

Crossing The Ocean By Zeppelin

By HUGF ALLEN

Regular transoceanic passenger travel by dirigible airship now seems definitely assured at a comparatively early date. The Germans have made the first start. But with Great Britain completing two great ships, each half again as large as the "Graf Zeppelin," and with America constructing two naval ships, each almost twice that size, as precursors of the American commercial fleet, the next five years should bring many significant developments.

After its round trip across the Atlantic, which was highly successful in spite of extraordinary difficulties, the Graf Zeppelin recently completed two Mediterranean cruises, each lasting over eighty hours. Both of these were without other incident than the magnificently smooth performance of the ship and the rigorous following of schedule and route.

The many passengers on both cruises were enthusiastic over the opportunities the air cruise offered for sight-seeing and were loud in their praise of the convenience of this mode of travel. The transatlantic voyages and the two Mediterranean cruises comprise the first long commercial journeys made by a rigid airship and they are excellent evidence of its practicability, both as a means of travel and as a commercial enterprise.

It was in 1900 that Count Zeppelin built his first airship. Although the ship was presently wrecked due to motor failure, the principles incorporated in its design were those that still form the basis of dirigible construction. By 193, Count Zeppelin had built five ships, and had won recognition for the inherent soundness of his ideas. France, Italy, and Great Britain began experimenting with lighter-than-air ships, though the larger expansion was not to come until the World War.

By 1912, the Zeppelin produced at Friedrichshafen had reached the point of development where they contained comfortable passenger quarters. They were used for regular passenger transportation within Germany—a service which was continued and was expanded on several routes until the late summer of 1914, when all Zeppelins were commandeered for military purposes.

From the beginning of the war, the works at Friedrichshafen were going day and night at full force; and toward the end of the war, using the full resources of the enormous works, the Germans were able to complete a Zeppelin every six weeks. At the cessation of hostilities in 1918, the Zeppelin Company had manufactured one hundred and sixteen airships since the memorable first one produced in 1900.

In the meantime, the British and French had made serious efforts to reproduce Zeppelins. The R-34 was the outgrowth of British development in dirigible construction, and as such was the first airship to cross the Atlantic, flying in 1919 from Pulham, England, to Mitchell Field, Long Island—a distance of 4,700 miles—in seventy-five hours.

Activities at Friedrichshafen were resumed for the construction of the ZR-3, afterward the Los Angeles, which was turned over to the United States Government as payment of reparations. This craft, upon its completion in 1924, was the one-hundred-and-seventeenth to be built at the Zeppelin works. It was flown across the Atlantic and delivered to the United States Navy at Lakehurst, New Jersey, after having made a flight of 5,100 miles in eighty-one hours.

At the time of this writing, while the Graf Zeppelin, the highest refinement of German dirigible ingenuity, is cruising over the Mediterranean, Great Britain is building two enormous airships of the Zeppelin type—each of 5,000,000 cubic feet capacity—and the United States is building two more aircraft of the same type each of 6,500,000 feet capacity, almost twice the size of the Graf Zeppelin.

The new British ships will have accommodations for a hundred passengers, and will be both stronger and faster than the R-34. Instead of being shaped like a lead pencil, as the earlier ships were, they will be short and fat—shaped more nearly like a cigar.

These new American ships will be inflated with helium, which is a non-inflammable, natural gas. Helium is superior from the point of view of safety to the hydrogen gas used by Great Britain and other nations, but it requires a somewhat greater volume to lift a given weight than does hydrogen gas. For that reason the American ships of 6,500,000 cubic feet capacity will have approximately the same lift as the British 5,000,000-cubic-foot capacity ships.

A feature peculiar to helium ships is a ballast device on the motors worked out by the United States Navy. A problem that has vexed dirigible pilots since the inception of this type of aircraft is the fact that

Zeppelins in flight grow continuously lighter with the consumption of gasoline and oil by the motors. The Los Angeles, on its delivery flight to the United States in 1924, was twenty-two tons lighter when it landed at Lakehurst than when it left Friedrichshafen.

In order to compensate for some of this decreased weight, some of the lifting power had to be discharged during flight. However, this procedure would involve a serious difficulty for the American ships, in view of the fact that helium gas is considerably more expensive and is a natural product that cannot be manufactured on demand.

The consequence is that American naval engineers have developed a water-recovery device which recycles the gasoline fumes (mixed with moisture from the atmosphere) and condenses them, using the resultant water as ballast. Since water has a higher specific gravity than gasoline, and is therefore heavier than the gasoline which it replaces in the airship's fuel tanks, this is an extremely practical method of stabilizing the ship without loss of any of the precious helium gas.

The new American ships will also be stronger and safer than any that have yet been built. It has been the practice to build a single longitudinal rib from end to end, along the keel of the ship. Into this keel rib is built the control car, the fuel tanks, and the crew's quarters. Its entire length becomes the 300-foot gangway from the nose to the stern of the ship.

The new American ships will have not one, but three such backbones, one at the keel and two others, each partly up its sides, so rigidly connected as to form a triple backbone.

The power cars will be actually built into the new American aircraft, so that the whole will retain an accurate streamline shape.

It has been generally conceded that a ship equivalent in size to the two British and two American craft now in the process of construction is required for a commercially feasible unit for regular service.

The present construction hangar at Friedrichshafen will have to be superseded by a much larger one if such a ship is to be built there, and since the German Government, in the recent formulation of its budget, has practically canceled the appropriation and subsidy intended for the Zeppelin works, this may be delayed for some time.—From the June Living Ace.

Airship Operated By Helium

Detroit Aircraft Corporation Announces That Deposits Made Available in Southern Colorado Are Exceedingly Rich in Gaseous Content

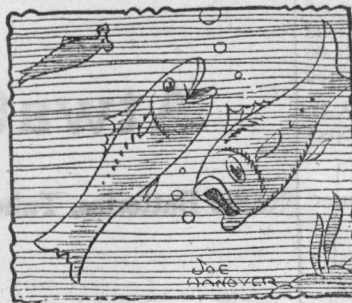
Detroit, Mich.—Officers of the Detroit Aircraft Corporation, whose subsidiary concern, the Aircraft Development Corporation, is building the first all-metal dirigible for the United States Navy, have been informed that new deposits of helium gas have been found in Colorado which will provide sufficient inflation to operate all United States airships for the next 20 years.

Col. Turney Gratz and W. R. Offnut of the Helium Company, commercial producers of the gas, have authorized announcement of the discovery. Detroit Aircraft Corporation officials said.

The new field is by far the richest helium deposit yet found, the Helium Company officers said. The gas has a helium content of 7.07 per cent.; the best previous content was 3.6 per cent.

"While it is impossible to determine accurately the total volume of this new field," Colonel Gratz said, "our corps of chemical research engineers estimated that the deposit will meet the demands of airship builders and operators for a minimum of 20 years."

Colonel Gratz indicated he could not reveal the exact location at which development work was being conducted, but announced construction had already been started on a production plant in southern Colorado.



Perch: Who won the nail driving contest at the picnic?

Bass: Why the hammer-head shark of course!

Sincerity is never ludicrous; it is always respectable.

Real Cherry Blossoms



JAPANESE MERMAIDS IN INTERNATIONAL MEET

These Japanese girls are the first of their race to go aboard for international competition. They will represent Nippon in the swimming meet at Honolulu this summer.

Indus Diggings Base Civilization 5,000 Years Old

Excavators Uncover Stones of a People Contemporaneous With Abraham

Cities Found Under Cities

High State of Culture Indicated by Many Relics

Probably the last thing any archaeologist ever imagined was that contemporaries of Abraham would be found in India, and yet H. George H. Frank, member of the Indian historical records commission writes in "The Christian Science Monitor" the recent excavation of the Indus Valley has revealed the secrets of a wonderful civilization hitherto unknown and almost undreamed of, which undoubtedly dates back to the time when Ur of the Chaldees was flourishing.

In view of the latest romantic discoveries in the home of Abraham, the results of the researches at Mohenjo-daro, in the Indus Valley, a little less than 300 miles from Karachi, are of considerable value, especially as they probably give a more intimate picture of the life and civilization of the people who lived about 5,000 years ago than any other archaeological investigations ever made.

By good fortune the workers in India have happened upon the very houses in which these ancient people lived, and as a result of the great variety of relics unearthed from the three top layers of the six cities which have rested for more than two millenniums one on top of the other in silent decay, it is possible to know the appearance of the people, the manner in which they lived, the food they ate, the clothes they wore, the games they played, the extent of their culture, the tools they used, the writing they had evolved, the ornaments they put in their houses, the jewelry they carried on their persons, and the animals they domesticated and hunted. About the only thing we do not know is how they fought their enemies, for no implements of war have been found.

It is too early to ask, perhaps, whether Abraham ever visited this flourishing corner of Northern India, and sailed down the mighty Indus, but it is certain that his people were contemporaneous with the Mohenjo-dariens and that fairly intimate relationships had been established. When the full story of the present discoveries is told, and when it is possible to make a closer side-by-side comparison between the antiquities of Ur and those of Sind, it is almost certain that a most romantic tale of early culture will be related.

Perhaps the most spectacular and most interesting of all the finds are the pictographic seals—little engraved tablets with animals and queer signs running all over them. Many of the symbols occur again and again in the thousand or more seals, thus suggesting that the art of writing, even in pictures, had been well systematized although in the absence of any large stones or tablets containing lengthy inscriptions, it is doubtful whether these seals will ever give up any other secrets than the names of their owners.

The children appeared to have a

good time, for, in addition to a delightful series of figurines and painted clay models which would equal any modern equipment of a toy Noah's ark, there have been found some very interesting mechanical toys, one being a horse which moved its head by the pulling of a string, and another being a fully equipped chariot with driver and gabled roof.

Various flint and bronze tools and implements have been unearthed with which many of the household utensils were made. The knowledge of saws, chisels, razors and knives reveals a high state of culture and more or less explains the liberal discoveries of the carvings, the polishings and the designs of the different ornaments. The jewelry, for example, would do credit to many a modern craftsman of the West, and if only the necklaces, beads, bangles and earrings could be put up for sale in these times, they would have as great value for the excellence of their workmanship and for being unique. In addition to graceful common pots, there was an amazing variety of ware decorated with designs of swastika, flowers and animals which would stir modern designers to a high pitch of admiration, for while many of the shapes re-echo old Elam and Mesopotamia, others recall fine old jars and bowls of Greece and Etruria.

BUSTS RESEMBLE MONGOLIANS

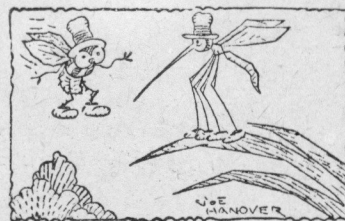
There have been unearthed two large earthenware busts which depict respectively a man and a woman of this ancient race. The former is particularly lifelike and in striking contrast to the other haphazard and crude modelings which have been found. From these busts it would seem that these people were of a Mongolian type, with high cheek bones. They have an old-fashioned type of ear, almost circular, with a hole in the center, and on the whole possess facial and cranial characteristics which are somewhat remarkable for a race of such antiquity.

There is not the slightest doubt that there are many features common between this newly-found culture and that of Mesopotamia and Babylon, even as there is just as striking evidence that each was very different from the other. Then again, there is the faience seal on which is a row of four standards carried aloft by men, on the top of each of which is a figure for all the world like the famous Egyptian totem poles, and this feature suggests a connection with predynastic Egypt.

Skepticism

This faith which I repudiate
I saw disproved by common grief,
Saw fearless doubt annihilate
The citadel of my belief.

So I proclaim with my last breath
Quaint heresies, securely won:
I am incredulous of Death,
I do not trust Oblivion!
—Ruth Forbes Elliot in the Century.



Mosquito (to fly): Well, here we are again. Let's hope we go through the summer without getting slapped or caught.

Sudan Railway Opens Big Area To Development

Land Once Useless Due to Lack of Outlets Ready for Various Crops

London.—The link on the Port Sudan-Kassala railway between Gedaref and Sennar, 144 miles in length, was formally opened by Sir John Maffey, the Governor-General of the Sudan recently. The railway development of the Sudan is thus proceeding apace. From Port Sudan the line runs to Atbara on the Nile and a junction at Haia leads a branch southward to Kassala.

This latter length of 136 miles has been in operation for some months. At Atbara the line runs north to Cairo and south to Khartoum and Sennar and thence westward to the terminus El Obeid. The great dam at Sennar carries the railway line eastward to link up with the Kassala section at Gedaref.

The railway development of the Sudan cotton area means much, for the heavy rainfall and periodic flooding made real roadmaking a difficult task. The dirt track is all right for bullock carts and possible for motors in the dry season, but the first rains turn these into quagmire. Plenty of good cotton land was useless to sow as there was no outlet to rail or sea.

The circle of railway which is now in operation has altered all this. Cattle, cereals, cotton and gum can now be produced with the knowledge that there is an outlet to the markets, and the inhabitants of this potentially rich area will reap the benefit. It also makes possible what is known as the Gash Delta cotton scheme. It is estimated altogether that some 20,000 square miles will be opened up for development.

Dean Inge Rhymes Value Of Women's Short Skirts

In Bit of Verse He Extolls Benefits of Sunlight

London.—The value of sunlight on the human frame has been proclaimed by Dean Inge of St. Paul's Cathedral with the following bit of verse which he recited at the opening meeting of the Sunlight League:

"Half an inch shorter, half an inch shorter,
Same skirts for mother and daughter,
When the wind blows,
Everything shows,
Both what should and what didn't oughter."

He praised the woman's revolt from the extensive covering they indulged in forty or fifty years ago, saying that the movement of the Sunlight League was carrying on further the salutary effects of milady's discard of heavy clothes.

"However we have to beware of admitting cranks and freaks," he said. "There is a certain sect on the Continent and particularly in Germany which believes in walking about nude. In Germany it is possible to see bands of young enthusiasts of both sexes going about without clothes. There is nothing objectionable in that. But clothes are a matter of convention, and it is necessary to hold at arms' length certain unwholesome people."

Saves Airplane By Quick Action

Quick action by an aviation enthusiast who has never been off the ground was responsible for a "happy landing" at the East Boston Airport.

Army officers at the airport received a telephone message from West Barnstable. Their informant said he had just seen an airplane flying overhead with a broken landing gear. He added that he recognized it as an army plane and that it was headed for Boston.

Airport officials immediately rolled a landing wheel and strut into the center of the field to warn the approaching fliers, and an airplane was sent up to signal them. As the heavy Douglas observation plane appeared, observers saw that one of the struts was broken, so that one wheel dangled below the other.

The pilot, Lieut. Russell Randall, was oblivious of the condition of his landing gear until he received the warning over the airport, as he had apparently made a good takeoff at Mitchell Field, L.I.

He succeeded in making a safe landing, with comparatively little damage to the airplane.

A GOOD BOOK

Choose not the book that thinks for you but the one that makes you think. The books which help you most are most.—Theodore Parker.