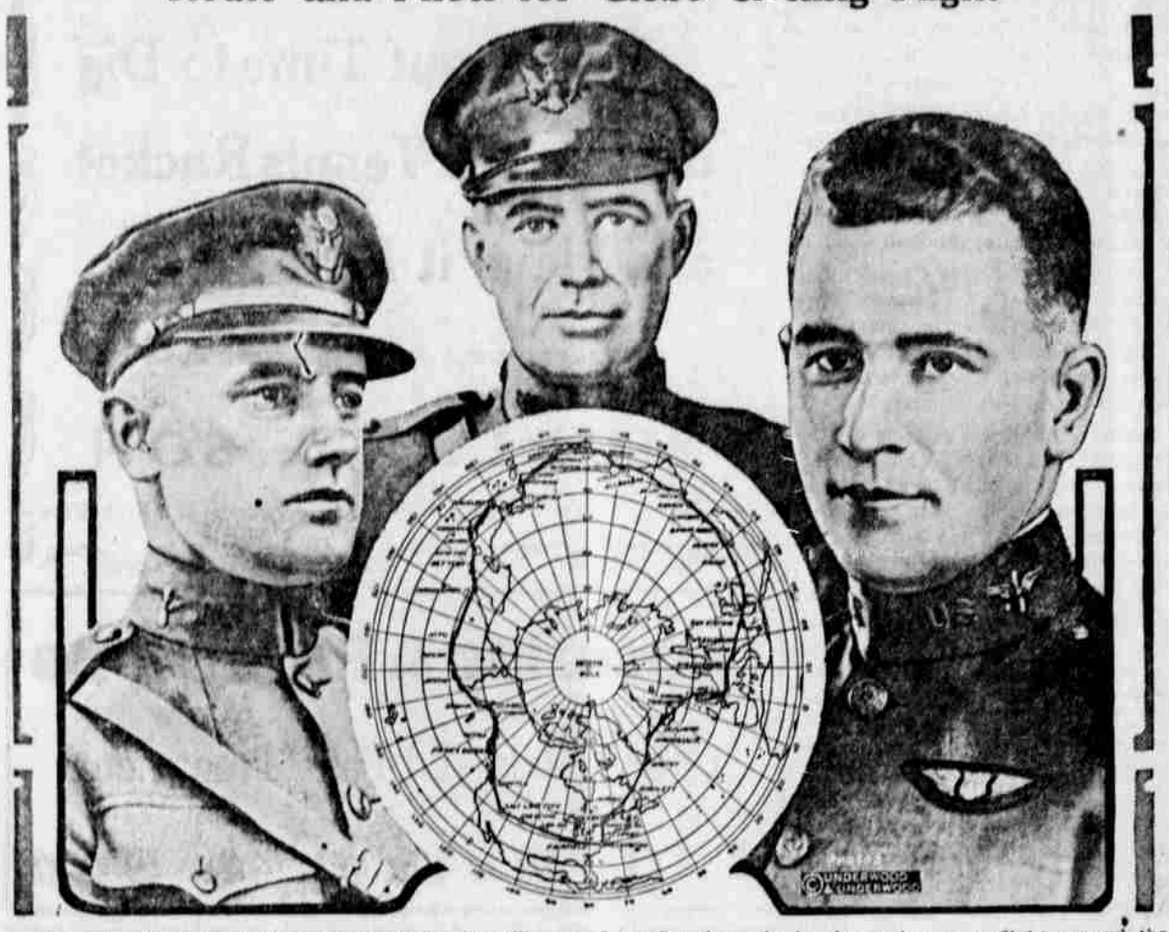
Route and Pilots for Globe Circling Flight



Four Douglas cruisers of the army air service will start from Seattle early in the spring on a flight around the world. The illustration shows a map of the proposed route, and, left to right, Lieuts. Lowell H. Smith, Erik H. Nelson and Leigh Wade, three of the pilots selected. The expedition will be under the command of Maj. F. L. Martin.

Living Scale Is Lower Since War

Economics of Country Dominated by Its Effects.

New York.—The scale of living for the American people as a whole is lower than before the war, according to Dr. W. R. Ingalls, New York mining engineer and economist, who has just completed a survey of the economic prospect for 1924 for the American Institute of Mining and Metallurgical Engineers.

Doctor Ingalls, a member of the bureau of economic research, thinks that the immediate outlook for business regarding things needed for direct use is good, but that it is not so good for things that the upbuilding of mines, railways, factories, etc., require.

"I still see the economics of this country, as well as of the rest of the world, dominated by the consequences of the war, and I think that it will be many years before we are clear of them," he says. "In the meanwhile there will be ups and downs in business.

"Underlying everything is the destruction of the war, which brought Austria, Germany and Russia to ruin and impoverished other countries. Not even the United States escaped physical loss.

"Yet in Europe and America alike there developed a mental unbalance in the thoughts of men that in some way the war had produced conditions whereby men could enjoy an improved scale of living without being constrained to work so hard as formerly. There developed other conditions which have put serious obstacles in the way of the international division of labor. These adverse developments may be characterized as the international unbalance.

Farmer Hard Hit.

"In the United States a fundamental consequence of the war was the upsetting of the old economic equilibrium in our domestic system. This produced what I call the primary unbalance; between property and management on the one hand and labor on the other; and the secondary unbalance among classes of labor whereby some of them have benefited greatly while others have suffered acutely. There are tertiary and quarternary unbalances among the divisions and groups of classes of labor.

"The economic discomfort of the farmers is ascribable in part to the international unbalance and in part to the domestic primary unbalance, the farmers being owners of property who have suffered at the hands of town labor. Similarly is the unhappy position of the white-collar classes of labor attributable to the secondary unbalance among workers themselves.

"I do not think that the American people as a whole are enjoying so good a scale of living as pre-war, although some classes have improved their status as a consequence of the unbalancing. A fundamental reason for this opinion is that we are not producing enough, which is ascribable in part to the increased diversion of labor to service, and in part to the slackening in hours and efficiency per hour by those who are working as direct producers.

"Although engineering and management have done something to offset this, it has not been possible for them to develop a complete compensation within so short a time.

"The effects of these fundamental conditions are bound to be slow. We may go through 1924 with the general feeling that all is well, and indeed things may superficially look so. We may even try to make some sort of a forecast from these fundamental conditions.

All Will Become Clear.

"In a general way we may expect a continuance in activity in the production of consumers' goods and dullness in those branches that pertain especially to capital goods. There will be upswings and downswings, according as producers misread the signs and overproduce some things with the result of accumulation of stocks, whereof orderly digestion must then be awaited. The setback in business activity in the latter half of 1923 is explainable in that way. In all kinds of production we shall for a long time experience the effects of the excessive provision of producing capacity that happened during the war.

"The desire to make use of surplus capacity will contract margins of profits and will be a constant incentive toward overproduction of some kinds of goods. Labor, with no understanding of real conditions, will behave more and more in strangling ways. Even now we foresee a great strike of bituminous coal miners next April.

"To those who will weigh these words much that seems paradoxical will become clear. Retail traders are doing large business and are optimistic. The manufacturers of many kinds of machinery, on the contrary, find things slow, and in their sentiment range from doubtful to pessimistic. The one has to do with consumers' goods, the other with capital goods.

"Any forecast should, of course, take into account the imminence of German collapse and should allow for surprises elsewhere. American economics are not independent of those of the rest of the world.

"Let anybody draw what deductions from these opinions that he will. My own deduction is that real well-being awaits the removal of a good many economic restrictions, with which we have enmeshed ourselves, and the restoration of the old economic equilibrium."

WRONG EAGLE ON COINS

Strangely enough, the eagle on a gold eagle coin is not a golden eagle, but one of a more ignoble species, the bald eagle. The same is true all through American coinage and other places where the eagle is used as the symbolic bird of America. Now Montana civic bodies and nature lovers are campaigning to have the national symbol changed from the bald eagle (as shown against a background of stars) to the bushy-headed golden eagle, shown below.

Newark May Lose War Base

Washington.—The city of Newark must submit revised proposals in the near future for purchase of the War department base there, if it expects to be considered in the final disposal of that property. Two offers for the property have been received by Secretary Weeks from private sources, and he feels that he cannot much longer delay action.

Niagara Falls to Be Dry in 3924

Geologists Say Tilting of Soil Will Change Flow of Water.

New York.—On the very spot where Buffalo's great factories now turn out their giant air liners, our ancestors used to stand and gasp in awe at the thunder of the greatest cataract in the world—Niagara falls. Over this falls, 2,000 years ago 220,000 cubic feet of water plunged every second. Tourists came from all over the world to gaze at this natural wonder, and the thunder of the waters could be heard for miles away.

Such is what the school children of 3924 will read in their histories and geographies if the prediction of Prof. Ulysses S. Grant, head of the department of geology at Northwestern university, in Chicago, is correct.

For, according to Professor Grant, Niagara will cease to flow in 3924, leaving Lake Ontario stranded and the wonderful scenic beauty of Niagara gorge and the hills a thing of the past.

River May Dry Up.

Possibly Michigan's two peninsulas may be joined, and it is also entirely possible that the Detroit river may dry up.

Here is what Professor Grant has found:

Gradually the east end of Lake Michigan is being raised above the level of the west end. As water will seek its own level, it is obvious the lake surface will change. Tilting of the earth's surface causes this change in the lake's level. The difference in levels between the east end and the west end is now only eight feet. By measuring the change in levels in the past, and by carefully observing and recording the lake levels, scientists now are able to estimate approximately when the levels will be equal. And when they are equal the flow will cease, other conditions being unchanged.

Lake Michigan is now tilting southward six inches per 100 years.

The Canadian border is being raised by tilting of the earth.

The shore line of Lake Michigan is continually advancing westward. Careful measurements over a long period of time show how much the lake is tilting westward.

Thus, through a careful study of these conditions, Professor Grant announces his belief that there will be no Niagara 2,000 years from now. If this be true and Lake Michigan tilts southward, this would serve to dry up the straits and would join the two peninsulas of Michigan, providing of course that there was a similar tilt to the earth strata in the eastern part of Michigan and Canada. The rising of the Canadian side would tend to make Windsor a hillside suburb of Detroit, with the river disappearing and Detroit's dream of a lakes-to-the-sea route shattered.

Must Control Lake Level.

Still, 2,000 years is a long time ahead and, if science progresses as much in the next 20 centuries as it has in the last, ocean routes will become a thing of the past, scientists predict, giant liners of the air carrying the world's commerce at a speed never even dreamed of.

Associated with Professor Grant in his researches has been Prof. John B. Hayford, director of the School of Engineering at Northwestern university. For the past 10 years, Professor Hayford has studied the lakes with the view of finding out how much is lost by evaporation. As a result, he has concluded that some method of controlling the lake level must be advanced.

This regulation is possible, Professor Hayford pointed out in a voluminous report, by a series of movable dams—a plan recommended by officials of the sanitary district of Chicago. The dams would be built in the St. Lawrence river, near Lake Ontario, and in the Niagara river opposite Buffalo. This would make it possible to raise or to lower the lake levels as necessity calls.

The significance and importance of this is marked in the handling of commerce on the lakes. Professor Hayford now can estimate in a day the level of the lake at any given point. Formerly this required a week. Increase of the level of one-tenth of a foot makes it possible for the typically large lake vessels to carry 76 more tons of freight with very little additional expense. An annual saving of a million dollars in freight would result.

Forming the Falls.

A study of the efforts during the Nineteenth century to learn the age of Niagara falls brings up some interesting facts in connection with a statement that Niagara will cease in 3924 A. D.

Geologists say that when the glaciers drew back, the Great Lakes were revealed. Water then was discharged down the Illinois river, Lake Huron's level was lowered. Lake Huron, Lake Superior and Lake Michigan flowed out through the Ottawa valley, leaving Erie and Ontario to discharge down Niagara.

Between Lakes Erie and Ontario are layers of hard stone. In 23,000 years Lake Erie cut the gorge back four miles.

The land tilted upward. The upper lakes were turned down into Lake Erie once more and Niagara plunged on and tore out more rock. Nature is still working away at it and other conditions are bringing the condition when the flow will be turned back again and Niagara will not get water.

35,000 Years Work.

As far back as 1816 Frances Hall wrote, "The Horseshoe fall is no longer the shape of a horseshoe. Erosion is changing it to an acute angle."

In 1824 Sir Charles Lyell and Prof. James Hall visited the falls and after some study they stated that they thought recession was about a foot a year.

The length of the gorge from Lewiston up is seven miles. The time for erosion was estimated at about 35,000 years.

Mr. Bakewell, British geologist, next estimated the recession at three feet a year, which reduced the period of erosion to 11,000 years.

Professor Hall in 1842 made a very careful trigonometric survey of the Horseshoe fall, erecting marks at points where the angles were taken, so that the rate of recession could be determined in the future.

Another estimate was made in 1886 by Mr. Woodward of the United States geological survey, who estimated five feet a year as the rate of recession, or 7,000 years in the making of the gorge.

Couple Awarded $866 for Fall in Theater

Somerville, N. J.—A jury in Somerset Circuit court here awarded $400 to Mrs. C. M. Henry as a result of an injury which she suffered in a motion picture theater in Newark. Her husband, Doctor Henry, received an award of $466 for loss of her services.

Dr. and Mrs. Henry charged that because of an usher's negligence they had been forced to seek their own seats in a darkened theater and that Mrs. Henry had stumbled, sprained her ankle and suffered other injuries which incapacitated her for a month.

Dutch Kids Tutors for Former Crown Prince

Wieringen, Holland.—Children of the fishermen of the island of Wieringen were the chief companions of ex-Crown Prince William of Germany during his stay here after the revolution. When the former prince was not making horseshoes, one of his favorite forms of exercise, or reading, he was strolling about the fields or along the wharfs with his pals, the youngsters. It was from the children, chiefly, that William learned to speak Dutch fluently.

"My best helpers in picking up the language were the children of the fishermen," the ex-prince said just before his departure to join his family at his castle at Oels, Silesia. "The children were not shy like the old folks, some of whom often were awed by my presence, and just as natural as could be, I played with the boys and girls, held the little ones sometimes on my knee, drew for them pictures of animals and houses and trees, and even sketched some of the most picturesque children themselves and gave them results of my drawings.

"By association with the children I learned the language better and easier than if I had devotel all my time to studying books and papers. The brain of a normal youngster is the most curious thing in the world. The best system for an adult to learn another language is to talk regularly with children about nature and about books and pictures. Children just naturally are interested in everything."

William, who is forty-five, has six children of his own, the eldest being eighteen.

Square Mile of Riches

London.—"The square mile in the city which is controlled by the corporation of London contributes one-quarter of the total income tax of the kingdom," said H. T. McAuliffe, chairman of the finance, coal and corn committee of the city corporation, at a lunch at the Guildhall. A total of $1,750,000,000 was collected in income tax in the United Kingdom in 1920-1921.

MEMORIAL TO HEROES

This is the campanile which is being built at Baton Rouge, La., at the entrance to the new Louisiana State university and agricultural and mechanical college as a memorial to the sons of the university and of the state, who went to the World war and didn't come back. The tower was designed by the late Theo. C. Link as his last work.

Odd Timepieces Used by Ancients

Egyptians Had Water-Clock and Greeks Used Sundial.

Washington.—A 24-hour day, beginning at midnight, is so universally accepted by landsmen that the recent announcement that the system would be extended to ships, which now begin their day at noon, was surprising.

"However, land time and ship time are only two of a number of ways which men have marked the fleeting moments, and various other ways survive even now," says a bulletin from the Washington (D. C.) headquarters of the National Geographic society.

"Alfred the Great had wax candles, 12 inches long, marked in notches to tell off the four hours they burned. He later covered them with thin white horn, lantern-fashion, to protect them from drafts, but he was far behind his times in comparison with other portions of the world, and his timepiece was crude in the extreme compared with other inventions before 900 A. D.

Ancient Sundials.

"Primitive peoples, before the dawn of history, fixed a pole or stick in the ground and drew a line about it representing the course of the shadow it cast from sunrise to sunset. We may suppose that when Mr. Caveman started out in the morning on a foraging expedition, he led Mrs. Caveman out and notched the shadow-line to show her when she could expect him home. Some of his fellow-mortals in other parts of the world in the same stage of development made a kind of hemp or grass rope which they dampened and knotted in regular spaces. When this was lighted, the slowly and regularly creeping spark told off the flight of time. It is said that these primitive time-markers are used in parts of Chosen, Korea.

"Though some students believe that the early Japanese had no method of reckoning time, others claim that primitive Japanese and Chinese used almost the same thing as the rope, though their device more nearly resembled a wick which had been so treated that it smoldered out the hours. One of these ancient wicks is now in a museum in Paris.

"Even before 3800 B. C. the sparkling stars over Eastern deserts had made astronomers of men who had begun to reckon time by the cycles of the planets. No one knows when they first divided the time from sun to sun into 24 parts nor when the hours were first divided into minutes, but Ptolemy adopted the method in the Second century and gave it to his world.

A Time "Sinker."

"Some of the Malays even today use a crude apparatus for measuring time which has probably been in vogue in the Far East for almost 5,000 years. It is called the water-clock and is simply a small dish or round bowl with a small hole in the bottom. When this is placed in a tub of water it gradually becomes full and sinks, which always happens in the same period of time. On the Malay junks it is the customary thing to see a coconut shell floating in a bowl of water to tell off the time away from the home port.

"The ancient Egyptians knew the water-clock, too, and the British museum possesses one inscribed with the name of Alexander the Great.

"The Greeks claimed that the sundial was invented by a pupil of Thales of Miletus, but the great sundial of Ahaz was mentioned in the Bible when God promised the sick Hezekiah to deliver his city out of the hands of the king of Assyria. Historians have fixed this date as being about 713 B. C.

"From Greece the sundial made its way to Rome, the first one being set up in the temple of Quirinus. Roman citizens evidently suffered from that universal failing of orators, for in 61 B. C. Pompey the Great set up in the forum a valuable water-clock which he publicly announced was to limit the long-windedness of speakers.

Sand-Glass Still Used.

"No one knows how old the sand-glass is. It may have been suggested by the water-clock and probably originated in one of the desert countries—Egypt or Babylonia—where water was at a premium. We cannot tell exactly of what substances they were made, but they were shown on Greek sculpture before the Christian era. The sand-glass or water-glass has two uses all its own at the present time—for boiling eggs, and in the English house of commons to time the bells that ring to notify members that a division is at hand.

"Water-clocks and sundials reached high perfection and elaborateness during the Ninth century, the masterpieces exchanged by Haroun al Raschid and Charlemagne being two of the most famous of history. The first portable astrolabe arrived from Arabia about 700 A. D., and from that time clocks of various kinds and classes made their appearance until Peter Lightfoot in 1335 made 'the earliest real clock worthy of our modern definition.' This old hand-maiden of Father Time still is 'going' in the Science museum at South Kensington.

"The wrist watch is usually considered a modern development of the watch and clock industry, but Queen Elizabeth wore the first one about the same time she introduced silk stockings."

Schneider Cup Won by U. S. Navy

Schneider cup won by American navy pilots in the seaplane race held at Cowes, England. Lieut. David Rittenhouse, U. S. N., was first with a speed of 177.38 miles an hour, a new world's record for seaplane speed. Lieut. Rutledge Irvine, U. S. N., was second with a speed of 173 miles an hour.