

Water Measured At Niagara Falls

One of Steps Taken in Study of How Best to Preserve Its Scenic Beauty

New York.—The recently published press reports of the Special International Niagara Board—a body of eminent Canadian and United States engineers and landscape architects—on how the scenic beauty of Niagara Falls can best be maintained gave only meagre details of how this interesting work was carried on. An essential part was measuring the water going over the falls.

The comparatively small amount and even distribution of the flow going over the American falls presented little difficulty to the board. A light rope was shot across from the New York mainland to Goat Island by means of a mortar, then a steel cable was hauled across and tightened and by the use of a carrier system provided with weights and meters the discharge figures were obtained from which the depth and rate of flow over the brink of the American falls were readily computed.

The depth and rate of flow over the brink of the Horseshoe falls presented a more serious problem and results were secured by means of floats. The floats were made of scantlings, so buoyed and weighted as to float perpendicularly with submerged lengths of from one foot to twelve feet, and having flagged tops that could be readily observed from the shore. These floats were taken out on the river above the rapids in motor boats and dropped into the water at definite points on a range line across the river. When a float was released the watchers on the shore recorded its progress by transit and stop-watch observations, aided by photographic and moving-picture records. By these methods the rate of flow of the float in each section was readily computed.

If a float went through its course upright, it was evident it did not touch bottom. Longer and longer floats were sent through until one dragged on the bottom. Then with the length of the float known and by noting the angle of inclination, it was possible to calculate the depth at that point. To secure records of the characteristics of the current in the rapids adjacent to the river banks near the falls, it was found necessary to shoot the floats from spring-guns on the banks.

The board also investigated the cause and characteristics of the bluish green color of the water at the brink and how this beautiful effect might be heightened by securing greater contrast with the foam curtains at the edges and shallower parts. The color phase is most effective when seen from across the gorge. As a result of the investigation the board determined that the conservative minimum depth of water on the crest of the falls, for maximum brilliance of color, is five feet.

An interesting feature of the work was the survey of the water surface in the rapids above the falls by photogrammetric methods and the development of a small scale relief map and model representing the water surface over the entire rapids. The model was made by the Topographical Survey of the Department of the Interior of Canada.

The engineers who compose the International Niagara Board are J. T. Johnston, C. E., director, Dominion Water Power and Hydrometric Bureau of the Department of the Interior, for Canada, and Major DeWitt C. Jones, Corps of Engineers, U.S. Army, for the United States. The members added to form the Special International Niagara Board were Dr. Charles Consett, Deputy Minister, Department of Mines, for Canada, and Dr. J. Horace McFarland, past president of the American Civil Association and chairman of the Art Commission of Pennsylvania, for the United States.

Barley Ranks Third In Canada's Cereal Crops

Barley ranks third among the cereal crops of Canada in acreage and total yield and second in average yield per acre. Last year oats led in both total yield and in yield per acre; wheat came second in total yield and third in yield per acre, while barley came second in yield per acre and third in total yield. Barley is the hardest of all cereals, and can be grown through a greater range of climate than can any other. Its production dates from ancient times when it was used principally as an article of food. As the centuries progressed its uses became more varied and now its main consumption is in the production of beverages, though it still retains its uses as food both for man and beast.

A special report upon the production and uses of barley in Canada has recently been issued. In a survey of the production of this grain during the last decade it appears that the crop of 1930 was very little less than the highest of the period. The price, however, in 1930 was abnormally low. The largest yield of barley during the years 1926 to 1930 was in 1928, when it amounted to 136,391,400 bushels. The yield per acre in that year was 27.9. In 1930 the total yield was 135,150,200 bushels and the yield per acre 24.3 bushels. The weight per measured bushel throughout the five-year period varied from 47.04 pounds in 1923 to 47.21 pounds in 1929. The weight in 1930 was 47.22 pounds.

59 Killed in Month By Ontario Motors

Most of 857 Accidents Occurred in Daylight on Good Roads

Traffic Rules Violated

Toronto.—Motor traffic in Ontario took a toll of 59 lives last month, 16 of whom were children under 15 years of age, and injured 835, of whom 218 were children.

The report of the motor vehicles branch of the Department of Highways, issued recently by J. P. Bickell, registrar, shows a total of 857 accidents during the month involving 1,236 cars. The majority of these occurred in daylight on good roads in clear non-skid weather and involved drivers described in the report as normal.

Nor in the main were the accidents due to disregard of the law by the drivers. Less than 50 per cent. of the cases, 313, are laid to violation of traffic regulations and of these only 97 to speeding, cutting in, passing on hills and curves or passing standing street cars.

Level crossing accidents, 10 out of 13 of which occurred at unguarded crossings, killed 11 victims and injured 13. Six crashes occurred at crossings guarded by automatic signals and two at points guarded by gates or a flag man.

Out of 1,236 cars involved in accidents during the month, 1,017 were reported in good condition and only 219 with defective brakes. Only 168 commercial vehicles, 13 taxicabs and seven buses figured in crashes as against a total of 1,030 passenger cars. Violations of the law recorded in 343 instances include 76 cases of drivers exceeding the speed limit, three of passing on a hill or curve and two of passing a standing street car. Sixteen motorists were convicted of cutting in and 93 drove off the roadway.

Twenty-one pedestrians were killed by cars during the month and 240 injured. Of this total, four fatalities and 112 injuries were cases of children knocked down while playing on the street.

More Prizes Offered for Wheat, Barley and Oat Seed

Registered and certified seeds have been given increased prominence in the sectional prize list of the Royal Winter Fair for November next. The competitions are to encourage the production and distribution in commercial quantities of superior seeds from crops that have been inspected in the field and which carry certification of inspection. The classes have been extended to cover sixteen seeds and seed grains. More prizes are offered than in 1930 for wheat, barley and oats. There are additions to the previous lists of peas, beans, mangels, swedes, potatoes, clovers, Alfalfa, grasses, corn, beets and onions. These are championships for the bread grains, peas, beans and potatoes and four valuable trophies are offered. In addition, there are national contests and exhibits for boys' and girls' agricultural clubs held under the direction of the Canadian Council on Boys' and Girls' work.

Accident Prevention

Three Rivers Nouvelliste: When one considers the cause of a large majority of the recurring accidents on the public highways, only one conclusion can be arrived at. It is that the problem of traffic safety resolves itself into one main phase. Negligence on the part of the driver is still at the head of the list of accident causes. It would seem, then, that only one thing needs to be done to reduce the number of highway casualties to the minimum. It will suffice if the drivers of automobiles are prudent at all times and in all places, particularly at intersections, at level railway crossings, and when meeting or passing other vehicles on the highway. What a simple remedy can thus be applied effectively to a veritable public plague.

Forty Bergs Passed in One Day Off Labrador

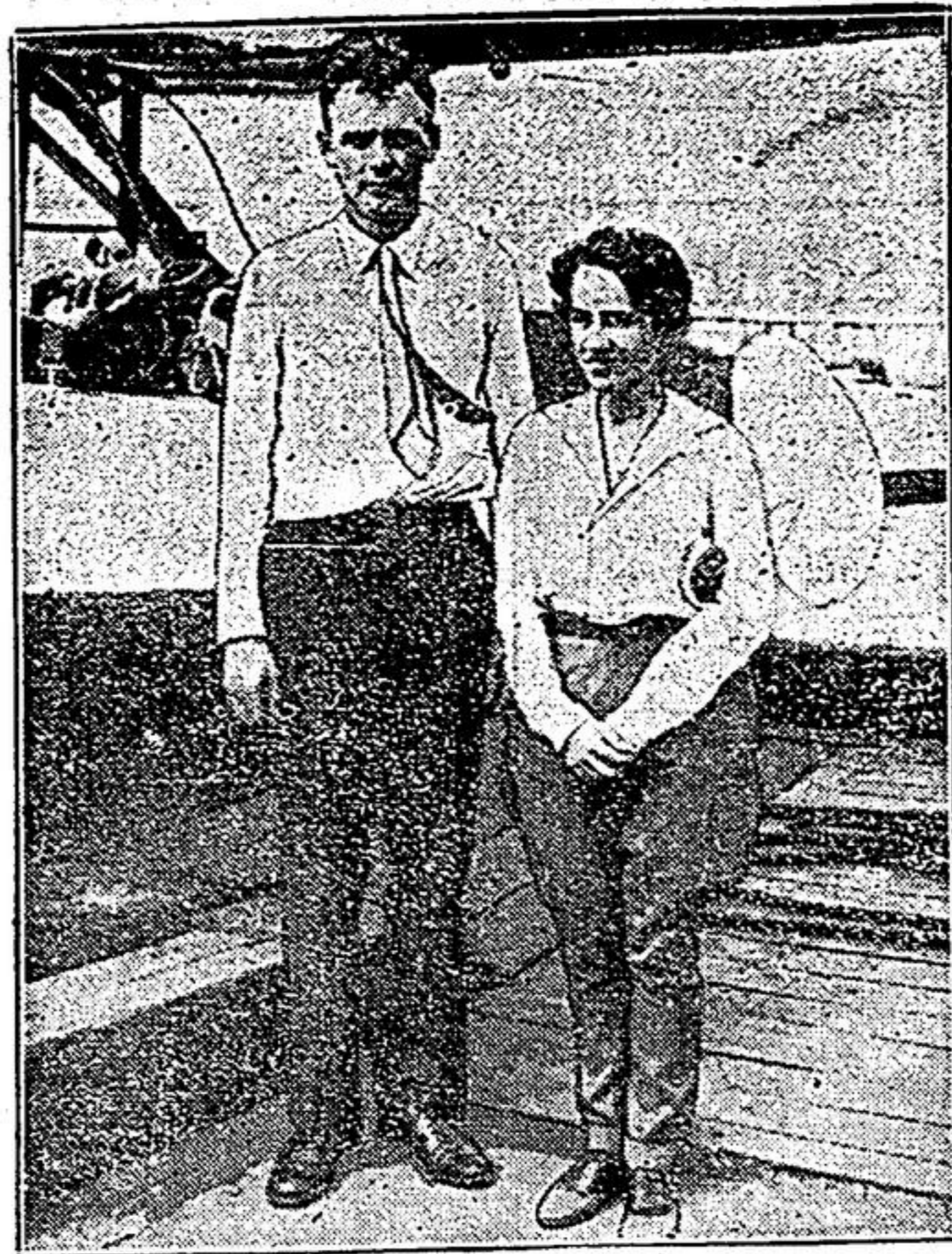
Boston.—The sighting of 40 icebergs in a single day was reported in a communication received from Lieut. Commander N. G. Ricketts, commander of the coast guard's oceanographic expedition in northern latitudes. It is the purpose of the expedition to obtain data through which the annual invasion of the steamer lanes by icebergs may be forecast.

The expedition is now operating in Northern Labrador waters, far above the trans-Atlantic steamer lanes. After an earlier cruise in the region of the Grand Banks, Commander Ricketts commented upon the scarcity of bergs in the steamer lanes this year.

Italy Continues to Increase Purchases of Foreign Grain

Rome.—Italy's purchases of foreign grain continue to increase. Official figures of the tariff office show that during the last eleven months Italy imported 18,990,409 quintals compared to 7,761,233 quintals in the period 1929-30. This represents an increase of 10,229,176 quintals.

On Their Way



Col. Charles Lindbergh and Mrs. Lindbergh are shown in front of their airplane just before they took off from North Beach Airport, L.I., July 27th, en route to Washington, on first leg of their 7,100-mile jaunt to Tokio, Japan.

Youths Travel 33,000 Miles Around World on \$700

Port Wayne, Ind.—A 33,000-mile globe encircling jaunt has been completed at a cost of less than \$700 by Harold Greiner, Fort Wayne, and Paul Neipp, Cleveland. The youths, both of whom were graduated from Concordia College here, began their long trip a year ago.

Among the methods of earning transportation engaged in by the youths was peeling potatoes on an ocean liner. In Spain they traveled more than 750 miles on bicycles.

Old English Burial Ground To Become Recreation Park

Twickenham, England.—Unused for more than a century, the old burial ground here will be turned into a recreation park. The last burial was in 1825, and small houses now surround it. In granting the town's request the chancellor of the diocese remarked: "The tombstones have no interest except as they disclose the early virtues of the eighteenth and early nineteenth centuries, such as humility—now sadly out of fashion."

The Geodetic Survey of Canada

The Geodetic Survey of Canada, of the Department of the Interior, plays an important role in the development of the Dominion, providing by its work an accurate basis for all kinds of other surveys whether relating to the making of maps or charts, the laying down of interprovincial and other boundaries, or the construction of powerhouses, dams, canals, railways, irrigation ditches and the like.

Australian Oranges Arrive in Canada

Vancouver.—The first shipments of the new crop of Australian oranges consisting of 5000 cases has arrived at this port. The fruit is of good quality and is being favorably received by the public. Australian oranges, it is anticipated, will from now on give steadily increasing competition to California oranges which have dominated the markets of western Canada.

New Flying Rules Drawn Up in U.S.

Greater Safety for Airline Passengers Object of Regulations

Washington.—New regulations to make flying safer on America's passenger air lines were adopted at a recent conference of pilots and operators at the Commerce Department.

The crash several months ago which killed Knute Rockne, Notre Dame football coach, and seven other persons, was largely responsible for one of the most important safety measures. It prohibits passenger transport planes to fly over stretches of fog and clouds without two-way radio equipment.

Another of the regulations gave the pilot an 8-hour day, forbidding him to fly longer than that.

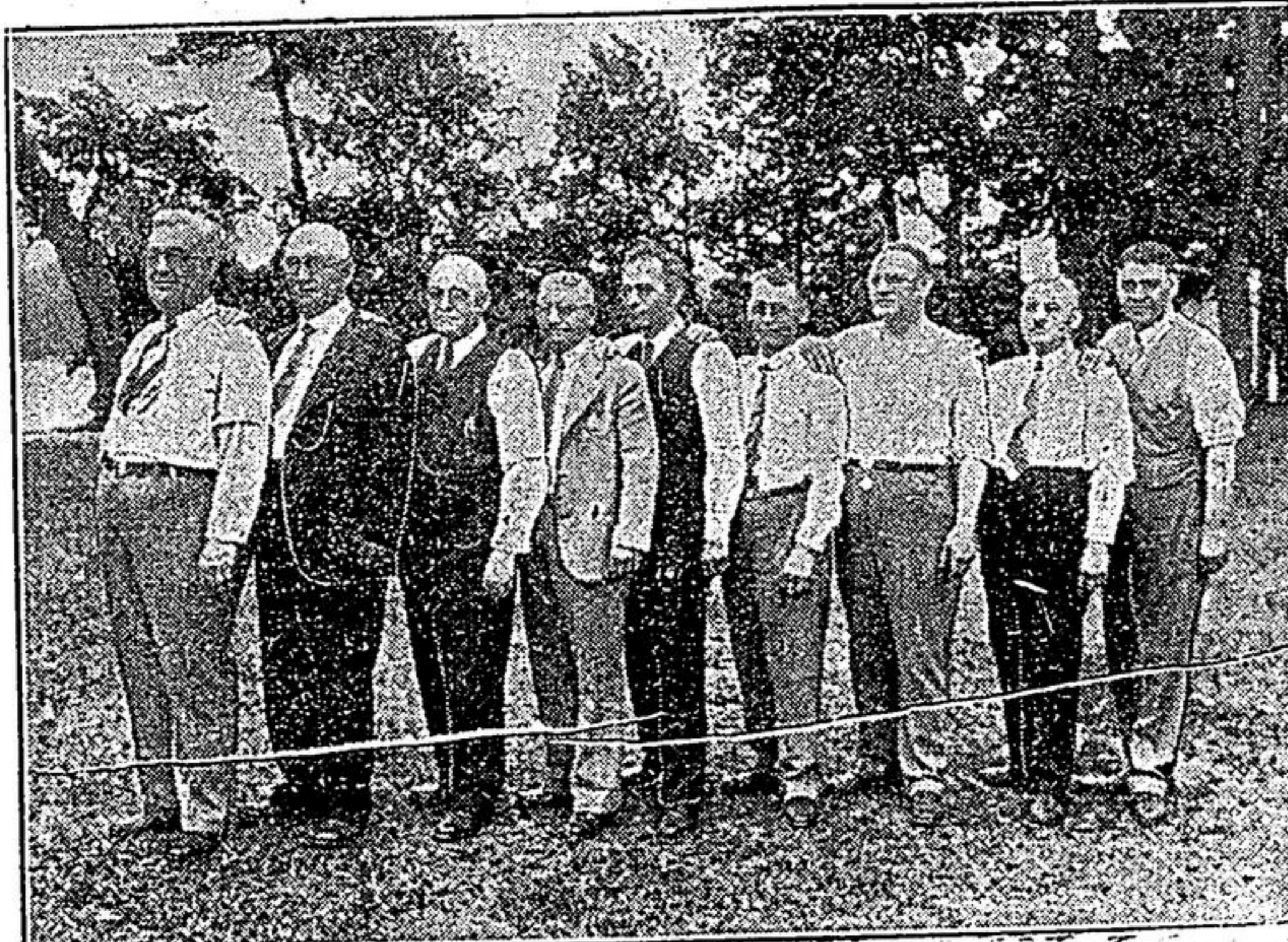
Assistant Secretary of Commerce Clarence M. Young announced that the new measures would shortly be drafted and promulgated. They were agreed on by 39 airline operators and 11 pilots. It was the first time pilots have attended such a meeting.

In addition to providing for radio communication, the fog regulation also forbids a trip where the destination is a landing field on which fog or cloud ceiling is lower than 300 feet. Clouds and fog played a part in the crash which took Rockne's life.

Besides being restricted to an eight-hour day, a pilot will be allowed to fly only 30 hours a week and will have a prolonged rest period between flights taking six hours or more.

Regular passenger lines will be required to report changes in schedule or extensions of operation to the department. Two pilots will be required on multi-colored planes only when the first pilot is scheduled to fly six or more hours in one day. This is a relaxation of the present co-pilot requirements for the larger planes, demanded by the airline operators as a move for economy which would not lessen safety. The pilots opposed this proposal, but it was approved.

Brothers Stage Re-Union



The nine Beach brothers, most of whom live in eastern Ontario, got together for the first time in years at their first annual picnic held recently along the banks of the Long Sault. Left to Right: Charles A. Beach, Cornwall; Frederick W. Beach, Ontario; Benson C. Beach, Ontario; Dr. (Anson, twin of Benson), Dominion government inspector; Mahlon W. Beach; Dr. Howard, Ottawa; G. Weston, Toronto; J. Russell, Ottawa; and Olin A., youngest of the family, of Ottawa.



We are pleased that as a result of the publicity given to Lone Scouting through these columns many new members have joined the movement during the past few weeks. This week applications for membership have been received from Cobden, Hydro, Burkes Falls and Harriston, and at Durham there is every prospect of a full Patrol being formed.

A recent check up of the records of the Ontario Lone Scout Department showed that since its inception two years ago about 460 boys have been admitted to membership in the movement. Of course quite a few of these have been since transferred to regular troops which have been formed as a result of Lone Scout activity.

The Lonies at Fenelon Falls under Senior Patrol Leader Doug. Warren have had a very busy time just recently. On July 4th they had the pleasure of again meeting their friends of the 51st Toronto Troop, who camped near the town. The Lonies helped the Toronto Scouts to make camp, and entered into their activities with zest.

Later the Lone Scouts were invited to visit the camp of the 90th Toronto Troop at Sandy Point, on Sturgeon Lake. They liked over to the camp on July 8th, and to their surprise met an old friend who turned out to be none other than "Cookie" ("Colonel" Walton), who was so popular at the Lone Scout Camp at Ebor Park last summer. The Lonies stayed overnight with the 90th, and entered into their programme enthusiastically, having a great time at the evening council fire.

We like to see this fraternization between the Lonies and their city brothers, and we are pleased to state that quite a few members of the Lone Scouts have gone to camp this year with regular troops, at the latter's invitation.

The Fenelon Falls Lone Scouts also report a rather unique "Good Turn" which might be copied by other Lonies who live along the lake shore. They recently assisted the local town authorities to clean up the beach, which

we think was exceedingly good work, as we have seen quite a few beaches recently that could very well benefit by a similar "Good Turn."

Lone Scout visitors to Provincial Headquarters in Toronto recently have included Bill Gilbert, of Essex, and Jack Bassett, of Listowel, and Harold Nickle of Harriston was in Toronto a short time ago, but he did not pay us a visit. Lonies who come to Toronto for any reason are always welcome visitors to Scout Headquarters, so we hope you won't forget to pay us a call.

This week's Summer Time Proficiency Badge is the Angler's Badge. The requirements are as follows:

1. By the usual angling methods catch and name seven different species of fish. At least one specimen must be taken by fly-casting or trolling and one by bait-casting. In single handed fly-casting the rod must not exceed seven ounces in weight; in double handed fly-casting the rod may be one ounce weight for each foot in length; in bait fishing the rod must not exceed ten feet in length nor twelve ounces in weight.

2. Show proficiency in accurate single-handed casting with the fly for distances of 20, 40 and 50 feet, or in bait casting for distance of 40, 60 and 70 feet.

3. Make three artificial flies (either after three standard patterns or in imitation of different natural flies). Make a neat single gut leader at least four feet long, or a twisted or braided leader at least three feet long. Splice the broken joint of a rod neatly.

4. Give the open season for the game fishes in his vicinity, and explain how and why they are protected by the law.

Applications for membership in the Lone Scouts will be received from boys between the ages of 12 and 18 inclusive, who cannot become members of a regular Troop, for reason of locality or other handicap. Applications should be sent to the Lone Scout Department, The Boys Scouts Association, 330 Bay Street, Toronto, 2.—"Lone E."

Disaster

The New Yorker.—Disaster. It makes us laugh, with a hearty old laugh, to see how completely our friends' country homes go to pieces nowadays when anything happens to the electric current. It used to be that when a storm broke down the electric wires, the only thing that happened was that the light went out. Now, when the light goes out, everything else quits too. There is no ice in the icebox, no music in the piano, no coffee in the percolator, no dialogue in the radio, no toast in the toaster; the vacuum cleaner stands silent in the corner. Sister can't curl her hair. Brother's toy trains stop running, the heat in the bath room goes off, the bed-warmer doesn't work, and the orange-squeezer stops squeezing right in the middle of an orange. It's just a question of gathering around a log fire and marking time till the storm abates.

Their Majesties

Open Glasgow Dock
Glasgow.—After a busy week in the Scottish capital, Queen Mary and King George paid a visit to Glasgow to open the new dock of the Clyde Navigation Trust at Shieldhall.

In his speech the King spoke of former visits to Glasgow and recalled Glasgow's enterprise in the development of trade with North America. The Queen performed the naming ceremony, and, after His Majesty had unveiled the memorial stone, he declared the dock open for traffic. The stone bore the inscription: "This dock was opened by their Majesties the King and Queen on 10th July, 1931, and named George V. Dock."

Whirlpool Found Off Atlantic Coast

Boston.—Investigation of an ocean whirlpool on Georges Banks, so powerful as to divert the course of a vessel, has been undertaken by the United States Coast and Geodetic Survey, it was reported recently by Capt. William E. Parker, of the government steamer Hydrographer.

The whirlpool, when discovered by spot approximately 150 miles due east of Cape Cod, its action was described as spinning outward instead of toward its center. Several attempts to force the Hydrographer through the whirlpool were frustrated by the currents which threw the vessel's head off the course.

Raw Hides Tanned In Week in Sweden

Stockholm.—The problem of producing leather of an excellent quality from raw hides in a week has been definitely solved through a Swedish invention, called after the inventor, the Wrangle-Friberg method.

The vital part of the work is performed by the Friberg vacuum pump, which makes possible rapid and perfect tanning of hides in a practically complete vacuum.

Britain's Crime Problem Increasingly Serious

London.—Great Britain's crime problem, Lord Justice McCardo said at the opening of the Birmingham Assizes, is more serious than at any other time during the last sixty years. "Modern criminals," he said, "are more ingenious and astute. Perhaps the greatest feature of recent years is that the number of boys under sixteen convicted of indictable offenses was much greater in 1929 than in 1907."

\$60,000 Home for Animals

Springfield, Mass.—A home for animals to cost \$60,000 is being built here by the Springfield branch of the Massachusetts Society for the Prevention of Cruelty to Animals.

Variable Climate Found Healthiest

Dr. Huntington Tells Biologists of Weather Influences on Man

Matamek Factory, Que.—New Englanders with their variable climate need not look longingly to California's equable temperature for they are far better off in New England in the opinion of Dr. Ellsworth Huntington, climatologist of Yale University, who read a paper before the biological conference in season here.

By a uniform system of plotting statistical numbers in relation to climatic influences, Dr. Huntington proved that frequent variation in temperatures not only induced greater resistance to disease and death, but also favored mental activity. He told of his experiments with cadets at West Point and Annapolis with a view to determining most favorable temperature for work and health. Experiments had also been made among factory workers in New England and North Carolina.

It has been found that the optimum or most healthy temperature average was 0 degrees, while for intellectual work persons fortunate enough to live in an average temperature of 38 degrees enjoyed greater stimulation of mental activity.

Comparison of weight records of given individuals with weather records showed that winters in North Atlantic states favor a gradual increase in weight, while summers usually induce a sharp decline. The intervention of a cool summer, however, not only maintained the winter weight but accelerated the rate of gain until a peak in November, Dr. Huntington continued. Similarly a rise in temperature affected mental efficiency. This was the explanation of spring fever, he suggested.

Steamer Lines to Cut Fares Across Atlantic

Paris.—Steamship travel between the United States and Europe will be 10 to 30 per cent. cheaper after August 15.

In an effort to attract more tourists to the luxurious suites as well as the cheaper cabins of transatlantic liners, the North Atlantic Steamship Conference agreed to a reduction in virtually all classes.

The first class fares will be slashed 10 to 30 per cent. The third class fares will be reduced 13 per cent. and all supplementary charges for cabins occupied by second class and tourist class passengers will be lowered. The cuts will be effective August 17.

The rate-cutting decision was reached by representatives of all lines operating between New York and Canadian ports and the principal ports of North Europe. The United States lines insisted that all decisions relative to reduction of traffic, as had been proposed, must rest with the New York offices. The German lines were said to have been opposed to fare reductions on a drastic scale.

The fast German liners, Europa and Bremen, were said to be paying for their operation, although some of the smaller German lines were running at a loss.

The English lines led the move for fare cuts and the conference was called at their request. The decrease in American tourist traffic, estimated at from 30 to 50 per cent., has affected the English lines severely.

Tourist traffic was the most widely discussed problem before the conference. It was estimated that Europe has lost about \$250,000,000 this summer because American tourists have remained at home, and a large fraction of the cut in steamship passengers has been due to the absence of tourist parties.

Muir Glacier Falls

Washington.—According to a telegram received by the American Nature Magazine from Arthur Newton Pack, editor of Nature Magazine, now in Juneau, Alaska, half the Muir Glacier, in Glacier Bay, Alaska, has collapsed.

The telegram stated that Pack succeeded in taking motion pictures of the fall. The glacier, not counting the wings, is about 9,200 feet wide, stands 210 feet above the water at the front, and is 700 feet deep below the water line. The ice is about 900 feet thick, and extends back about 15 miles. The area of the glacier is estimated to be equal to that of Rhode Island.

British Schools Plan Study of League

London.—Courses of study for teachers and pupils from the public and secondary schools of Great Britain are being held at Geneva in July and August this year, with a view to enabling both students and teachers to examine the work of the League of Nations from within.

The Geneva Institute of International Relations holds its summer sessions in the offices of the League Secretariat from Aug. 16 to 21. The discussions of the institute are led by deputation.