Democratic Watchman.

Bellefonte, Pa., June 11, 1926.

To Raise $300,000 for Care of Orphans.

The appeal to Pennsylvanians made generally throughout the State by Major General William G. Price, Jr. that the effort of the American Legion to raise $300,000.00 in this campaign which started May 17th, for the care of the orphans of the veterans who gave their lives during the war, has been meeting with a generous response in many localities throughout this Commonwealth.

One particularly touching instance was the case of Ferdinand Martini who lost both his arms and his right leg in the Argonne, and who today is making a real livelihood for himself through the education which was supplied him through the United States Veterans Bureau. Out of his small income he forwarded to Campaign Headquarters a check for $50.00 with this statement—"My education stops me from writing much. I gave my arm and leg as my sacrifice to the Country of my adoption. Many of my brave comrades did more—they died and left children. The Soldier's first love in France was the Country he was fighting for, next, he thought of France's children. He loved them and tried to make them happy. Today you ask us as Americans to give to our Buddies' orphans. If it was my last dollar I would have to give some part of it to these dear children. Please accept my gift, because it breaks my heart when I know these children need care."

This particularly humanitarian effort to alleviate the suffering among America's children and plant in their minds the proper seed to be better Americans has been a theme that has touched upon by members of many ministerial associations in sending their indorsement of this campaign.

Spangler, Pennsylvana, Post was the first town over the top, with a quota of $48.00. Quite a few others are nearing their goal.

In the eyes of the general public this is the greatest service to the community that the American Legion has ever attempted, and one which should encourage a deeper interest in the principles of this organization.

1,363,000 French Killed in Battle.

Paris.—The most striking appeal against future war is contained in statistics finally worked out regarding the lasting records of France's war losses. M. Gaston Cadoux, former president of the Paris Statistical society, now has made reckonings which peace organizations in every country might well keep in mind for future propaganda.

The population of France at the outbreak of the war was 39,600,000. From these the government mobilized for the army and navy 8,355,000. Of this number 1,363,000 lost their lives. This figure represents one-sixth of the mobilized effectives, one-seventh of the masculine population of the country and one-twentieth of the whole.

If the dead alone might be drawn up in a serried line it would require the Twentieth Century Limited, traveling without stop at sixty miles an hour, some nine hours to reach the end. The entire mobilization of human material by France would have reached from San Francisco to New York if placed shoulder to shoulder.

Comparing the percentage of losses suffered by the principal belligerents, M. Cadoux reckons that his country had one dead or missing per 28 inhabitants, as against 35 in Germany, 50 in Austria-Hungary, 66 in Great Britain, 79 in Italy, 107 in Russia and 2,000 in the United States.

France's agricultural male population of 5,608,971 lost 699,219. Of 1,327,156 engaged in commercial pursuits, 155,977 were lost. Of 915,186 artisans of the building trades, 168,747 did not return. There were 235,320 men of liberal professions mobilized and 40,432 died. Transport workers numbering 60,972 failed to return of 665,029 who went to war. There were 21,426 civil servants, 2,712 ecclesiastics, 80,190 students and 9,493 persons of independent means without profession killed.

The statistician's reckoning shows that the return of Alsace-Loraine did not compensate for the ghastly hole torn in the populace by war. Whereas the population of France was 39,600,000 in 1914, it has fallen to 39,209,000 after these provinces returned to the fold.

Science May Rob Summer of Terror.

Science is opening a new field for refrigeration, making it possible to utilize the pipes which supply heat in homes during the winter months to furnish cool air in the hot months and thus lower the temperature.

Sixty experts who were in consultation recently with representatives of the American Gas Association expressed the belief that the innovation is practical and that it can be made available for public use next fall. House cooling is merely an extension of ice-box cooling and as the principle is already applied to theatres and department stores, its extension to homes and offices will naturally follow if practical devices are adopted and the cost is low enough to encourage private use.

According to N. T. Sellman, utilization engineer of the Consolidated Gas company of New York,, one cubic foot of standard test gas is the equivalent of one pound of ice-melting effect in winter, and one and one-fourth cubic feet of gas are equivalent to one pound of ice-melting effect in summer. This means that the pubic will be able to get the benefit of 1000 pounds of ice for the price of 1000 cubic feet of gas in winter and the price of 1250 cubic feet of gas in summer.

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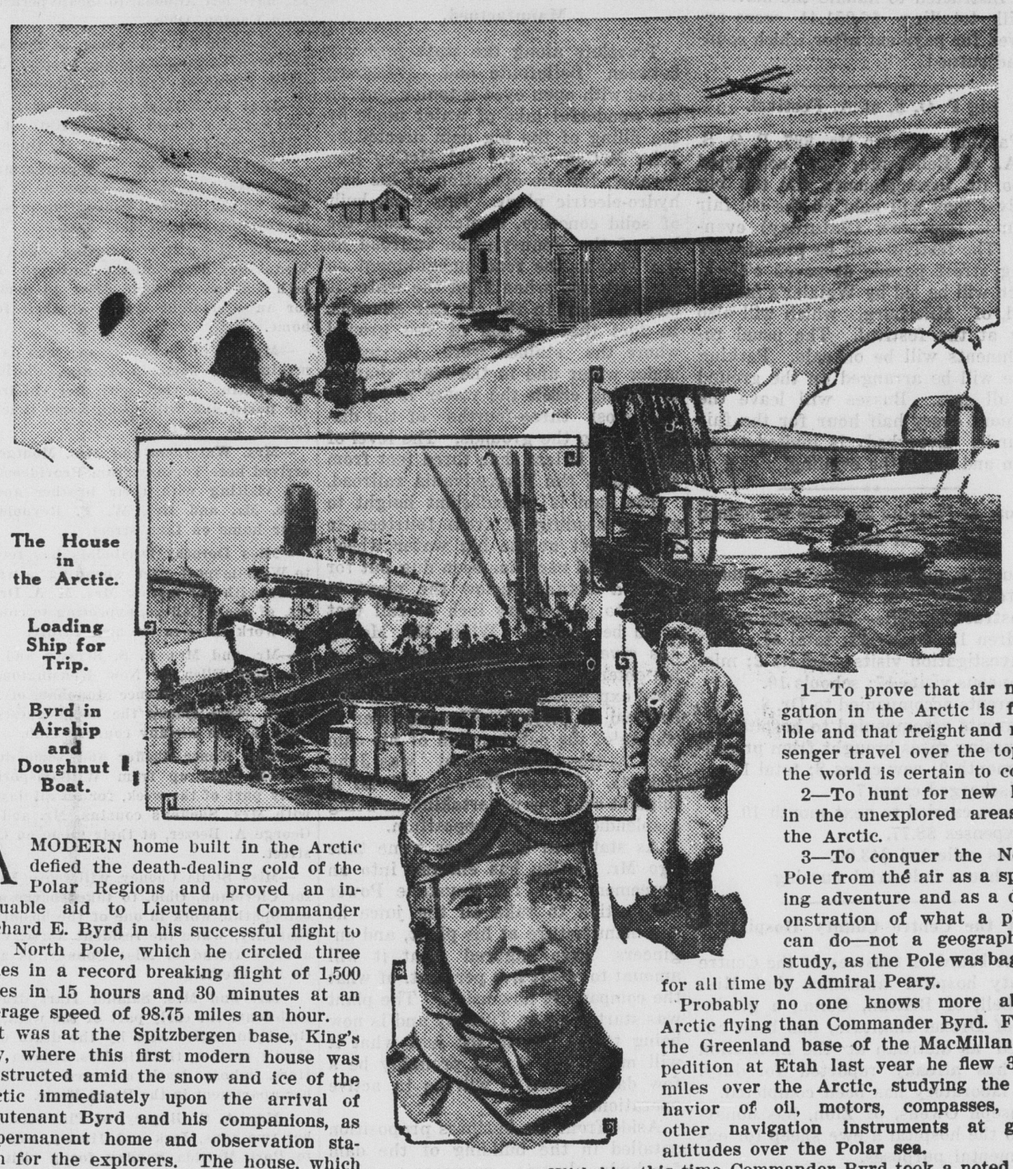
Modern Home Aided Byrd Pole Dash; Sugar Cane Fought Cold of North



The House in the Arctic.

Loading Ship for Trip.

Byrd in Airship and Doughnut Boat.

A MODERN home built in the Arctic defied the death-dealing cold of the Polar Regions and proved an invaluable aid to Lieutenant Commander Richard E. Byrd in his successful flight to the North Pole, which he circled three times in a record breaking flight of 1,500 miles in 15 hours and 30 minutes at an average speed of 98.75 miles an hour.

It was at the Spitzbergen base, King's Bay, where this first modern house was constructed amid the snow and ice of the Arctic immediately upon the arrival of Lieutenant Byrd and his companions, as a permanent home and observation station for the explorers. The house, which rose up on the horizon of the frigid north in marked contrast to the igloo of the eskimo, was equipped with a complete radio outfit that those who remained at the base while Lieutenant Byrd made his thrilling dash to the Pole in his speeding Fokker might keep in touch with their chief and the outside world, which they kept informed as to the progress and success of the flight.

It was to this same home that he returned after his hazardous trip and from which some of the first messages were sent to the waiting public, telling them through the lanes of the air that Byrd had circled the pole three times and had returned to his Spitzbergen home in safety, adding one of the most memorable pages to the history of Arctic exploration.

Sugar Cane Fights Polar North.

When Lieutenant Byrd left the Brooklyn Navy Yard on the ship Chantier he declared he had the best and most scientifically equipped expedition that ever had started for the North Pole. Special plans were made for the erection of his Arctic home. Boards of celotex insulating lumber made from bagasse (sugar cane fiber after all sugar juices have been extracted) were carried along with the latest inventions to aid in polar exploration. This building material is very light and is filled with millions of air cells, which give it great insulation value and resistance to change in temperature, especially the severe cold. One odd circumstance in connection with the use of this material is that the sugar cane of the south was utilized to fight the cold of the north.

Celotex was selected instead of lumber because tests made by the United States Bureau of Standards and its universal use in building construction all over the world, had demonstrated that this insulating lumber would keep the quarters of the explorers warmer and protect their living conditions more securely than ordinary building material.

It was only after careful investigation by the scientific men in the expedition that celotex was selected. These authorities pointed out that the protection afforded by its insulation efficiency was three times as great as ordinary lumber and nearly twelve times as great as that of brick and other masonry material. The ship Chantier also was lined with celotex as an added precaution to keep the ship warm while the explorers used it in the preliminary stages of the expedition.

In practically every other way this expedition was more scientifically prepared than any of its predecessors. These included inventions of Commander Byrd himself. A simple sun compass conceived by Byrd and developed by Mr. Bumstead of the National Geographic Society, superseded the complicated German device, developed three years ago for Amundsen. The drift indicator also was Byrd's invention. The bubble sextant by which the navigator obtains his bearings while in flight was another one of his inventions. Still another scientic development was a quick method of telling when one is at the North Pole. This has been worked out by G. W. Littlehales, the navy's hydrographic engineer.

Device Locates the Pole.

Byrd and others contributed to a chart of the magnetic lines flowing toward the magnetic North Pole, which is in Bolthla Land, 1,200 miles south of the Pole. Between Bolthla Land and the Pole the campass points south instead of north and over much of the Arctic it is badly disturbed by the discrepancy of position between the geographical North Pole and the magnetic North Pole.

This chart of the magnetic lines, flowing to the magnetic North Pole, although it was far from complete, was such as to enable the navigator to tell in what direction the compass should point from any spot in the Arctic. With this knowledge, the erratic behavior of the compass becomes orderly and it is once again a useful instrument.

A third type of compass used was a device of infinite sensitiveness—a revolving electrical coil,. which is adjusted to a given relation with the magnetism of the earth. This, the sun compass, and the magnetic compass were each used to correct the other.

Lieutenant Byrd in his flight used a quick method of telling when he was actually at the Pole. This was the invention worked out by Mr. Littlehales, the U. S. Navy hydrographic engineer. It shows the sun's position from the North Pole at every hour of the day and every day of the year. When the flyer is near the Pole he can, by ascertaining the exact position of the sun, prove that he is near the Pole.

Flies 3,000 Miles Over Arctic.

The expedition, backed by such men as John D. Rockefeller, Jr., and Theodore Roosevelt, Jr., had three main objects.

1—To prove that air navigation in the Arctic is feasible and that freight and messenger travel over the top of the world is certain to come.

2—To hunt for new land in the unexplored areas of the Arctic.

3—To conquer the North Pole from the air as a sporting adventure and as a demonstration of what a plane can do—not a geographical study, as the Pole was bagged for all time by Admiral Peary.

Probably no one knows more about Arctic flying than Commander Byrd. From the Greenland base of the MacMillan expedition at Etah last year he flew 3,000 miles over the Arctic, studying the behavior of oil, motors, compasses, and other navigation instruments at great altitudes over the Polar sea.

With him this time Commander Byrd took a noted fuel expert, who is Flying Commander G. O. Noble, as it requires great skill and pains to prevent the freezing of lubricating oil and stiffened action of the motors, if forced to work on the plane in the open at great altitudes with the thermometer at 60 to 70 below zero. The points which favored the month of May were that the Arctic fog had not begun to rise and heavy snows still covered the land and afforded many good landing places.

A factor of safety pointed out by Commander Byrd in connection with the use of the Fokker machine is that it carries a reserve engine. It has three engines. With a light load one is expected to be sufficient to maintain the plane in flight. With a normal load, two engines will do the work. If two engines break down at one time, when the plane is not too heavily loaded, it may fly with the use of one engine. The Fokker machine has a wingspread of slightly more than 64 feet. It is said to be a marvel of airship construction.

The other airplane—the Curtis Oriole—was to have been used chiefly in finding landing fields so that if the fliers found their main landing place covered with a fog they might go elsewhere.

The Chantier was equipped with a powerful radio transmitter to send back the news of the expedition. The Fokker also is equipped with a receiving and transmitting set. Commander Byrd not only kept the world informed of the progress of the expedition, but received through the Chantier weather warnings to guide him in his flight.

How Expedition Was Equipped.

Forty-five hundred pounds of whole beef were included in the rations of the Byrd crew of forty-seven fliers, seamen and technicians. Also four hundred pounds of pemmican (meat fats and raisins), huge quantities of bacon, dried milk, erbswurst (pea soup) and other supplies in proportion were carried along. Cod liver oil was included for its healthful properties. Herbert Griggs, who had charge of provisioning Peary's expedition in his famous dash to the Pole, worked out the rations for the Byrd explorers. Two pounds per man per day was the allowance to take care of all emergencies.

No amount of clothing is really sufficient when flying 1,000 or more feet in the air in the Polar regions, but every possible precaution was taken by Commander Byrd against exposure. The men were equipped with the warmest and lightest of reindeer suits and with fur parkas, a garment that reaches to the knees and has a hood covering the head. Plenty of goggles were found to be an absolute necessity to protect them against the glare of the snow.

In spite of all the precautions the undertaking was full of unseen danger. None of this equipment would be of the slightest avail against some unexpected and unprecedented situation which might arise. There is always the danger of snowblindness, exhaustion, freezing, some mishap to the engine. Lieutenant Byrd and his companions, however, were particularly fortunate in escaping with practically no ill effects except the exhaustion due to such a perilous trip.

Pick Up Ice Pilot.

The ship Chantier's first stop was at Tromso, Norway, where an ice skipper was taken on to pilot the Chantier and its crew through the ice-filled waters around Spitzbergen to King's Bay, where preparations for the first flight to the Pole were made. The planes, the instruments and the various oil mixtures used in connection with the airship tests, were carefully examined and tested. Lieutenant Byrd's original plans called for six flights as follows:

1—A 400-mile flight from Spitzbergen to Peary Land to unload oil, provisions and equipment at a place that looks promising for a landing.

2—A 400-mile flight back to Spitzbergen.

3—A second 400-mile flight from Spitzbergen to Peary Land base with further food, fuel and equipment.

4—An 850-mile flight to and around the Pole and back to the Peary base.

5—An 800-mile round trip flight to the northwest over unexplored areas in search of new lands.

6—A 400-mile flight from the Peary Land base back to Spitzbergen.

It was his plan in his second flight to attempt to discover new land, but when he received the report of the flight of Amundsen in his dirigible, in which it was stated that the Norge had failed to find any trace of new land, Lieutenant Byrd decided to abandon further flights and the trip over land on sleds he had planned in his search for new land in unexplored areas. Now he has decided to try to accomplish by airship at the South Pole what he did at the North. As he left the Spitzbergen base he stated that he would have just as well an equipped expedition for his southern flight as he had in his recent adventure in the North.