

# Urges Helium to Float Airships

Manning Says Rare Gas Is Non-Explosive, and Therefore Safer Than Hydrogen.

**MOST ABUNDANT IN U. S. A.**

It Is Now Recovered From Natural Gas—More Experimental Work in the Production of Helium Urged by Van R. Manning.

Washington.—Further experimental work in the production of helium as a substitute for hydrogen gas for dirigibles is urged by Van R. Manning, former director of the United States bureau of mines and new director of research for the American Petroleum Institute. The terrible loss of life in the ZR-2 disaster at Hull, England, Mr. Manning declared, accentuates the need for an intensive development of helium here.

"The military and commercial use of helium for dirigibles," said Mr. Manning, "is generally recognized, although to date no practical utilization of this gas has been made except by the government. In the spring of 1917, as the director of the bureau of mines I approved a preliminary investigation as to the possibilities of the production of helium as a war measure, and as a result a co-operative effort was instigated by the Interior, Army and Navy departments looking toward the solving of a problem which was important to our own and our allies' interests. Prompt and quiet results were desired.

**Results Satisfactory.**

"It can be said to the credit of these branches of our government that satisfactory results were obtained, although not in time to put into actual service dirigibles filled with helium. Ample funds were allotted by the Army and Navy departments to the bureau of mines, Interior department, and experiments were immediately begun with three processes. One process was proved to be successful, another not wholly successful and the third plant has been operating experimentally up to a few weeks ago. The fact is that the government is now operating a large helium production plant, with a capacity of 30,000 cubic feet of helium per day.

"Maj. P. E. Van Nostrand of the United States army, who was to have been one of the officers on the ill-fated ZR-2, was one of the collaborators in the development of this work and fully appreciates the importance of helium for dirigibles and balloons, is credited by the press with the statement that 'had the ship been filled with helium it is doubtful if such an accident could have happened.'

**Expense Justified.**

"As one who had to bear the responsibility for the experimental work until a year ago, I cannot emphasize too strongly the statement that the government expenditures, large as they were, in separating helium from natural gas for use in dirigibles, whether for military or commercial purposes, have been thoroughly justified, and it will be obvious to any one who has even a superficial idea of the uses for helium that ample funds should be forthcoming from the government and private sources to carry on further experimental work. The government is now the chief user of helium, and I should like to direct the attention of our country to the importance of continuing active and immediate development of the rigid airship and helium programs previously undertaken by congress to the end that the officers and men who forfeited their lives may not have died in vain."

The story of helium was described by Mr. Manning as "one of the romances of science." "It may be of interest at this time," he said, "to

know something of helium and the development in the production to date. Scientists admit that its discovery was one of pure science. It was first discovered in 1868, in India, while scientists were making observations of an eclipse of the sun. Scientists agree that the occurrence of helium is in the air, in sea and river water, in rocks and mineral springs, in geysers and in volcanic gases, but the only quantities on a large scale can be recovered from the natural gas of the United States."

Before the Bank of England was founded in 1694, there were no banks in all that country.

**Is Last Surviving Grandchild of Signer**

Newport, R. I.—Henrietta Channing Ellery of this city has the distinction of being the last surviving grandchild of a signer of the Declaration of Independence. She is the granddaughter of William Ellery.

Miss Ellery was born April 8, 1838, and has lived her entire life in Newport. Neither she nor her sister Mary, long since deceased, ever married. For a great many years they made their home in the Ellery home-stand, on Thames street, the home of their grandfather, but this house is no longer standing.

The Newport chapter of the Daughters of the American Revolution is named after this signer of the Declaration of Independence.

**Prize Winners in Indian Baby Show**



Here are the winners in the Indian baby show which was a feature of the Indian field days that are held every year in Yellowstone National park.

# New Aviation Terms Fixed

Three Types of Aircraft Definitely Named in New Order to Army and Navy.

**CUTS OUT SLANG PHRASES**

National Advisory Committee on Aeronautics Compiles Standard Terms—"Aircraft" is Any Form of Craft That Navigates the Air.

Washington.—Standard aeronautical terms, devised and compiled by the national advisory committee for aeronautics, have been officially prescribed for use in the army and navy. Hereafter, the new order states, the officers of the two air services will use the regulation nomenclature.

For some time, aerial experts point out, laymen have been calling anything that traverses the air an "airship," whereas the word "aircraft" should be employed. They say that all balloons, rigid and nonrigid airships, or lighter-than-air craft, are constantly being termed "blimps," a slang word, now obsolete, but originally used to designate a nonrigid airplane fuselage slung beneath the gas bag.

"Seaplane," Not "Hydroplane." The word "hydroplane" has often been misused in referring to a sea-

plane; "hydroplane" designates a sea sled, which planes on the surface of the water, but does not take the air. An airplane has been called an "aero," which, it is explained, is as wrong as calling a boat a "water." The words "aeroplane," "hydro-aeroplane" and "dirigible," have been done away with and "airplane," "seaplane" and "airship" have taken their places.

According to the recent published report of the national advisory committee, "aircraft" constitutes any form of craft designed to navigate the air and is divided into "aerostats" and "airplanes." Aerostats comprise lighter-than-air craft, embodying a container filled with a gas lighter than air, such as hydrogen, and sustained by its buoyancy. They include "airships" and "balloons."

The word "airplane" is now used to designate craft heavier than air, obtaining support from the action of the air on the wings, and driven through the air by screw propellers. Airplanes equipped for alighting on water are termed "seaplanes."

**Some New Terms.**

Among the new and often misunderstood terms are the following:

- Aeronaut**—The pilot of an aerostat (airship or balloon).
- Airdrome**—A landing field equipped with hangars and shops.
- Aviator**—The operator or pilot of heavier-than-air craft, such as airplanes and seaplanes.
- Fuselage**—Body of an airplane, including engine and passenger seats.
- Glider**—An airplane without a power plant.
- Helicopter**—An aircraft deriving its support not from wings but the vertical thrust of propellers.
- Ornithopter**—An aircraft deriving its support and power from flapping wings.
- Pancake**—To land by an airplane by leveling off higher from the ground than normal, causing it to stall and descend nearly vertically.
- Soar**—To fly on a level without power.
- Spin**—An aerial maneuver in which the airplane descends nearly vertically while turning rapidly in the form of a helix or a "corkscrew."
- Taxi**—To run an airplane over the ground or seaplane over the water under its own power, without taking the air.
- Zoom**—To climb rapidly at a very steep angle.

**People of Berlin Don't Want Any More War**



A monster demonstration was held in front of the Lustgarten in Berlin recently, in commemoration of the World War. Thousands of placards reading "Never Again War" were carried.

# Volga Towns in Hunger Despair

People Sit Silent in the Streets Awaiting Death to End Their Sufferings.

**PICTURES OF GRIM MISERY**

Docks and Railroad Stations Piled High With Belongings of Refugees Driven From Their Land by Drought and Grasshoppers.

Syzran, Russia.—There was a time when Syzran was the most colorful city along the Volga, but that time is gone. Today it is crowded with dust-begrimed peasants, who group themselves into gray masses in their search for food.

There was a time when the air was filled with a perfect babel of tongues—the languages of the Kalmucks, Mongols, Tartars, Chinese and Russians—but the crowds that throng the streets of the city at present are mute. Even the laughter of children has been silenced in the despair that has settled over these tens of thousands, who sit, crossing themselves, and wait for what seems to be the inevitable.

**Pictures of Grim Misery.**

Pictures of misery seen here are duplicated in Samara, Simbirsk, Saratoff, Tsaritzin, and every other city in the famine-stricken valley of the Volga. Docks and railroad stations are piled high with the belongings of the refugees, who were driven from their land by the drought and the clouds of grasshoppers that destroyed even the meager grain that had defied the heat of the terrible summer now drawing to a tragic close. Committees are trying to move the refugees to other points where there is some promise of food, but it is necessary to use the limited river and railroad transportation facilities to send seed grain into the country and to bring bread into the famine districts.

Many professional beggars of the gypsy type are to be found here and in other large centers in southern Russia, but the starving farmers ask no alms and utter no cry. They stand silent and await their fate with the stoicism pictured so graphically and truthfully by Tolstoy and Dostoevsky.

**Sell Rings and Clothing.**

Markets have sprung up mushroom-like here and there about the refugee camps, offering for sale vegetables, bread, flour and meat. They are surrounded by hungry people, who have no money to offer, but who exchange wedding rings, fur coats, caps, kettles, pans, boots and other small possessions. They know the Russian winter is coming, and that it will find them without shelter and clothing, but they are obliged to give up the necessities of the future to meet the demands of the present.

Large peasant families arrive in a state of exhaustion, their carts being dragged by camels and starved horses. There is no hay or grain here, and there is slight prospect that the animals can be kept alive until spring.

In the carts are samovars, talking machines, concertinas and American sewing machines, which are bartered for food or for coffins. The dead lie unnoticed for hours, while near them are pitiful groups boiling a few potatoes and onions with which to keep alive. Some markets are under armed guard, but this appears to be unnecessary, as the peasants are too weak and passive to take violent measures.

**Typhus Claiming Victims.**

Great crowds attempt to cling to the few trains that leave here daily, and soldiers often pull some of the refugees from the cars, frequently separating families, some members of which have managed to secrete themselves between the cars.

Typhus has appeared in many places and the hospital superintendent

at Samara said the other day the only way to handle the situation was to segregate those who have been stricken. They receive rations when food is available, but there is no soap. Five hundred sick children were found grouped in one building in Samara. Some of them were seen eating leaves from shrubs, while others were lying about on dirty beds, more dead than alive. Most of these children were so ashen and emaciated that they resembled old men and women.

**Germans Among Sufferers.**

Many once prosperous German families from Mariupol and other German centers are among the refugees at Samara and are living in filth and poverty in crowded dock sheds or have no shelter at all. Several Germans told the correspondent they had relatives in Siberia and were trying to reach Omsk, but they had exhausted their money and could not get permission to migrate eastward.

Miss Anna Haines of Philadelphia, a worker for the Friends' relief organization, is in Samara and recently said the mortality among children less than three years old is very high and that nearly 90 per cent are already dead. She told of four persons dying on a station platform in Samara the

other night while they were waiting to be transferred to some other town. Others were lying about and were so helpless that it was difficult to distinguish between the living and the dead.

**HAS 4,000 PATIENTS**



How would you like to have 4,000 patients and have to examine them all on Saturday afternoon? This is the task assigned to Floyd S. Young, who has charge of the fish aquarium at a department store in Chicago. Floyd has nothing to do all week long except to see that his 4,000 fish are supplied with food and water, but on Saturday afternoon he takes them all out and gives them an examination and treats any of them that seem to be ailing. They require baths; they have to have their fins looked over and each one of them is susceptible to a number of diseases.

**WOULD-BE RESCUERS PERISH**

Men Plunge Into Pond to Save Boy Whose Antics Lead Them to Believe He Was Drowning.

New York.—The shouts and splashes of Edward Anderson, eight years old, were mistaken for the cries of a drowning lad, and two workmen of Elizabeth, N. J.—Paul Saps and Michael Sosenk—plunged into a pond on Staten island to rescue him.

The boy, thinking the men were going to arrest him, swam to the bank. When he looked back at the water there was no one in sight.

Two policemen later recovered the bodies of Saps and Sosenk from the bottom of the pond. It is believed that cramps seized them.

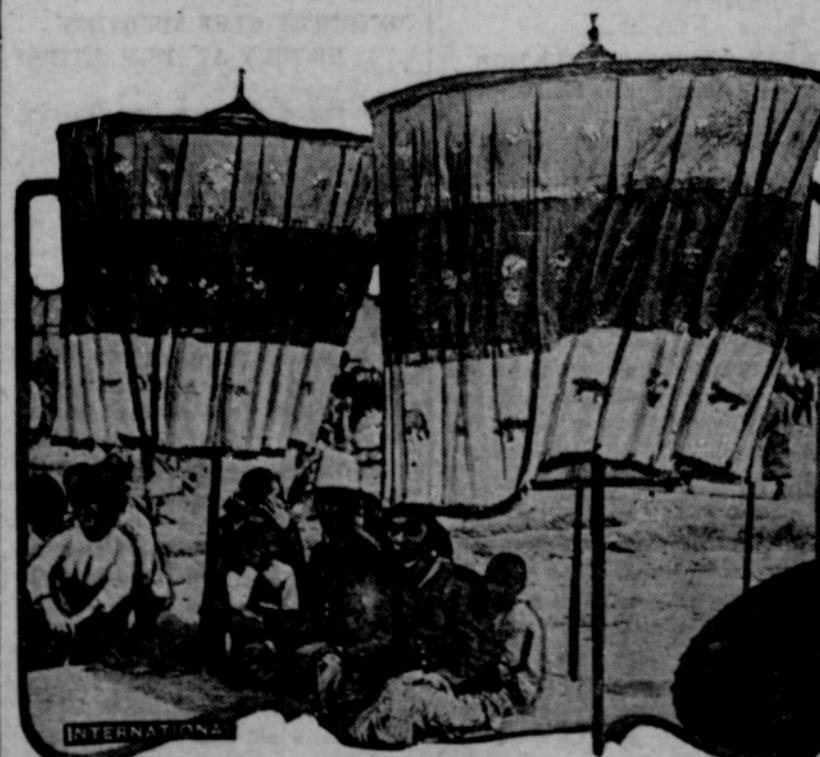
When a young man proposes it is up to the girl to lose her self-possession.

**Motorcycling in Mojave Desert**



With the exception of occasional cloudbursts which sometimes shed as much as six inches of rain in half an hour, rain is almost unknown in the Mojave desert, California. When the cloudbursts come they wash out roads and everything else. This motorcyclist is attempting to navigate one of the roads after such a storm.

**At the Harvest Festival of Java**



The greatest of all the festivals celebrated in Java is the harvest festival. During the procession the sultans of the clans sit under great sunshades that are covered with gold and silver stars, making plain the rank of those squatted beneath them.