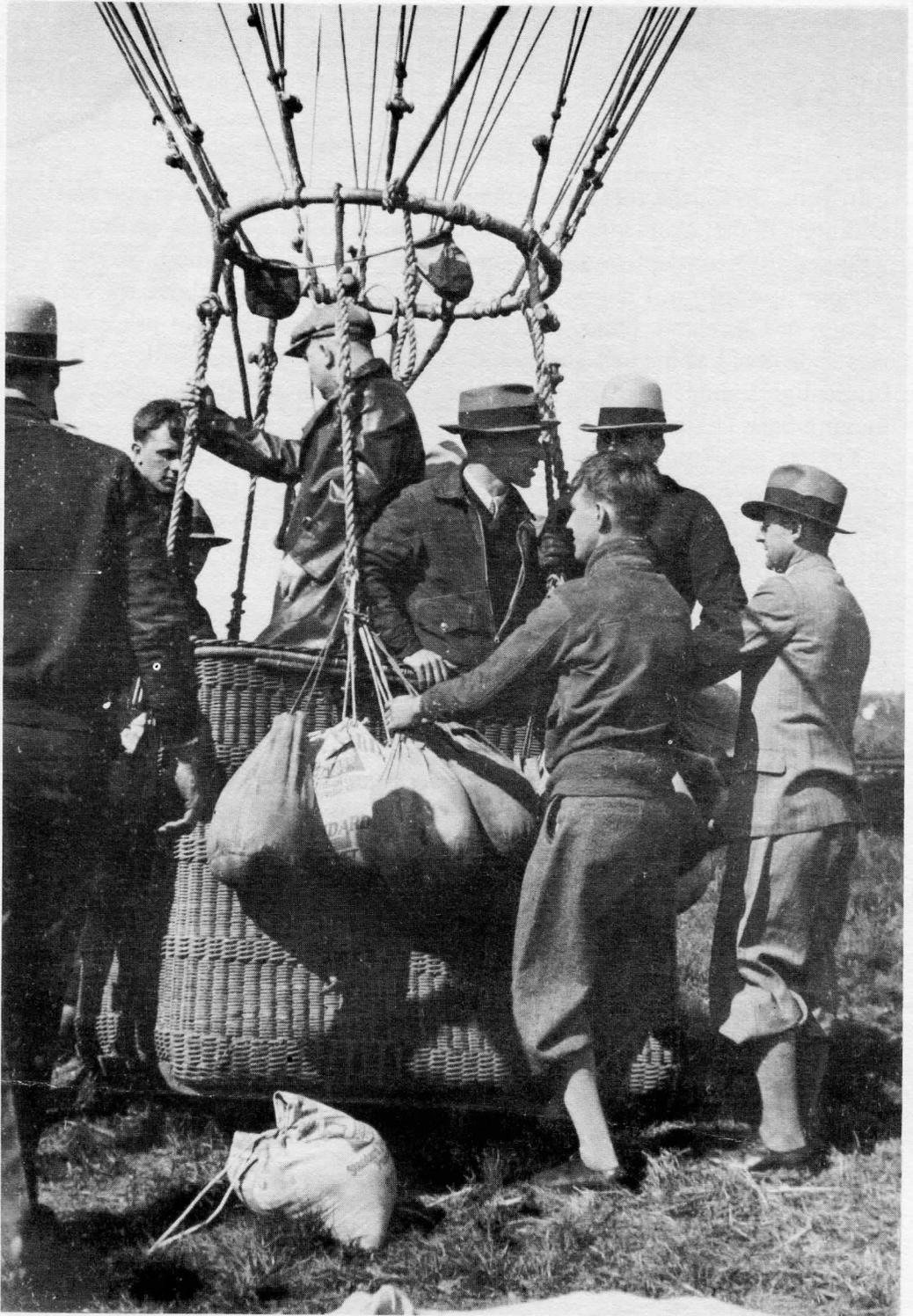
In June, 1932, the recently-formed Cleveland Balloon Club made its first midnight flight. Moments after the balloon lifted off from the earth, it was wrapped in the complete darkness of the night. The gas balloon rose straight upward until it leveled off at fifteen hundred feet above the central section of Cleveland, Ohio. The feeling of motionlessness and peacefulness was short-lived as a small airplane flew directly towards the balloon. Its two bright lights shone sharply, one red and one green, and the aircraft was moving very fast.

The six men stood in the wicker basket, feeling totally helpless as they reflected two hand-held flashlights off the lower side of the massive 80,000-cubic-foot balloon envelope. The lights shining from the city below made it impossible for the airplane pilot to identify a balloon flying through the night skies.

The airplane seemed to disappear into the top of the balloon (which contained combustible coke oven gas), but a moment later it reappeared on the other side, safely over the top of the balloon. Fifteen minutes later the Cleveland Control Tower issued a radio alert that a gas balloon was expected to fly over the city.

The next eleven hours of the flight were uneventful except for a brief landing in Lake Erie. The crew were sitting on sandbags in the bottom of the basket, attempting to ascertain their location in reference to the approaching shoreline. The momentarily pilotless balloon drifted slowly earthward until it hit the lake with such a shock that water poured over the top of the basket. Thirty pounds of sand were quickly tossed overboard and the balloon rose swiftly to five hundred feet.

Finally, the balloon landed on the grounds of the Detroit Ladies Polo Club, where all six of the tired travelers enjoyed breakfast in the clubhouse.

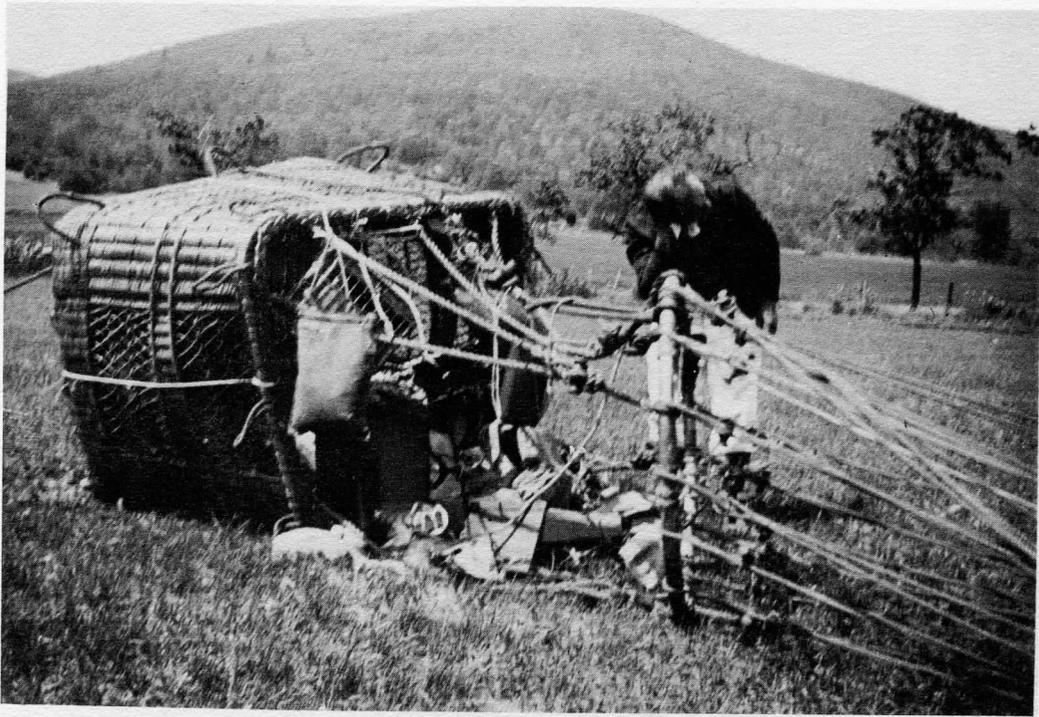




Above, Tony Fairbanks places the wishbone valve into the top of the balloon envelope before an evening inflation. Midnight lift-offs were popular because the air is more stable then, with fewer updrafts and downdrafts, which are a result of uneven heating of the earth's surface by the sun. The balloons would have a long ten to fifteen hours of flying and would land only during daylight.

At left is the Club's 80,000-cubic-foot balloon ready for lift-off (1932). Edmund Fairbanks is in the basket, looking out toward the right. Tony and his brother Edmund would later fly gas balloons together in the fifties.





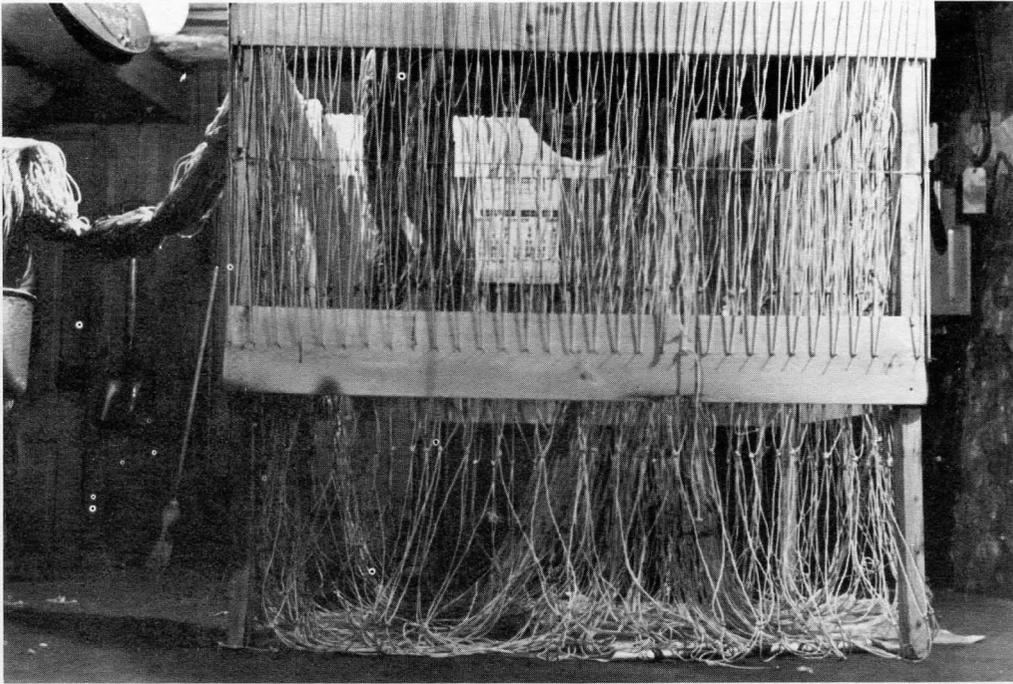
Milford Vanik and Tony Fairbanks became close friends and flew together frequently. Milford was the teacher and Tony, the student. On August 11, 1935, Tony made his first solo flight. It was his fifth balloon flight and covered twenty-five miles in four hours. It was a rather slow flight in Vanik's 35,000-cubic-foot balloon.

The team of Vanik and Fairbanks applied as an entry for the upcoming 1936 National Balloon Races to be held in Denver, Colorado. At that time the Cleveland Balloon Club was the only balloon organization in the United States that was completely private, not connected with either the U.S. military or a large corporation.

Above, Milford shakes sand out of his hair after the hardest landing Vanik and Fairbanks ever made. They flew forward into a solid brick wall.

Tony Fairbanks, at left, checks the flight path on his recording barometer following his solo flight in 1935.





Above, the members of the Cleveland Balloon Club construct a cotton net to go over their 80,000-cubic-foot balloon (1934).

At left is the Goodyear Tire and Rubber Company balloon, flown by Frank Trotter. In this photograph, pontoons are attached to the basket for a planned water landing.





It was common practice for the long flights of the thirties to carry and release carrier pigeons. Some of the pigeons would return with messages of the balloon's location within three hours, but other birds took two or three weeks to return to their nests. Being released from 8,000 to 10,000 feet above the ground seemed to confuse some of the pigeons.

At left, Tony Fairbanks examines the pigeons prior to the inflation of the balloon. A special basket, shown in the foreground of the photograph, was used to house the pigeons during the balloon flights.

The Denver Mile High Air Races made Denver, Colorado, the nation's aviation capital during July 3, 4, and 5, 1936. All kinds of modern aircraft and everyone known in aviation participated in the many events held at the Denver Municipal Airport. The 1936 National Balloon Races were to be the highlight of the first day's activities. Amelia Earhart was the Balloon Races' "Honorary Referee."

The Women's National Aeronautical Association held its seventh annual meeting at the races and over a hundred female pilots attended.

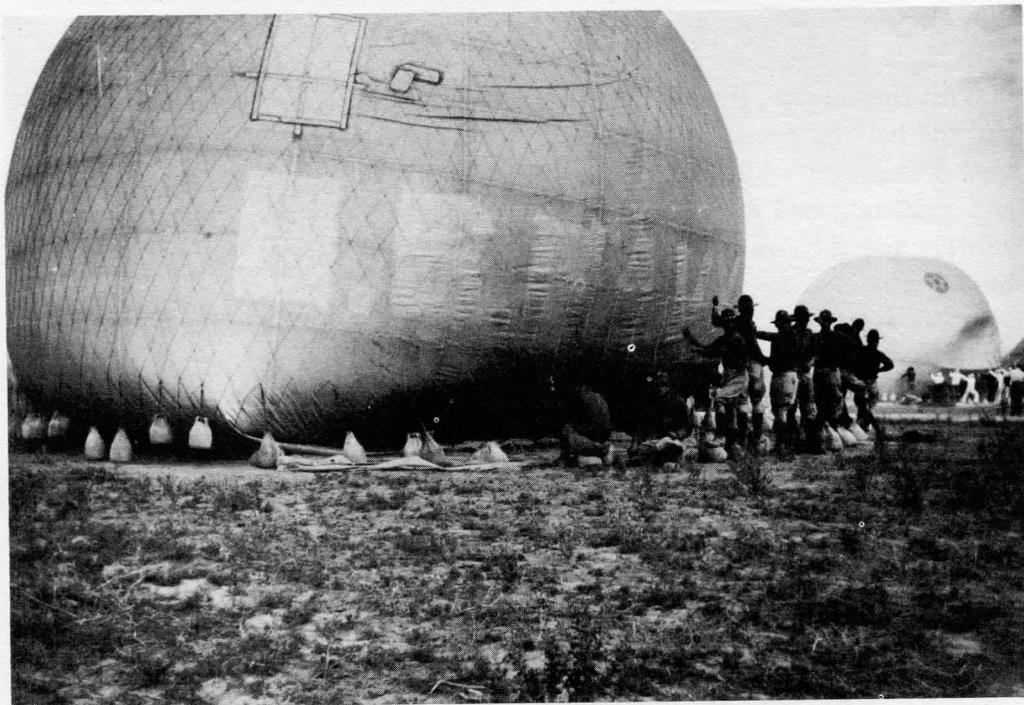
One famous spectator was seventy-year-old Ivy Baldwin. Forty-six years before, Mr. Baldwin had treated Denver to its first balloon ascension. Mr. Baldwin made his own first ascension in Terre Haute, Indiana, when he flew a wood-smoke balloon in the year 1880.

On July 3 at 2:00 P.M. the six 35,000-cubic-foot gas balloons began the long procedure of inflation. An estimated 10,000 people watched the pure hydrogen being pushed through long cloth hoses from a Navy railroad car. The balloon envelopes were laid out in a circle like busted basketballs.

The strong winds that afternoon ripped the balloon scheduled to be flown by Roy S. Cunningham of the Detroit Balloon Club, Detroit, Michigan. The damage to his envelope was too extensive to be repaired on the field and Mr. Cunningham withdrew from the races.

At 9:30 P.M. the five remaining balloons were fully inflated and rigged for lift-off. Miss Grace Jackson, the daughter of the governor of Colorado, presented a bouquet of flowers to the first balloon in the lift-off rotation—the U.S. Army Air Corps balloon flown by Captain Haynie McCormick and Captain John A. Tarro. The other balloons followed by delays of eight minutes per balloon.

The second balloon in the air was the U.S. Navy Department balloon, flown by Lieutenant Commander Francis H. Gilmer and Reginald H. Ward. The third balloon was that of the Goodyear Tire and Rubber Company of Akron, Ohio, and was flown by Frank Trotter and V.L. Smith. The fourth to lift off was another U.S. Navy Department balloon, flown by Lieutenant R.F. Tyler and Lieutenant F.F. Flaherty. The final balloon in the air was the Milford Vanik and Tony Fairbanks balloon. All the balloons headed toward the northeast.



Top, advance publicity. During the inflation of the balloon in Cleveland, Ohio, just prior to leaving for the Nationals in Denver, Colorado, Miss Great Lakes Exposition poses with Tony Fairbanks.

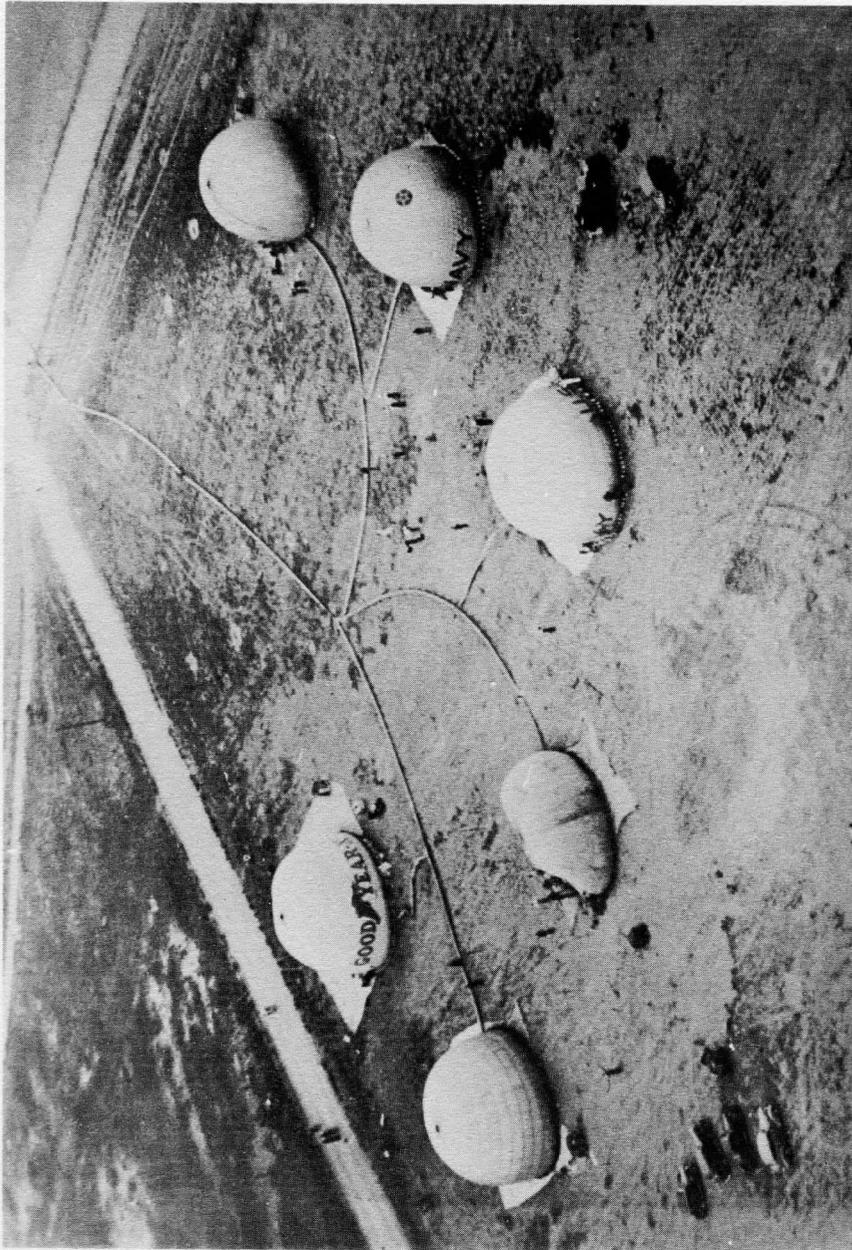
Below, the Great Lakes Exposition balloon being inflated at the 1936 National Balloon Races. Because high winds were forecast, soldiers were ordered to assist in the inflation of all the balloons.

The winner of the race would be the balloon able to travel the most miles from the city of Denver. The *Great Lakes Exposition* balloon, with Vanik and Fairbanks, stabilized at five hundred feet above the ground after a short tug on the valve rope to release a small amount of gas. The other balloons were all flying higher and quickly becoming separated from each other.

Milford and Tony believed that the ground winds would slide over the mountain and be stronger at the lower altitudes. Their balloon maintained a steady and swift course away from Denver. People on the ground could see their one battery-operated lightbulb and would stop along the highway to shout at the low-flying balloon. In a short few hours, Denver was left far behind. The flight was uneventful, the land was flat, and there was little to do except dump an occasional handful of sand to maintain a level flight path.

With the sunrise, the heat of the day expanded the gas in the envelope and the balloon gently rose to two thousand feet above the ground. The view was improved but the forward speed became very slow. By noon Vanik and Fairbanks had only reached Akron, Colorado. The winds then quit entirely and the two balloonists spent the afternoon looking downward at the same land area. The radio receiver was broadcasting news of the other balloons ascending and descending in attempts to find the elusive wind currents.

By 4:00 P.M. the decision was made to terminate the flight and the *Great Lakes Exposition* made a soft landing outside the city limits of Akron, Colorado. There was fast becoming a need to land during daylight hours because the sixteen-year-old balloon had lost too much hydrogen through the rubberized cotton envelope. They could not keep the balloon in the air through another night.



The 1936 National Balloon Races. Above, from left to right, the Goodyear Tire and Rubber balloon (clearly marked), the *Great Lakes Exposition*, the damaged Cunningham balloon, the two U.S. Navy balloons, and at the extreme right the U.S. Army balloon.





At left, the *Great Lakes Exposition* takes off in total darkness at the start of the 1936 National Balloon Races.

After the landing, above, Milford Vanik (left) and Tony Fairbanks (right) pose with Miss Great Lakes in Akron, Colorado. Miss Great Lakes followed the flight by automobile.

Across their balloon, Vanik and Fairbanks flew a large *Great Lakes Exposition* sign because expenses were provided by that organization. In their basket were thirty-two bags of sand, a portable broadcast receiver, lunch, and the two instruments required to fly the balloon: an altimeter which recorded how high above the ground the balloon was flying, and a variometer which recorded the ascent or descent of the balloon.

The Goodyear Tire and Rubber balloon won the race by traveling the most total miles from the starting point. They landed near Sterling, Colorado, for a distance of 115 miles. The *Great Lakes Exposition* placed second with just over 100 total miles. It was a close race. Because of the circular winds, the distance traveled was low for balloons in the air over eighteen hours.

Third place went to the U.S. Navy balloon, with Lieutenant Commander Gilmer as pilot, with a distance of sixty-four miles; and in fourth place was the other U.S. Navy balloon, piloted by Lieutenant Tyler, which traveled a distance of fifty-five miles.

The U.S. Army balloon traveled a total of thirty-five miles and was destroyed by fire when it crashed against a treeline on a hillside near Elizabeth, Colorado. Captain McCormick said that the balloon was just over the ground, trailing a heavy drag rope to prevent the wind from taking them back toward Denver, when a sudden downdraft caught the bag, crashing balloon and basket against the trees. Both men jumped clear of the basket just before the burning fabric of the balloon fell down onto the wicker basket.

The Denver race was the last of the big balloon races; the end of an era. The first national balloon race was held in 1909 and the one in 1936 was the twenty-fourth and final. Balloon racing had been popular in this country and also in Europe in the 1920s and 1930s. The Depression, the *Hindenburg* disaster of 1937, the signals of the coming of World War II, and increased motorized air traffic, all conspired to finish off the old-time national races.

Homeward bound, at right, the trailer containing the basket and balloon which placed second in the 1936 National Balloon Race. This gave the team of Vanik and Fairbanks the right to fly in the International Balloon Races, to be held in Poland.

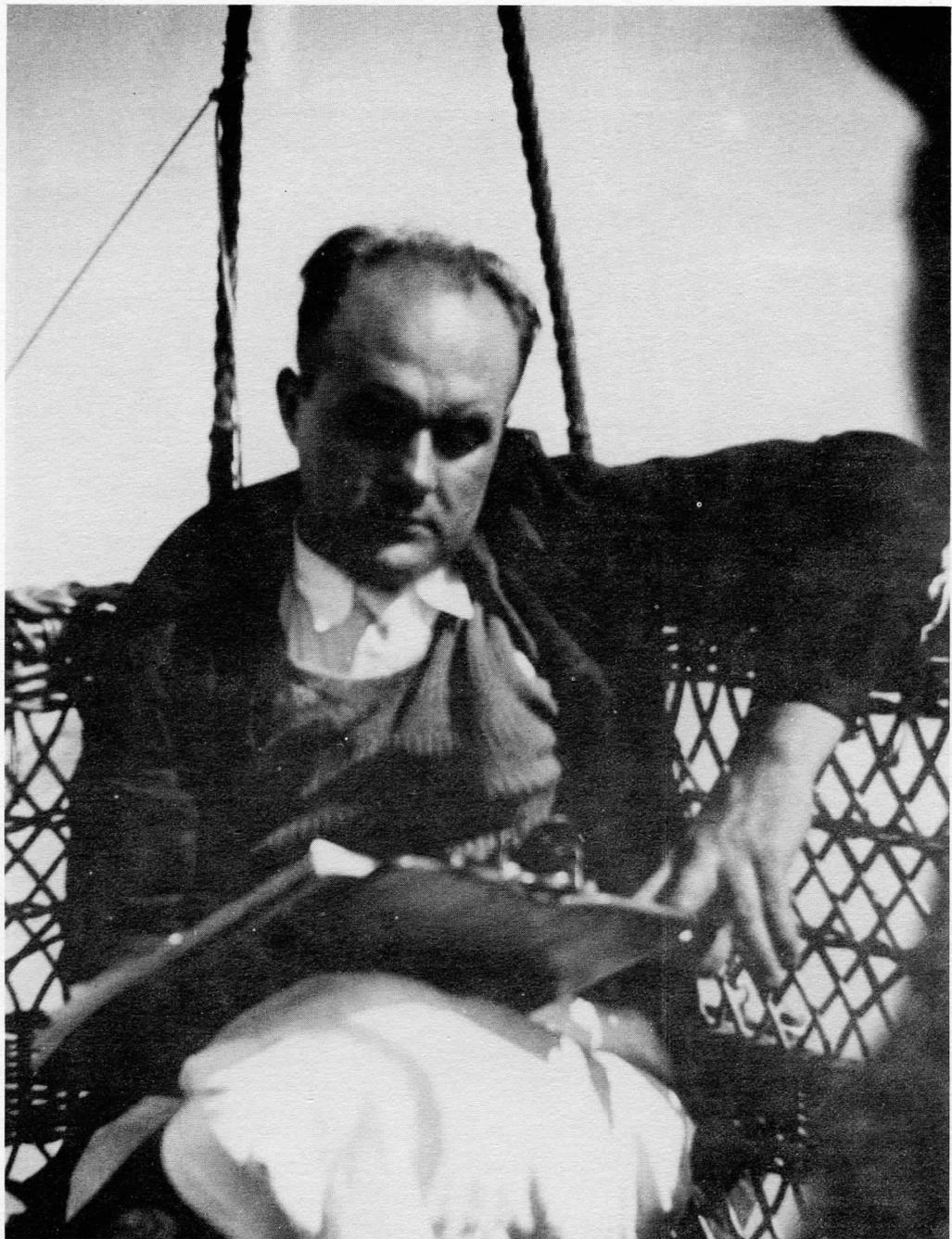






In August, 1936, a Grudge Race was held between the two balloons that had finished first and second in the National Balloon Race one month earlier. The race was promoted by the city of Cleveland, Ohio. The two balloons took off at midnight from the Cleveland Municipal Stadium. Frank Trotter lifted off first, and the team of Milford Vanik and Tony Fairbanks (shown above, moments before lift-off) lifted off second. Both balloons flew about eight hours, but the Goodyear Tire and Rubber Company balloon traveled the greater distance from Cleveland and again won first place.

At left, the team of Vanik and Fairbanks take off at midnight from the Cleveland Municipal Stadium in the Grudge Race.



Above, 1939, Milford Vanik plots locations on his map, two miles above the ground. This is the final flight of the Cleveland Balloon Club, which ceased to exist with the beginning of World War II. The next time the team of Vanik and Fairbanks would fly together would be thirty-nine years later, when they would pilot a gas balloon over the European Alpine Mountains from Switzerland to Italy.

At right, the letter from the National Aeronautical Association which stopped the American team from traveling to Poland. The Gordon-Bennett Races were to begin on September 3, 1939, in Lvov, Poland. Poland was bombed, and World War II began, on September 1, 1939.

THE NATIONAL AERONAUTIC



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August 4, 1939

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AIR MAIL
SPECIAL DELIVERY

Mr. A. M. Fairbanks
C/o Curtis Airplane Company
Buffalo, New York

Dear Mr. Fairbanks:

I just returned to the office to find your letters of July 26 and August 1, which my secretary acknowledged in my absence.

The War Department informs us, after so long a time, that the only balloon specialist from the Air Corps available for an inspection of your balloon would be Sergeant W. J. Bennett, stationed at Wright Field, Dayton, Ohio. If you desire him to make a trip to Buffalo to inspect your balloon, expenses, plus per diem pay would have to be borne by you. Even if you were willing to do this I do not believe that we have enough time to get your entry to Poland by August 10, the deadline date.

I have discussed the matter of your participation in this year's Gordon-Bennett Balloon Race with several officers of the War Department and it was their personal opinion that in view of the unsettled conditions in Europe, that a balloon team from the United States should not venture to Poland this year.

Sincerely yours,

C. S. Rogsdon
Charles S. Rogsdon

Assistant Secretary, Contest Board

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