DANGLING DIRIGIBLES pdf

1: Baldwin, Thomas Scott - National Aviation Hall of Fame : National Aviation Hall of Fame

Wires were dangling from the nose. Nichols grabbed one of them and wrapped it around a fence post. The post snapped. The floating wreckage turned slightly from its course, knocked off the top of a shed, bowled over a grape arbor, skimmed over the ground, and settled down gently, open end first.

Two showmen, one dirigible, and the flight that changed aviation Kings of the air. Millions of visitors to the St. Louis Exposition were awed by the feats of aeronaut Roy Knabenshue in New Jersey, fourth from left, in , with Walter Brookins, in short-sleeve shirt, and Glenn Curtiss, wearing bicycle inner tube. Louis before thousands of witnesses and how international aeronautical celebrity wore, for a time, a distinctly American face. The following year, Knabenshue was filmed as he floated above the skyline of New York City. Perhaps six were built; one is on display at the National Air and Space Museum. The pilot would then calmly wait to crash here: Library of Congress Baldwin powered his airship with a two-cylinder, air-cooled automobile engineâ€"capable of generating 7 hp. It drew gas from a small tank near the top of the craft. Beginning with just a handful of flights in a rickety dirigible, they helped change the course of flight itself. The introduction of flight to most of the country, and much of the world, might have been delayed by years. As Baldwin and Knabenshue hustled their way through the sky, their adventures changed lives and fortunes. In , Europeans appeared to lead the way in human flight. The press heavily favored Santos-Dumont to win the grand prize at the St. But it was not to be. After arriving in St. The next morning the silk envelope was found irreparably slashed. The sabotage was never solved, and Santos-Dumont returned to Paris. The field was now wide open for the grand prize. Several tried, but none made it past the foot-high fence surrounding the concourse, ostensibly there to shelter the airships from the wind. Twenty-nine-year-old Roy Knabenshue witnessed the whole disappointing spectacle. He was selling tethered balloon rides that offered spectacular views of the fair. To attract business, he once allowed the balloon to rise while hanging onto its tether underneath. Sliding along as he and the balloon rose, he paused now and again, hanging on one-handed hundreds of feet up, waving to the growing crowd below. Knabenshue was an unlikely daredevil. The son of a respected newspaper publisher in Toledo, he had a job installing switchboards for the telephone company. But after seeing balloon ascensions at state fairs, he had to fly. He bought a balloon and hit the circuit. To save his family shame, he adopted the moniker Professor Don Carlos. Knabenshue quickly learned the century-old entrepreneurial rigors and the quasi-science of carnival ballooning. He once tested, with nearly fatal results, his theory that ascending directly into a thunderstormâ€"in a balloon filled with highly flammable hydrogenâ€"would be safer than staying on the ground. By the time Knabenshue got to the St. Louis fair, he was looking for a new attraction to land contracts. He found it when it walked up and said hello. Everything about him was big: For years, he had been the greatest showman among American aerialists. Baldwin was a tightrope walker and trapeze artist, often performing stunts dangling beneath a rising balloon. Wearing a pink leotard with blue trunks, he gained international fame in with his first parachute jumps. Always looking for his next act, Baldwin became interested in the flights of Santos-Dumont, and began his own experiments with steerable balloonsâ€"dirigibles. His search for a powerful, lightweight motor ended in Hammondsport, New York, at the workshop of a young motorcycle manufacturer named Glenn Curtiss. In August , Baldwin completed his first airship back home in San Francisco, and gave the inelegant craft a decidedly ambitious name, perfect for advertising: With a net covering an oblong, hydrogen-filled silk bag, it looked like a giant captured potato. Underneath was slung a triangular wooden frame that held the Curtiss engine, a rudimentary propeller, and the pilot. Although it had a rudder for steering, the pilot controlled pitch by making his way forward and backward along the frame. Louis was old news. Baldwin arrived in St. Louis on September 10, , with only the bag and the motor. He was in luck. The deadline for the grand prize had been extended to the end of October, and he needed to build a new frame. Soon after he arrived, he recruited the slender, lightweight Knabenshue to be the pilot. The two men built the frame and propeller, then inflated the bag. Six days before the deadline, they launched. On October 25, , the Arrow was taken out into the concourse. Knabenshue climbed aboard, and the Curtiss motor was started. It shook the frail frame violently. He yelled at Baldwin to get a mechanic, but

Baldwin misheard and ordered the ad hoc ground crew to let go. Flying straight at the hangar, Knabenshue tugged the rudder and swung aroundâ€”directly toward the dreaded fence. Heaving over some ballast, he watched the fence slip by underneath. Narrowly missing the giant Ferris wheel, he swung out over the grounds as tens of thousands cheered and gapedâ€”someone at St. Louis was actually flying! And then it was over. He crossed the Mississippi and landed in a cornfield in East St. He missed the course altogether, but he, Baldwin, and the Arrow were heroes. Knabenshue thrilled the crowds with turns, circles, figure eights, and landings back at the concourse. Memories of failure evaporated, but sadly, so did the grand prize. The American public no longer needed Santos-Dumont nor anyone else from overseas for aerial heroes. Knabenshue and Baldwin headed for California, and for the next four years, the one-man dirigible owned the American sky. Their partnership did not last long. The two turned in a set of stunning flights in Los Angeles: Having earned nationwide fame, Knabenshue and Baldwin parted ways in the spring of He built two new airships, and instantly made a splash for his hometown crowd by landing on the roof of the Spitzer building. He would go on to help design a dirigible known as the Beachey-Baldwin, and thrill millions with his exhibition flying. Baldwin accumulated success for the Arrow, but he hit a snag, then a catastrophe. First, Professor John Montgomery of Santa Clara sued him, alleging he stole secrets that made the Arrow fly; then the San Francisco earthquake struck, and he lost everything. A calamitous natural disaster was nothing for Tom Baldwin. Overnight, they had converted Curtiss into an airship engine builder, and his reputation was growing. And because of Baldwin, Curtiss met the Wright brothers. Curtiss was there as a mechanic. It was not exactly a coincidence. Curtiss wanted to sell motors to the Wrights. They met when the Wrights came to see Baldwin perform and even joined a rescue party when the Arrow escaped its mooring. Although Curtiss initially saw aviation as a new market for his motors, his personal interest in flying grew. Curtiss was on his way to the airplane. And the airplane was on its way to the public. The Wright brothers had already triumphed, privately, and were approaching a public debut. In the meantime, Santos-Dumont briefly recaptured headlines when he hopped his first airplane, the bis, in Paris in The heroes of St. Louis stuck with the dirigible as long as they could. There was still plenty of business. My banker must have been a very patient and believing manâ€¦. He struggled through the rest of the season, then disbanded his team. Meanwhile, Baldwin convinced the U. Curtiss built the motor, and together they arrived at Fort Myer, Virginia, to conduct tests in public. On August 4, , the two made their first practice flight. But four days later, Wilbur Wright flew before an audience of thousands in Le Mans, France, and everything changed. Curtiss and the AEA had actually built and flown three airplanes by that time, and Curtiss had even won the Scientific American trophy for a straight-line, one-kilometer flight. Henry Farman of France had flown a kilometer in a crude circle. In their private flights in Dayton, the Wrights had flown 38 times that distance. The Wrights had done it.

DANGLING DIRIGIBLES pdf

2: Dirigibles on the Rise | www.enganchecubano.com

For licensing inquiries please contact Historic Films Archive (www.enganchecubano.com / info@www.enganchecubano.com) MAN CLIMBS MOORING MAST TO TOP & UNTIES WIRE HOLDING BLIMP IN PLACE. BLIMP IS SLOWLY.

Amateur flyer Clifford Harmon had also been invited to fly but backed out at the last minute. He flew down the river to Carondelet, and over the Eads Bridge where thousands stood cheering him. Surprising his audience, Baldwin returned by air, flying under the Eads Bridge at 50 mph and under the McKinley Bridge, a feat of pure daring. Made a large number of balloon ascents throughout the U. S and was the first to make parachute descents from a balloon. Pioneered the construction and operation of the first dirigibles in America. Awarded a contract to design and build the first U. Army Signal Corps dirigible using a Curtiss engine. He was only 12 years old when he witnessed the murder of his parents by marauding renegades during the Civil War. As an orphan, Baldwin lived with a foster family until he ran away at the age of After becoming a railroad brakeman, a circus manager discovered him while Baldwin was practicing acrobatics atop railroad cars. After accepting a job with the circus, Baldwin began traveling as an apprentice acrobat, but soon he was performing on the high trapeze. He was not satisfied with his act, and he continued to modify it until he was using a hot-air balloon, which would ascend during his act, as he performed on the trapeze bar hung below. His daring death-defying acrobatics and feats soon made him a star attraction. After acquiring his own hot-air balloon, Baldwin quit the circus and began a free-lance tour of the county fair circuit with his brother. When he made his first balloon ascent in , Baldwin quickly became the star attraction at county fairs all over the country and in Canada and the Far East. Baldwin made nearly 3, ascents from a balloon and had several close calls, but his seemingly proverbial luck and great skill always saved him from disaster in even the most dangerous situations. After ten years and thousands of shows, the novelty of balloon ascents began to fade and Baldwin found himself searching for a daring new exhibition specialty. The brothers rediscovered the rigid parachute, invented a century before, and redesigned it to be lighter, flexible and more compact. The Baldwins tested their first parachutes with weighted sand bags from cliffs nearby. After this feat, Baldwin was ready to take his new act on the road. The crowd, unknowingly, witnessed the first public descent from a balloon with a parachute. While holding on to a ring fastened to his dangling parachute, he would ascend in a sitting position on a small seat beneath his balloon. When he reached the desired altitude, Baldwin would pull a rip panel in his balloon to release the hot air, causing the balloon to begin a rapid descent. With the momentum needed to fill the parachute with air, Baldwin would then jump from the seat. Neither he nor his brother ever patented their parachute design and construction. Intrigued by the work of Alberto Santos-Dumont, the first man to make a successful dirigible flight in ; Baldwin traveled to France to study motor driven balloons. After struggling over four years to find just the right engine, he finally found a lightweight engine used for motorcycles and built by Glenn Curtiss. Baldwin immediately ordered one and waited hastily for his new engine to arrive. But he became exceedingly impatient and made the trek from San Francisco to Hammondsport, New York, to expedite his request. Once arriving in Hammondsport Baldwin was somewhat astonished by the modest factory and rather young Curtiss working alongside his employees. Finding Curtiss inundated with orders, and realizing he had not even begun the work on his engine, Baldwin asked for Curtiss to remove an engine from a motorcycle and send it immediately to San Francisco. With the missing piece finally in hand, the dirigible was ready for construction. The non-rigid gasbag of varnished Japanese silk measured 52 feet in length and had a maximum diameter of 17 feet. Below the gasbag was a long triangular wooden framework that housed the 10 horsepower, pound Curtiss engine. The operator, called an aeronaut, rode astride in this open framework, subjected to all the elements. The propeller in front, driven by a long shaft connected to the engine mounted in the middle of the framework, powered the airship. The aeronaut, however, would have to move forward or backward on the framework to make the dirigible ascend or descend. The California Arrow, and more importantly the Curtiss Engine, ignited a new breed of man who valiantly or perhaps foolishly risked their lives for a show. The Army dirigibles had to meet several guidelines including a

more durable gasbag, greater load capacity, the ability to maintain altitude for longer periods, and improved flying capabilities. Curtiss, henceforth, designed a new horsepower engine, 4-cyclinder, water-cooled engine, and the first of its kind. The airship was designated as Signal Corps. By Baldwin was searching for a new challenge and found it in the airplane. The Wright Brothers were stealing the show with their heavier-that-air plane, and Baldwin was determined to outdo them. In , Baldwin designed his own pusher biplane, one of the first to have a framework with interplane struts of mild steel tubing and wooded frame wings. But not for long. His final employment, however, was with the Goodyear Tire and Rubber Company in Akron, Ohio, continuing to design and manufacture airships. For more information on Thomas Baldwin, you may want to visit these websites:

DANGLING DIRIGIBLES pdf

3: Frozen Fridays: â€˜Zâ€™ is for Zeppelin! | From Woody's Couch

A lot of people tend to think that breaking a bone is worse than fracturing itâ€”or perhaps they believe it's the other way around. Others may think of a fracture as a specific kind of break.

Western Union is opening scores of new telegraph offices; it seems that people drowning in cheap e-mail and faxes long for the drama and succinctness of the telegram. And even dirigibles are making a comeback: They may soon see service as airborne tour buses, flying cranes, and stratospheric cell phone antennas. All those statements are surprising, but unlike the first two, the last one is actually true. Dirigibles, also known as airships, never deserved to go the way of the telegram or the steam locomotive; never deserved to be reduced to flying billboards like the Goodyear blimp. Public relations, ironically, had been part of their downfall: After 36 people died when the Hindenburg burned at Lakehurst, New Jersey, in , it became hard to convince anyone that airships had a future. And it may also be a very lucrative one, which is why so many people are giving it a try. From the Archives of the Count Friedrichshafen, on Lake Constance in southern Germany, is a modern town, because like many German towns it had to be rebuilt after the war. Traces of its old resort atmosphere survive, though. Sometimes on summer evenings a brass band assembles by the lake, in knickers and felt hats, and the genteel blat of their horns winds through the streets and floats into open windows and drifts out over the water to die gently, oompah-pah paaaah, in the feather-bed air. On just such an evening a century ago, July 2, , the first zeppelin took off here from a floating hangar. Count Ferdinand von Zeppelin built his hangar on the lake because he figured, wisely, that his airship might need plenty of room and a soft landing place. People lined the shore and circled the hangar in small boats to watch that first flight. But within a decade he had stayed aloft for 24 hours and had become a national hero. Airplanes then were still fluky gnats. At his funeral in , Zeppelin was compared to figures like Galileo and Columbus, not the Wright brothers. His great idea had been to make his airships rigid. When a blimp develops a large enough leak, even before it falls to the ground it becomes almost unsteerable; it starts to sag, changing from an aerodynamic cigar into a flopping banana. Their external envelope, of waterproofed cotton or jute, was held taut by a framework of aluminum rings and longitudinal girders, and the hydrogen itself was contained in a series of internal bags lodged between the rings. A zeppelin could lose one or two of those hydrogen cells and still be kept afloat by the others, and still keep its shape thanks to its rigid skeleton. A nonrigid dirigible of the size and speed of the Hindenburg would have been so deformed by the air it was plowing through that it would, again, have become un-dirigible. In , Allied planes bombed Friedrichshafen, flattening the Zeppelin hangars. And yet Klaus Hagenlocher, its research director, found himself always fielding questions about airships. Hagenlocher began looking through the company archives and found that half of all the accidents had been caused by a lack of maneuverability. A conventional airship is steered the way an airplane is, by adjusting the flow of air over control surfaces; on wingless airships, all the control surfaces are on the tail. The hard part is landing. When an airplane touches down, it is still moving fast enough to control its pitch and yaw. But an airship is moving at next to no speed, meaning there is next to no airflow over the control surfaces as the pilot tries to maneuver it toward the mooring mast. At that moment, says Scott Danneker, a veteran American airship pilot who is now the chief test pilot at Zeppelin, the poor sap at the controls "is sweating bullets. If the winds are calm he has absolutely no aerodynamic control. The only thing he can do is rely on the ground crew. Even the far smaller Goodyear blimp needs a ground crew of 15 or Using humans as brakes makes airships uneconomical; worse, the brakes are often ineffective. In the archetypal accident, says Hagenlocher, an airship comes in for a landing, gets hit by a sudden crosswind, and is blown into trees or buildings before it can lift off again. In the past few years, it has happened a couple of times in the United States. It is never supposed to happen to the airship that Hagenlocher and his colleagues built and have been flying around Friedrichshafen for the past three years. But it is a zeppelin: It has a rigid internal frame, unlike any other airship today. The frame is mostly made of carbon fiber, which is stronger, stiffer, and lighter than aluminum. The whole frame weighs just a ton, but it is enough to guarantee the basic cigar shape of the airship. But it can lose up to a third of its helium, says Hagenlocher, and still fly for six or seven hours in search of a safe landing. Instead it pushes itself off the

ground by pointing a propeller on each side up and a propeller on the tail down. Once the ship is under way, air flowing over the hull and the tail generates lift. Helium does the rest. When it comes time to land, being slightly heavier than air is an advantage: The zeppelin is drawn to the ground. By pointing the three propellers upward, it comes in hovering, like a helicopter. Meanwhile, a fourth propeller thrusts the tail from side to side, like the tail rotor of a helicopter, to keep the nose pointed into the wind and toward the mooring mast. The control is so fine Danneker can fly a line dangling from the nose into the hand of a worker who then attaches it to the mooring mast. Watching this zeppelin rise off the airfield at Friedrichshafen, it seems obvious that many people would pay to ride the thing; it looks like a blast, a peaceful blast, and not from the past at all. A Swiss entrepreneur has agreed to buy the passenger ship for sight-seeing tours once the German government has certified the prototype. The company is waiting eagerly, though, for someone to order a bigger airship. The Hindenburg had a volume of , cubic meters, but a ship just a quarter that size, says Hagenlocher, could carry passengers and prove much more economical to operate and build. Airship economy increases rapidly with size: One of them appears flame-blackened. The buildings belong to the main tenant of the hangar, an outfit that tests building safety standards. To build the first SkyCat, a new kind of airship he has designed, Munk will need to get rid of those apartment buildings and take over the main hall. A SkyCat , more than 1, feet long, more than 40 stories tall, and with 10 times the volume of the Hindenburg, would be far too large for assembly in the Cardington hangar. Munk has spent the past three decades, ever since he gave up a career as a motor-yacht architect, trying to rescue airships from their history. He has built a series of 20 increasingly modern blimps, including the Fuji blimp and several that were certified for passenger flights. None, however, can compare with the SkyCats for technological derring-do. The SkyCats, if and when they fly, will be dramatically new in two ways. The first innovation is their shape. From the back a SkyCat will look like two Siamese blimps, with separate tails that fuse in the middle; from the front it will have the cambered profile of an airplane wing, more or less flat on the bottom and curved on top. In flight, a SkyCat will get 40 percent of its lift the way an airplane does, by diverting air downward and thereby pushing itself up. While landing, its wide, flat bottom will make it less vulnerable to the crosswinds that can roll a conventional airship. At that point a SkyCat will reveal that it is also part hovercraft. As the airship nears the ground, giant fans inside the twin hulls will blow air down into fabric skirts, allowing the ship to set down gently on twin cushions of air. Next the fans will switch into reverse, creating a suction that anchors the SkyCat firmly to the ground. Or, maybe the trucks would be carrying food and medical supplies, or even a whole hospital, to victims of flood or famine. When Britain recently tried to help evacuate flood victims in Mozambique, Munk points out, it had first to dismantle four helicopters, ship them by cargo airplane to Mozambique, and reassemble them there. But that will give him a chance to demonstrate the technology required for the behemoth. The biggest challenge is the hull, which will have three separate layers: Tedlar on the outside to keep the weather out, Mylar in the middle to keep the helium in, and a Kevlar-like fabric on the inside for strength. That strength will be tested severely at the points where the heavily burdened payload module attaches to the hull, and also by the need to keep the hull so tautly inflated that it can withstand the pressure of going more than miles per hour, faster than any other airship. Each piece will be cut precisely so that the whole confection inflates to the desired shape. A CargoLifter airship, the company says, would hoist such a load at the manufacturing plant and deliver it directly to its final destination, even thousands of miles away, more rapidly and at lower cost. The CargoLifter airship, called the CL , will have a payload capacity of tons. Its structure is semirigid: The engines are necessary for maneuvering the airship, especially during takeoff and landing, operations that promise even more ticklishness than usual for an airship. Once at its destination, a CL will hover at an altitude of feet. The payload platform, bearing the ton cargo, will be lowered on steel cables to an altitude of feet. There it will hang while it is anchored to the ground by other cables and while ballast water is taken on to compensate for the enormous load the airship is about to shed. Otherwise the ship would become far too lighter-than-air and would soar into the sky. Cargo would then be lowered by cable from the payload platform; the off-loading operation would last around two hours. It seems a bit precarious, and it elicits polite skepticism from others in the industry. CargoLifter sees no insurmountable obstacles, though. Over the next decade or so, it plans to build and operate airships from its own bases all over the world. And that is very exciting. The giant

airships that an American company called Sky Station International hopes to launch will fly much, much higher, around 65, feet, and without pilots. Technical details of the Sky Station plan are difficult to come by because the company, fearing competitors, refuses to discuss them. In fact, several groups right now are interested in putting a fleet of unmanned airships into the stratosphere. Cell phones are becoming ubiquitous, yet spotty reception makes them maddeningly unreliable. But talking by satellite requires expensive high-power phones that few people really want, while the costs of launching a global network are huge, as Iridium, the newly defunct satellite-phone company, discovered. An unmanned airship floating in the stratosphere, 12 miles up, would not face the same problems. Ordinary cell phones would have enough power to send signals to it. In industrialized countries, airships could complement existing telephone networks. In underdeveloped countries they could be even more important:

DANGLING DIRIGIBLES pdf

4: The Zeppelin Museum in Friedrichshafen, Bodensee (Lake Constance), Germany

Other expressions of interest in the dirigibles have come from construction companies that lay pipelines or build dams in remote regions. The use of airships to ferry large sections of pipeline or.

The English word "catenary" is usually attributed to Thomas Jefferson , [6] [7] who wrote in a letter to Thomas Paine on the construction of an arch for a bridge: It appears to be a very scientifical work. I have not yet had time to engage in it; but I find that the conclusions of his demonstrations are, that every part of the catenary is in perfect equilibrium. To create the desired curve, the shape of a hanging chain of the desired dimensions is transferred to a form which is then used as a guide for the placement of bricks or other building material. Louis, Missouri , United States is sometimes said to be an inverted catenary, but this is incorrect. While a catenary is the ideal shape for a freestanding arch of constant thickness, the Gateway Arch is narrower near the top. According to the U. National Historic Landmark nomination for the arch, it is a " weighted catenary " instead. Its shape corresponds to the shape that a weighted chain, having lighter links in the middle, would form. Catenary arch kiln under construction over temporary form Cross-section of the roof of the Keleti Railway Station Budapest, Hungary. Cross-section of the roof of the Keleti Railway Station forms a catenary. Catenary bridges[edit] Simple suspension bridges are essentially thickened cables, and follow a catenary curve. Stressed ribbon bridges , like this one in Maldonado, Uruguay , also follow a catenary curve, with cables embedded in a rigid deck. In free-hanging chains, the force exerted is uniform with respect to length of the chain, and so the chain follows the catenary curve. In most cases the roadway is flat, so when the weight of the cable is negligible compared with the weight being supported, the force exerted is uniform with respect to horizontal distance, and the result is a parabola , as discussed below although the term "catenary" is often still used, in an informal sense. If the cable is heavy then the resulting curve is between a catenary and a parabola. The catenary represents the profile of a simple suspension bridge, or the cable of a suspended-deck suspension bridge on which its deck and hangers have negligible mass compared to its cable. The parabola represents the profile of the cable of a suspended-deck suspension bridge on which its cable and hangers have negligible mass compared to its deck. The profile of the cable of a real suspension bridge with the same span and sag lies between the two curves. The catenary produced by gravity provides an advantage to heavy anchor rodes. An anchor rode or anchor line usually consists of chain or cable or both. Anchor rodes are used by ships, oilrigs, docks, floating wind turbines , and other marine equipment which must be anchored to the seabed. When the rode is slack, the catenary curve presents a lower angle of pull on the anchor or mooring device than would be the case if it were nearly straight. This enhances the performance of the anchor and raises the level of force it will resist before dragging. To maintain the catenary shape in the presence of wind, a heavy chain is needed, so that only larger ships in deeper water can rely on this effect. Smaller boats also rely on catenary to maintain maximum holding power. The equation of a catenary in Cartesian coordinates has the form [32] y.

DANGLING DIRIGIBLES pdf

5: Catenary - Wikipedia

The Hindenburg required at least men on the ground to stop it; a filmstrip at the Zeppelin Museum in Friedrichshafen shows the captain bawling commands through a megaphone at men who are scurrying to catch ropes dangling from the airship. Even the far smaller Goodyear blimp needs a ground crew of 15 or

The requirement was simple, that a pilot of any type of aircraft fly from the chateau at the Parc de Saint-Cloud to the Eiffel Tower and back in just 30 minutes total time. The distance, computed in round trip figures, was just 6. Today, this would be an easy achievement, yet when the Deutsch de la Meurthe Prize was announced, the date was April To accelerate matters, the prize purse expired on October 1, Portrait of Santos-Dumont in his trademark Panama hat. In the late s, he had mastered balloon flying and, after some experimentation, had developed a steerable, engine-driven dirigible. By the Spring of , he was a well-known fixture in the Parisian social scene. His dirigible was parked at his apartment and at lunchtime, he would ascend into the basket and cruise down the wide Paris boulevards to choose a fashionable cafe for lunch. In all of history, no man has ever mastered urban flying like he did in , literally to the point of using the dirigible for everyday errands and tasks from his fashionable address at No. In the basket of Dirigible No. Yet the Deutsch de la Meurthe Prize was something else. By the summer of , Alberto Santos-Dumont had a dirigible that was just fast enough that he could possibly make it. This was his Dirigible Number 5. He could take his time and choose the right day as there were no other competitors yet for the prize, despite the extraordinarily high value offered. Each attempt, however, failed for one reason or another. Finally, on August 1, he made a brave attempt, pushing the throttle to the limit. Yet the stresses on the balloon were too much. His hydrogen-filled Dirigible Number 5 tore open. Rapidly losing hydrogen, he dove toward the ground, attempting to clear a rooftop of the Trocadero Hotel to make the street beyond. He did not make it. In a roaring explosion, the balloon was engulfed in flame. Santo-Dumont was trapped underneath in his basket. Somehow, the lines of the basket caught on the rooftop spires and he was left dangling over the street below â€" luckily, the flames of the burning dirigible burnt out without severing his ropes. With the help of others, he managed to climb to the roof and safety. This one was more powerful and larger. He called it Dirigible Number 6. It was sleek, shaped like a long sausage with a long latticework hanging underneath in which his basket stood. The basket could only carry one person, despite the large size of the balloon. Further, where the other dirigibles had relied on a long rope for altitude control, in this case, the balloon would fly free at a higher altitude so that he could easily clear the tall buildings of Paris and make a straight line distance to the Eiffel Tower. Dirigible Number 6 rounds the Eiffel Tower. Finally, on October 19, , after considerable testing and various trials to prove the handling of the balloon, Santos-Dumont brought Number 6 to the Parc de Saint-Cloud. There, with some fanfare, he departed. The official timing began. Climbing to altitude, he could see the Eiffel Tower clearly. He made a direct flight there and, reaching it without problem, he circled it with precision, as if it were simply a racing pylon. Then he began the flight back. As he neared the Parc de Saint-Cloud, however, the timing was close. He set down and anchored the Dirigible Number 6 to the ground, declaring himself within the time. Photographed from the top of the Eiffel Tower during his successful flight! The timekeepers, however, were in dispute. There had been some sort of error and soon a debate broke out among them. It lasted several days before finally the decision was made, the Deutsch de la Meurthe Prize was won â€" his final time was 29 minutes and 30 seconds! By then, the purse had risen to , francs, which Santos-Dumont graciously accepted. Immediately thereafter, he gave 75, francs to the poor of Paris and the rest to his faithful maintenance and construction team as a bonus. The Brazilian Government too offered him another , francs as their own reward to carrying the name of the Brazilian nation into the record books. Early postcard commemorating the achievement of Santos-Dumont. Whereas before, he had been the toast of the Parisian Belle Epoque cafe circuit, now he was a global celebrity. His dirigibles were in demand and his flights garnered regular press attention. He was feted by aristocrats and senior business leaders. He was honored by artists and asked to make appearances internationally. A year afterward, in , he was pursuing heavier-than-air designs. Soon he had developed his own fixed wing creation as well as a helicopter concept. On October 23, , he finally achieved heavier-than-air flight, although that is

another storyâ€¦. The first woman to pilot a powered aircraft in history â€” Aida de Acosta in In all his years flying, Alberto Santos-Dumont never took a single passenger up in his dirigibles of fixed wing aircraft â€” except for Aida de Acosta. In , spying Santos-Dumont in his Dirigible Number 9, she approached him and asked if she could fly with him. He agreed and gave her three flight lessons. During the the third lesson, she piloted the craft herself, thus becoming the first woman in the world to pilot a powered aircraft in flight.

6: Zeppelin Pictures - Freaking News

It was the first to have a cabin actually inside the envelope (the cabin dangling off the bottom was just for the pilot)â€"and that cabin has been painstakingly recreated in the Zeppelin Museum of Friedrichshafen, the small city on the north shore of Lake Constance where the dirigibles were built back in the early 20th century glory days.

At times it was almost clear; then ominous clouds would scud across the field of the Naval Air Station and disappear as quickly as they had come. The airship Shenandoah , nose to her high mooring mast, was floating gracefully with the variable breezes. Her twenty gas bags were about 91 per cent full, her tanks loaded with 9, pounds of water and 16, pounds of gasoline. Sailors were riding up the elevator to the top of the mast. Everybody wanted to see the flying battleship. A native of Greenville, Ohio, he was familiar with the line squalls that swept over that part of the country during the summer, and he had officially requested that the tour be postponed. The Navy had put it off until early September, but rejected any further delay. It would disappoint too many thousands. And besides, the Shenandoah had already flown 25, miles in all kinds of weather. Now almost the entire crew of 41 officers and men, together with two observers, had gone aboard. Not far from the base of the mast, Lansdowne was talking quietly with his wife. An Annapolis graduate with considerable lighter-than-air experience before taking command of the Shenandoah , Lansdowne was a tall, rangy, rawboned man who had a reputation as a strict disciplinarian aloft, but also as an understanding and affable officer who lent a sympathetic ear to the personal problems of his crew. Now he said good-by to his wile and walked toward the mast. The dirigible lifted slowly. Water ballast streamed first from amidships, then from the tailâ€"2, pounds of it in all. The Shenandoah swung around the mast and a few minutes later headed west into the uncertain sky. Margaret Lansdowne turned her back as the dirigible sailed out over the pine woods. So did the other wives who had come to the field. The graceful Shenandoah was the first rigid dirigible made in America. Started in at the naval aircraft factory in Philadelphia, its construction had been held up many months by the failure of Congress to pass appropriations. The design of the Shenandoah was almost identical with that of the captured wartime German Zeppelin, the L , but American navy engineers had made one great step forward. From a natural gas found in exploitable form and quantity only in the United States they had succeeded in isolating helium, so inert that it could not be set afire with a match. But since helium had only In addition, the bow had been strengthened to withstand the strain of mast landings, the fins and rudders had been redesigned, and a walkway for in-flight inspection had been fitted outside the envelope along the very top of the ship. The rigid dirigible, invented by Count Ferdinand von Zeppelin, had been greatly improved upon during World War I by his German countrymen. Already it had accomplished great feats: Now, with the slender Shenandoah , the United States was attempting to take the lead in the international airship field. In her first flights the Shenandoah had captured the imagination of the world. Her triumphs had been many: Now, an hour and 26 minutes after leaving Lakehurst, she hovered over Philadelphia. Before long the Alleghenies were reached. The men oft watch eased themselves into their bunks along the keel amidships. Bisecting its base was a narrow catwalk, the other two sides of the triangle being bounded by the gas cells. These bags, pressing against restraining networks of wire and twine, were usually filled to about 85 per cent capacity at the start of a long trip. Every five meters along the keel was a triangular frame of latticed girders which bound together the circular outer ribs. Each of these frames was marked with phosphorescent numbers so the men would always know where they were in the dark interior. The control car was suspended on metal struts twenty feet below Frame But the air was not rough. The night was warm, and the men off duty slept without blankets. Anderson, a studious young man, remained in the control car through most of the flight, and he was to remember vividly all that happened there during the eventful hours that lay ahead. Now he began to draw up his usual midnight weather report, and a few minutes later, getting up from his little desk, he handed it to the skipper. Lansdowne studied it for a few minutes, then nodded. He started for the ladder. He climbed up the ladder and was soon in his bunk. But Lansdowne got little sleep. The Shenandoah was making little progress against a strong head wind. Lansdowne ordered the man at the elevator controls to bring the ship down to 2, feet, in an effort to find a hole in the wall of wind. For an hour and a half

the slender airship struggled westward, drifting first to port, then to starboard. At a few minutes after 5 A. Alien, the elevatorman, turned to Lansdowne. Allen turned the big elevator wheel clockwise to drive the ship down. It was obvious that the Shenandoah was not responding to the controls. But despite the increased power, the ship continued to rise. There was a note of panic in his voice now. He started to pull the wheel even farther over. Joffray tugged his wheel counterclockwise. He had to put his whole body into the effort. In spite of rudders, elevators, and motors, the ship continued to shoot up, tail elevated about fifteen degrees, and to head relentlessly westward, directly into the storm. The dirigible was rolling now like a raft in the sea. Down on the ground, in a little Ohio town called Caldwell, a man awakened when the wind slammed the furniture around on his front porch. He went outside, looked up at the sky, and spotted the giant airship. Directly above it was a dark cloud that seemed to be in a great turmoil. What they saw was a line squall gathering directly above the ship. Formed by a clash of opposing windsone moist and warm, the other dry and coldâ€”such a squall was capable of seizing the Shenandoah , twisting her in different directions, and wringing out her light metal frame. All over the Shenandoah , men were on the alert. In the control car the atmosphere was quiet but tense. Lansdowne glanced at the altimeter and held a quick conference with his executive officer, Lieutenant Commander Lewis Hancock. The sky was now solidly overcast except far to the south and southwest. Lieutenant Anderson peered ahead, trying to determine the safest course. Then, directly north of the ship and above, at an angle of 45 degrees, he saw the huge threatening cloud extending above their course to the west. The valving oil of helium was finally taking effect. Even so, they were close to 6, feet and still the Shenandoah rose. He realized that at any moment the rise might stop and, with so much helium valved away, they would begin a fast plunge to earth. Then he ordered the valves closed. Above the control car, Anderson carried out his orders, then started back down the ladder. Suddenly a blast of bitter-cold air rushed down the keel through the ventilating hatches, hitting him in the face. The ship had just risen into the squall and was now in the grip of two opposing forces, each wrenching it in a different direction. The fantastic rise stopped sharply at 6, feet. The Shenandoah wavered for an instant and began to plunge. Elevatorman Allen, standing near the altimeter, sounded the alarm. Eardrums pounded as the Shenandoah plummeted down 25 feet a second. Tons of water were dumped. The skipper then ordered the ship nosed upward. In the gondolas, mechanics swore at their erratic motors. In the keel the few men still asleep were pitched from their bunks, while those on duty clung to girders for support. Suddenly, at 2, feet, the ship stopped falling and leveled off. But the men were still tense, wondering what would happen now. Lansdowne gave an order to Rudderman Joffray, so quietly that no one else heard. The ship headed south. Then the captain picked up the telephone. Rigger Mark Donovan, near Frame 60, was the man farthest aft. As he did, there was a weird whistle of wind and the ship surged upward, even faster than the first time. The engine telegraphs began ringing frequently in the control car. Engines 1 and 2 were out and the mechanic on No. Lansdowne ordered Alien to nose the ship down as far as he could without stalling her. They were shooting up incredibly fast. The rise had to be stopped. It was a sight Anderson was never to forget. The ship began turning rapidly in a circle.

DANGLING DIRIGIBLES pdf

7: The San Diego Union-Tribune - We are currently unavailable in your region

The majestic spire of the Empire State Building is familiar to many people throughout the world, but not many know that the original purpose of the mast was to serve as a landing spot for dirigibles, also known.

Each week, we will feature some aspect of the history of polar exploration with a blog post written by our student authors Mount Erebus in Antarctica, as seen in Here at the Polar Archives, our job is to help our users locate primary source documentation on topics that can occasionally be deemed a controversial. However, we are also of the opinion that Climate Change is not a controversial issue. The Polar Archives is a collaboration between the Ohio State University Libraries and the Byrd Polar and Climate Research Center , and as such, we feel that it is our duty and obligation to use our platform to inform. For this Frozen Fridays, we will be focusing on you. We will be presenting you with information about Climate Change, why you should care, and what you can do to help stop and possibly reverse Climate Change. For the research associated with this post, we contacted scientists at the Byrd Polar and Climate Research Center. For this particular issue, we thought it much more appropriate to contact scientists with doctorates rather than relying on the understanding of an undergraduate studying history me. We asked them some fairly basic questions about Climate Change. Their responses are summarized by the following. Miers Glacier, seen here with Miers Lake in , is one such glacier that is at risk of melting. Climate Change, also known as Global Warming, is the phenomenon in which the global average temperatures over the past century have continually been increasing. In the past one hundred years, the global average temperature has increased by nearly 1. The most obvious effect is the rising of the sea level. The sea level has increased by eight inches over the past one hundred years. As the Earth gets warmer, so do its oceans. Warmer water expands to take up more space. Additionally, more water is being added to the oceans as ice from ice reservoirs and from both the North and South Polar melts. We have also seen an increase in severe weather events, such as hurricanes, over the past few decades. Here in Ohio, for example, we have seen a seventy-eight percent increase in nuisance flooding since Ohio is also likely to see lower grain yield and field viability, as well as an increasing need to cool and water livestock as temperature increases. As Cervenec points out, the evidence supporting the existence of Climate Change is overwhelming. He recommends going to this site for supporting evidence of Climate Change. Most climate scientists agree that Climate Change is real and currently happening. Although wider societal steps need to be taken to lower carbon dioxide and methane emissions. Cevernec recommends the following steps that individuals can take to help slow down Climate Change: Many of these actions pay themselves back within a few months to years. Consider replacing your traditional light bulbs with LEDs, which both save energy and need to be replaced less frequently. When you replace appliances, look for the Energy Star certification. Consider your transportation options and take advantages of opportunities to walk, bike, or use the bus. Turn off lights and appliances when they are not in use. Adjust your thermostat when you are away from home to avoid unnecessary heating and cooling. Look for options to purchase your energy from renewable sources. Antarctica, like many wild places, is filled with beautiful views that we must work to preserve. There are several upcoming events , including a Science and Technology Festival and two developmental workshops for educators scheduled for the next two months. And as always, the Byrd Polar and Climate Research. Center frequently gives tours to both public and private groups. Written by John Hooton. Each week, we will feature some aspect of the history of polar exploration with a blog post written by our student authors. In , having returned from his inaugural journey to the Arctic and now dreaming of his flight over the North Pole, Commander Richard Byrd began a lecture tour across America, armed with pictures and films of the Arctic. While on tour, Byrd discovered how bad his public speaking skills and his films were. By the very nature of their work, explorers tend to be xenophiles, willing to risk their lives for such attraction. At the beginning of the 20th century, however, the broader public caught the bug and began craving the strange, the daring, and the exotic. Byrd was far from the only man to capitalize on this fascinationâ€”in fact, he came late to the game. Newspapers had been catering to this desire for years, using any news, discoveries or controversies to sell papers and make money. Success and the resulting public venerations allowed many explorers to pay off

debts or fund their next adventure. While the Richard E. Byrd Papers are the most well-known of our collections, we document the history of polar exploration through the papers and records of other explorers as well! Many Americans were fascinated by the never-before-seen aerial view of Antarctica. Many expeditions to the Antarctic attempted to return with live specimens of penguin. Unfortunately, very few birds survived the journey. The American media was very interested in domestic life, even those of penguins. Many of the brands that used Byrd in their advertisements are still familiar to us today. Their personal lives were talked about in the media as though they were movie stars. This gossip was not always a good thing. Byrd made deals with companies when planning his expeditions. Advertizing rights were sold in exchange for funding and equipment. Paramount Pictures was one such company.

DANGLING DIRIGIBLES pdf

8: Blimp vs. Zeppelin: What's the Difference? | Mental Floss

Get this from a library! The Empire State Building. [Ronald A Reis] -- Explores the history of the Empire State Building, discussing the building's planning, construction, controversies, and uses.

Each week, we featured some aspect of the history of polar exploration with a blog post written by our student authors. In short, she scanned and researched these materials and wrote two blog posts about them. This is one of them. In May of , an airshipâ€”the largest ever to flyâ€”set out on its sixty-third flight, headed from Frankfurt, Germany to Lakehurst, N. This was supposed to be just another passenger flight carrying the well-to-do across the Atlantic Ocean. In half a minute, the flames stripped the airship down to its metal frame and the carcass collapsed on the ground. Sadly for those who did not survive the explosion, this particular airship was originally designed to contain non-flammable helium. So the makers of the airshipâ€”the German Zeppelin Companyâ€”resorted to using hydrogen. The massive explosion was caught on film and promptly broadcast to the world. Today, we know this as the infamous Hindenburg Disaster. View of the Graf Zeppelin as it lands in N. This disaster and the controversy surrounding it tend to overshadow the longer history of airships also called dirigibles. An airship is a lighter-than-air craft which employs gas to fly. There are two types of airship: While airships have their origins in the 18th century, they did not really take off until World War I when Germany used its dirigibles for reconnaissance and bombing missions. While this proved largely ineffective airships are highly susceptible to ground fires and bombing from high enough altitudes to avoid flames makes it hard to aim the German airships lurked so large in public imaginations that they were explicitly banned from Germany by the Treaty of Versailles. Most of the dirigibles employed by the Germans in World War I were produced by the Zeppelin Company who were also the makers of the Hindenburg. This company and their creations have a greater legacy than simply blowing things up, however. Like the later Hindenburg, this airship was simply massive; ten stories high and barely shorter that the Titanic, the Graf Zeppelin cast a mountain-sized shadow while flying. This became the airship which would ignite modern commercial flying. Image from a German postcard, showing the frame of the Graf Zeppelin while it was being built. In order to gain publicity and future financing for his company after years of war, Dr. Hugo Eckener who had taken over when Count Ferdinand von Zeppelin died planned an incomparable trip: Eckener was rapidly joined by the news mogul William Hearst, who frequently publicized spectacular events to promote his own newspapers. In exchange for funding half the trip, Hearst got exclusive rights to the story in the U. Hearst sent three reporters on the trip to cover all the bases: Wilkins, who has an innate love of science and weather, specialized in the technical and scientific side of flying a balloon through poorly understood skies. As the trip progressed, Wilkins became fascinated with Dr. When the Graf Zeppelin began its record-breaking flight, it carried twenty passengers who paid over ten thousand dollars for the privilege and who came from ten different countries , thousands of pieces of mail and all the necessary supplies for an emergency landing with it. This circumnavigation broke the previous record, with the whole trip lasting just over twenty-one days and the flying time clocking in at a mere twelve days. Sketch of the side view and floor plan of the Graf Zeppelin, reproduced here on a German postcard. The Graf Zeppelin was luxuriously outfitted for this trip with a full kitchen, nice passenger rooms and a dining hall. However, the ship was also unheated probably a good thing as it was flammable ; when it flew over Siberia, even Wilkins, who had lived in Antarctica, was forced to don a coat. The Graf Zeppelin made another famous trip four years later, in , when it flew over the Arctic. The Graf Zeppelin was far from the first dirigible to travel over the top of the world; people had been trying it since Merely five years earlier, Roald Amundsen and the Italian airship Norge had been the first to successfully cross the Arctic. Eckener, however, wanted to aid science as much as he wanted a publicity stunt. So in , with a team of scientists, the Graf Zeppelin set out. Freud, the radio operator aboard the Graf Zeppelin, dangling out a window. Originally the airship planned to meet up and exchange passengers with the submarine Nautilus. For various reasons, Wilkins was unable to complete this rendezvous. The Graf Zeppelin, however, proved much more successful than Wilkins. In preparation, the airship had been stripped of its luxuries to provide room for the necessary scientific equipment. Dirigibles were better equipped to handle the heavy

scientific equipment than airplanes of the time, given their relative stability. The Zeppelin was also equipped with a pair of cameras which took nine images every few seconds. These images allowed for a better mapping and understanding of the Arctic landscape. By , these trips became a bi-weekly event. The passenger flights of the Zeppelin Company came to an abrupt end after the explosion of the Hindenburg, however, and the legacy of commercial flying was handed over to airplanes. Written by Autumn Snellgrove and published by John Hooton.

DANGLING DIRIGIBLES pdf

9: Frozen Friday | From Woody's Couch

A sailor in a boatswain's chair was lowered from the Akron to tie a line on the swinging mooring cable that held Cowart. After dangling for nearly two hours, he was reeled in by a winch.

View All Register to post comments and participate in contests. This contest is fueled by the following news: The airships are named after their inventor and founder Ferdinand Zeppelin. Zeppelins were massive and modernized representatives of the rigid-type dirigibles. Zeppelins, supplied to the army and navy, were, as a rule, named accordingly in their respective defense departments; for example, dirigible LZ according to the shipyard in the navy is renamed as L Sometimes, the word Zeppelin is not precisely used as the synonym of rigid dirigible. The skeleton bears entire loads and releases excess pressure of the carrier gas if required by means of air bags ballonets unlike soft and semi rigid airships. Air ships of this type were massive dirigibles: Around rigid air ships were constructed from the end of the 19th century till the end of the s. The small rigid air ship D. Schwarz, with a metallic covering was constructed in Sometimes every rigid airship is incorrectly called a Zeppelin. The metal skeleton of rigid airships was manufactured, as a rule, from duralumin and consisted of cross-sectional and longitudinal girders. The cross-section girders looked like polygons for example, angle bars in the "Count Zeppelin", 36 angle bars in the "Hindenburg" and were called frames. The frames were arranged at a distance of 3. The main frames of the overwhelming majority of rigid airships with the exception, for example, of the British R. Longitudinal girders, passing through the length of the entire airship from nose to stern, were called stringers. Often, even they were divided into main and intermediate stringers and were connected with frames at the top. The quantity of stringers usually decreased at the nose part and at the stern and the stringers ended with a dome-shaped nose and cone-shaped stern. Apart from diagonal bracing, even auxiliary bracing was made, which looked like a network and passing along the internal surface of the skeleton and string network, which served for the bearing of gas pressure from filled gas bags. The corridor fin , serving for communicating with gondolas and for arranging various consignments and also containers with fuel, oil and water, passes along the entire length of the airship in the bottom portion of the skeleton. Carrier gas hydrogen, helium was filled in gas bags, in most cases, made from balloon fabric: The number of gas bags fluctuated from 12 to As a rough approximation, they had a cylindrical form and occupied the envelope compartments between two adjacent main frames. Each gas bag was equipped with an automatic safety gas valve; also, some gasbags had maneuvering gas valves. The external cover jacketed the entire envelope from the outside and served for lending an aerodynamic shape to the air ship and for protecting the gas bags from the hostile atmospheric effects. The cover consisted, as a rule, of cotton cloth coated with cellon; aluminum powder was added to the cellon for much later Zeppelins, which lent the silver shade to the airship. The empennage and operating controls were located, with an exception of earlier models, at the stern of the rigid airships. The empennage looked like a cross and consisted of 2 vertical fins, ending with yaw rudders and 2 horizontal stabilizers, terminating with elevators. As a rule, several gondolas were fitted outside the airship for controlling the airship and for arranging the engines and passengers. The passenger compartments were located inside the skeleton in later rigid airships. Up to 6 motor gondolas were fitted on the airships and a number of engines sometimes up to 8. The engines were fitted inside the body on the American "Akron" and "Macon". In comparison with airships of other systems soft, semi-rigid , rigid airships had a number of advantages: The profitability of the airship increased in direct proportion with the increase in volume. Thanks to low aerodynamic resistance, Zeppelins were considered to be high-speed airships at that time.

DANGLING DIRIGIBLES pdf

The Great Canadian Stripper Shortage The people of color. Dont I Know You? The Hamley,Hambly,Hamlyn group of families Bootleggers daughter Riverside Phonics We Use 2 The flames of growth Non-alignment in international law and politics 5. GPO films and modern design The cult explosion Index to stories of hymns It Only Takes 1 to Have a Competitive Edge in Sales Dry clean price list Myth of inevitable progress Nad c326bee service manual Our friend martin worksheet List of paronyms in english Partnerships and progress Intelligence test books Enid Blytons Second form atMalory Towers. The legend of drizzt series Jacques Hurtubise, recent works = Why We Have to Measure 12 Competing Conceptions of Academic Governance Humanizing office automation List of good carbs Preface to a modern mythology General Pattons Timeless Leadership Principles Miniature Worlds in 1/12th Scale Mechanics of solids 2 Ajax School edition Psychological Clinical Science: Papers in Honor of Richard McFall (Modern Pioneers in Psychological Scien The art of modelling stars in the 21st century Guidelines for Yield Assessment of Opium Gum and Coca Leaf from Short Field Visits (S) V. 3. Paramedics Zoonoses Index. Creating a brand identity a guide for designers Stephens Detection of New Adverse Drug Reactions Quantity food preparation Asme bpvc section viii division 1 Monitoring integrin activation by fluorescence resonance energy transfer Craig T. Lefort, Young-Min Hyun,