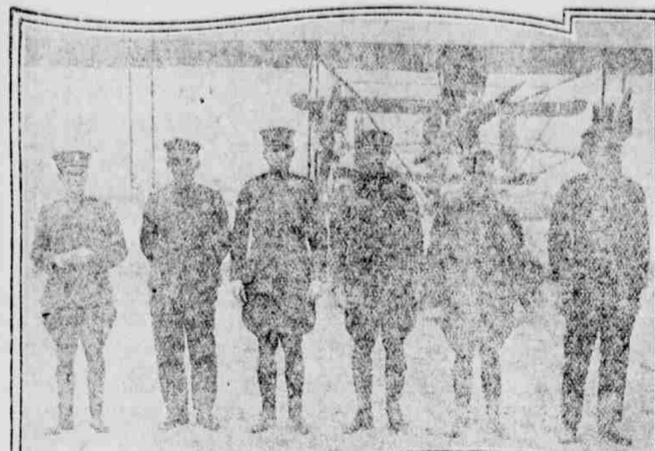


TRANS-ATLANTIC FLIGHT IN PERSPECTIVE



Lt. Comdr. Albert C. Read, U.S.N. of the NC-4, and his crew (Lt. Comdr. Read at extreme left)



The NC-4 Starting her Trans-Atlantic Flight—about 10:30 A.M. service



Walter Wellman who attempted the first flight across the Atlantic by means of a dirigible

Looking Backwards On Efforts At Transoceanic Flight— Sacrifices Made To Cross the Pond— The Significance of the Navy's Achievement.

BY DORA SIMPKINS

CEAN crossing by aeroplane is the sensation of the hour. The spirit of daring that has always characterized aeronautical enterprise has about reached its zenith in the achievement of the Navy plans of the United States and the heroic endeavor of Harry Hawker.

Trans-Atlantic flight has been the ambition of birdmen ever since dreams of air conquest became realities of every day life. The history of the growth of this daring desire and the perilous ventures made by men in trying to bring it to realization provide an engrossing story.

In 1900 when Count Zeppelin, whose name has since come to bear a sinister meaning for mankind, developed the first notable airship of all times and established a means of regular passenger travel, he planted a seed of speculation in the minds of all interested scientists. These seeds rapidly grew to a full grown belief in the possibility of long aerial journeys. Forthwith aviators began to try to demonstrate it.

The successes of the Zeppelin dirigible in Europe stimulated Walter Wellman, an American journalist and explorer, to make a spectacular attempt at long sustained flight. His experiment was the first trial on record to cross the Atlantic by air route.

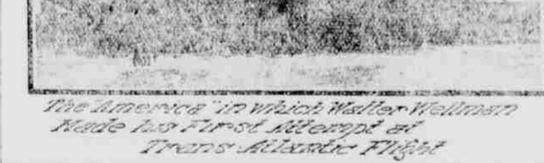
On October 15, 1910, with Atlantic City as a starting point, Mr. Wellman set out in his dirigible, The America, on the initial trans-Atlantic flight. This airship embodied a number of new features and was a credit to its builders in originality of design and construction. It was cigar shaped. The length was 228 feet and it had a lifting capacity of 23,650 pounds. The engines and the propellers were calculated to give a speed of 26 miles an hour with both engines working, and a cruising in six days was planned. The most unique part of the equipment was a so-called equilibrator, corresponding to the drag rope of an ordinary balloon and consisting of about 30 cans of gasoline strung together to form a cable. The idea of this was to carry the fuel, which when exhausted would lessen the weight and compensate for the escaping gas of the balloon proper. It also served as a wireless height and kept the balloon at even height.

The America drifted out to sea on the appointed date, carrying a lifeboat 27 feet long, plentifully stocked with provisions and suspended by a self-releasing hook, so that by slashing the rope it could be released instantly. The equilibrator followed the airship like a sea serpent; it pointed against the waves and made steering difficult. The weather was unfavorable. Within five hours Mr. Wellman ran into a failure of the engine, which was followed by other misfortunes. The crew was forced to abandon the airship and take refuge on a passing steamer after being in the air 7 1/2 hours and sailing or drifting a distance of about 1,000 miles, in a northerly direction toward the north steamer, both of which figures were records for dirigibles.

The only aim had been to get across the Atlantic and land in Europe or even Africa, so these reverses—accidents, aging though they were—did not mitigate the disappointment of the failure of the exploit. Mr. Wellman is quoted as having said that he would make another attempt when something was found to do what he expected of the equilibrator. Mr. Melvin Vaniman, the designer of The America, admitted that the equilibrator was too heavy and placed the blame for defeat on the lack of power to drive the airship against heavy winds.

The Second Attempt

Mr. Vaniman, designer and chief engineer of The America, decided to make another attempt on his own account. He designed a new and larger airship which embodied original ideas as well as established features resulting from previous European experience. The Akron, as he named it, was built the following year with powerful en-



The America in which Walter Wellman made his first attempt at Trans-Atlantic flight

gines and compared favorably with the large dirigibles of Europe. It was really the first American constructed dirigible. For Mr. Wellman's machine has been originally built in France for Arctic expeditions.

On July 2, 1917, The Akron set forth from Atlantic City on its trans-Atlantic trip, with Vaniman himself, acting as engineer. In less than one-half hour the dirigible was totally destroyed by an explosion, due to fire or other factor not definitely determined. The exact cause will always be open to conjecture because Vaniman and his crew of four went to their death. His perseverance gives him claim to be one of the martyrs of the history of air domination.

Growth of The Trans-Atlantic Idea

By this time the aeroplane was supplanting the dirigible and establishing itself as the most effective medium of mechanical flight. Louis Bleriot, the Frenchman, had crossed the English Channel in his monoplane from Boulogne to Dover on July 25, 1909, making the trip in 31 minutes.

The United States Government was planning to transport mail to Alaska by means of the aeroplane. The dream of magnificent airships plying across the Atlantic in the service of travel and trade, crossing in a few days by regular routes, was but another natural outgrowth from the exploits of aviators with their safe and perfect types of monoplanes and biplanes, in which they were accomplishing startling records of altitude and speed.

Small wonder that in the spring of

1913, Lord Northcliffe of the London Daily Mail offered a prize of \$50,000 for the first trans-Atlantic flight from the United States, Canada or Newfoundland to Ireland or Great Britain by an aeroplane in seventy-two hours.

After six years, with a world war intervening and teaching the following of aviation all sorts of valuable lessons; this offer expressed its magnificent appeal and tempted the daring American to strike to make the first trans-Atlantic flight across the Atlantic, in which he subsequently failed to the disappointment of people the world over.

Current news has supplied us with thrills regarding the latest attempt to "hop off" from North America and reach the other side. Harry Hawker, with Commander Mackenzie-Grieve, risked their lives in a desperate effort to be the first airmen to fly direct over the North Atlantic. But the signal, given to start the flight, was not given. The aircraft, a 223 horse-power Rolls-Royce motor, now floats a wreck of the crest of some distant wave, while the fliers are being congratulated on their lucky escape.

Successful Flight

National pride was roused by the successful feat of the NC-4 when it demonstrated its prowess in reaching the Azores and later Europe without mishap. The fact that her companion planes, the NC-1 and the NC-2 were disabled makes the success all the more notable.

The NC-1 was under command of Lieut-Com. Albert C. Read and the crew of five. Pilot, Lieut. E. F. Stone and Lieut. (junior grade) W. H. Hinton,

not yet reached the destined goal of aeronautics by the fact that a flying boat has crossed the Atlantic aided by ships stationed at certain intervals so that the pilot cannot run out of fuel or get lost. He says, "We have yet to accomplish the safe and sane non-stop flight across the pond by aeroplanes."

Captain Francis points out that at present the heavier than air machines cannot store away sufficient gasoline to last for the trip overseas and to make the trip must be dependent on supply stations established regularly at sea.

"I don't believe this difficulty will hold us up very long," he said, "with the way they are developing airplanes in France, England, Italy and America. If it were fuel carrying space alone, we would pretty soon be in a position to popularize trans-Atlantic flight. Another great difficulty causing more trouble than fuel carrying space is the lack of accurate navigation instruments. At present there are three methods of navigating a plane on the ocean. In two of the three methods stars, sun and moon must take the place of landmarks; the last method is by means of navigation instruments."

After pointing out that flying over the ocean necessitates a first-rate knowledge of the science of navigation, Captain Francis mentioned some of the difficulties experienced in adapting instruments of navigation to the plane. The sextant has not yet been accurately installed in airplanes; the objection to it lies in the fact that the navigator should have a clear view of the horizon while using it and this is not possible at the altitude at which trans-oceanic fliers make their trip. Directional wireless also has its drawback, for in order to supply the wireless waves ships must be stationed at certain places in the ocean, and this would be but slight improvement over having the ships there so that a plane might descend to get direction from the sailors. The combined use of the sextant and the telescope, the mechanism of which obviates the necessity of seeing the horizon, will

come to be the method of navigating a plane across the ocean, according to Captain Francis.

Wind is an element of paramount importance to successful trans-Atlantic flight. In the northerly route which lays between Newfoundland and Ireland, the prevailing direction of the wind is from west to east; this factor helps aviators to the extent that they may cut three or four hours from the time that would be required to travel the same route in still air. The winds of the southerly route blow westward, making it impracticable in the present state of aircraft development to follow this route. From these facts it would appear that the most favorable trip to Europe could be made along the northern route, and that the most favorable return trip from Europe could be made by southern route.

Future of Trans-oceanic Service

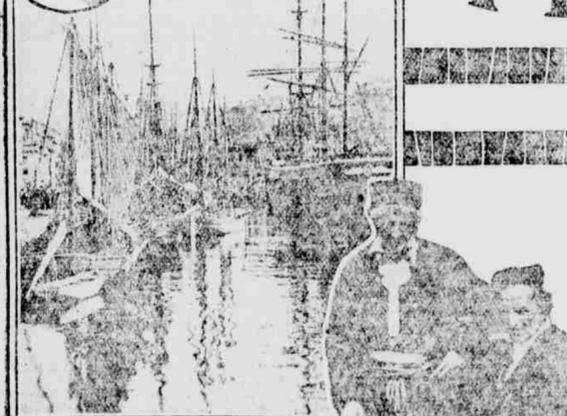
The Pacific will probably be the next ocean to conquer, and the trip across it by aeroplane can be accomplished with ships stationed at intervals to supply direction and fuel, the same as over the Atlantic.

So, looking forward, even to the time when the lighter-than-air machine makes the non-stop journey across the oceans a mere hop of twenty-four hours' duration and less, we see the oceans cease to function as obstacles to inter-continental communication at short notice.

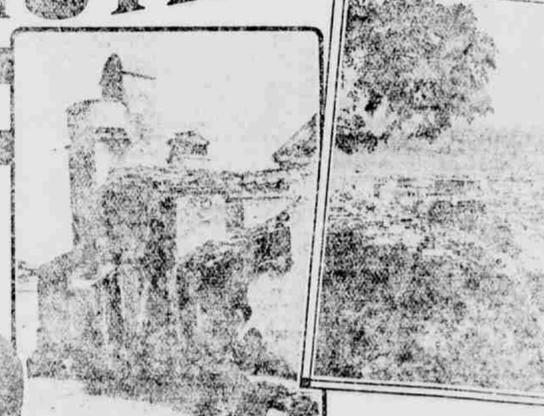
The coasts along the oceans will come to be dotted with piers and stations. The trans-oceanic planes will be fitted with commodious buses for passengers and will be advertising for passengers to ride between New York and Liverpool, without any stopover privileges along the route whatsoever.

The future significance of the perfected trans-oceanic plane in time of war can hardly be measured at this time; but it is a formidable thought to consider the possibilities of its use for carrying high explosives and bombs.

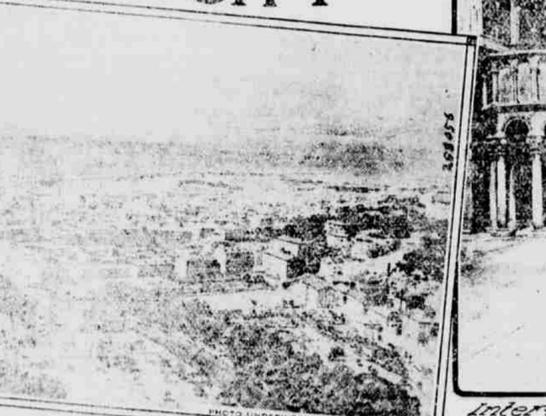
FIUME, ITALY'S DREAM CITY



The Wine Boats in the Fiumarola Canal



General View of Fiume



Interior of the Cathedral

A Story of the Adriatic Seaport— The Bone of Contention With the Italian Delegates To the Peace Conference.

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THE Peace Conference in Paris, by reason of the many new nations to be created, has had very delicate and grave problems to solve. All those who could by any possibility make claims to some part of entry are making a strong fight to have that part included in their territory. The necessities of trade and the expansion of their commerce cause this question to be one of the most serious to be solved. The infant states cry out for every opportunity to expand and have some important part in the world's progress. This has made Fiume a great factor. Located on the eastern side of the Adriatic its natural place was in the country carved out of the southern and southwestern parts of Hungary. Italy has made a bitter contest for it and threatened to leave the Conference unless her demands were granted and for a few days even carried out this threat.

Although Fiume is geographically a part of Croatia it really belongs to Hungary. It is typically Italian city and much beloved by the Italians, who have settled there. It is picturesque

situated at the head of the Bay of Quarnero, an inlet of the Adriatic and is about forty miles southeast of Trieste.

Early History

Like most of the old towns of Europe it has had a variegated history. Originating in Roman times Fiume was destroyed by Charlemagne in 793. The Franks then ruled it for a considerable period after which it passed to the feudal lords until Emperor Frederick III made it a part of Austria. This Emperor was the son of the Emperor known as "the man of iron" and Cymburga, a Polish woman. His long inconsequential reign is remembered chiefly because he puzzled lexicographers by leaving on his books, pottery and having inscribed on his tomb the initials "A. E. I. O. E.", a sort of promissory note of future Aus-

trian greatness which Frederick little realized. The most generally accepted explanation is that the initials stood for the Latin meaning "Austria Est Imperatoris Orbis Universus," meaning "All the earth is subject to Austria." Charles VI proclaimed it a free port and Maria Theresa first united it with Hungary. Successively occupied by the French and British it reverted to Austria and later was restored to Hungary before it was ceded to Croatia in 1849, to which land it belonged until 1879, when it was again claimed by Hungary.

Yet despite the Hungarian interest in the city its pre-war population in 1914, it is said was about 49,000, largely Italian and Slav with only about one-tenth Hungarian.

Modern Seaport

Fiume has been improved during the last few years before the war. In fact, the city as a seaport was increasing so rapidly and it was feared that this place alone would prove inadequate for the requirements of the commerce of Hungary. There are three large harbors the Porto Grande, the Porto Baross, for the timber trade, and the Petroleum Harbor. The largest of these harbors was built in 1872 and is capable of accommodating 150 large vessels. It is protected by a breakwater 2,350 feet in length and flanked by a quay nearly two miles long. The entire port is lighted with

electricity and has the most modern appliances for loading and unloading and hundreds of stevedores were employed. Of course, when the war began Hungary's commerce came to a standstill and has remained so.

Numerous Factories

Among the many factories of Fiume was one for the manufacture of Whitehead torpedoes and owing to the large number of Italians in the city, many of whom worked in this factory, when Italy joined hands with the Allies Fiume became a hotbed and all the Italians were discharged from the factory. This crippled the work to a great extent, although both Austria and her ally Germany were greatly in need of them. The factory is now closed.

As tobacco is one of the main products of the continent is a government monopoly here is a large tobacco factory at Fiume where about 2,000 people work.

There is also a large petroleum refining factory, a rice shelling factory, numerous mills which include saw mills and flour mills, also rope factories, tanneries and a large paper mill. Wine is also an article of export from the city and there is a special canal where the wine boats are moored. On shore the wine market is held under the trees and the peasants who still cling to their picturesque garments sit about their wine kegs selling wine at retail to the natives, and form a charming picture.

The whole city is a busy modern town, although it possesses many old places of interest for the traveler. It is also the starting point of the archaeological expeditions for most interesting places inland. The important part of the town centers around Piazza Adamich, where there are theatres and music halls to suit the different classes.

Picturesque Costumes

The fishing industry of the city is flourishing and on the Piazza one meets these fishermen in their picturesque costumes. Sunday is the best day for this when they come up to the center of the city to spend the day. One finds them sitting about or in the Music Halls enjoying the concert and drinking wine, and while they drink and seem to enjoy themselves there is never any drunken rowdiness and they are always fit to go out for their catch on Monday morning.

The part of Hungary near Fiume is noted for its fine horses and the horse dealers who come down to Fiume are big men whom one might take for pirates were it not for their manners, at least they present that appearance to strangers. Unfortunately these foreigners are few for Trieste is the favorite Adriatic seaport for the tourist and only a very small per cent. of travelers ever reach Fiume.

Just west of the Piazza Adamich on a street near an old clock tower stands an old Roman Triumphal Arch said to have been erected in honor of Emperor Claudius II, 248-270. It is

a thick stone affair with little decoration and green with age, yet it is an exquisite piece of architecture as it shows splendid symmetry in its building and looks as if it will last for all time.

Churches Of Great Age

The cathedral is the oldest church in Fiume, but it is spoiled by a new facade patterned after the Pantheon at Rome. The old church of St. Velt nearby is an imitation of the Santa Maria della Salute in Venice. Nearly all the structures seem to be copies of buildings somewhere in Italy and everywhere the Italian influence is felt.

Pilgrimage Church

The Pilgrimage Church (Madonna del Lussatto) is on one of the hills which surrounds the city. It contains a picture of the Madonna said to have been painted by St. Luke, the Apostle, who was an artist. The church was founded in 1453, according to the inscription on it, although there is a tradition that one of the Frangipani Counts rested here in 1291.

The church is reached by 425 steps flanked on either side by stations of the cross and the ascent is often made by Roman Catholics who make the climb on their knees. The church itself is very old and the great picture is small and hangs in the choir arch. The pillars nearby are covered with votive offerings from mariners, who have had close calls at sea or who have been healed from disease. There is some fine brass work and wrought

iron grille in the church as well as some excellent beaten brass.

Equisite Pictures

The view from the front of the church is exquisite for the entire old part of the city comes under observation as well as the new avenues with their fine homes built on beautiful streets lined with horse chestnut trees while far in the distance the Adriatic spreads out like a huge turquoise. At sunset the scene is one which tempts many painters for the coloring of the old houses blending with the green trees and blue water in the fading sunlight forms a perfect kaleidoscope of beauty.

Close by the church is the famous castle of Torsalio, which is said to have once belonged to the Count Frangipani (one of the old rulers of Fiume), now owned by Count Suent and completely restored. It contains a large collection of statues which are well worth seeing. The view from this point too is very beautiful.

By making the trip to the Pilgrimage church one meets the peasants in their quaint attire, which is very like that of the Italian peasant, even to the rawhide shoes and the queer little caps of brown or red. Several languages are spoken, but Italian and German predominate. Before the war the city had a governor who was a member of the Upper House of the Hungarian Parliament. The town was entitled to one representative in the Lower House. Fiume was the seat of Hungary's Naval Academy and several other institutions of learning.

