

GREAT FALLS, MONTANA, SUNDAY MORNING, APRIL 20, 1919.

Easter Sunday, Now Observed by Most Civilized Nations, Religious Festival of Nearly Two Thousand Years Standing

Observance of the Resurrection of Christ Has Been More or Less General Among the Christians Since Formal Institution, About A. D. 68

Little boys and girls rising early on Easter morning to see perchance what eggs the Easter "bunnie" has laid for them never realize that they are following in the footsteps of thousands and thousands of other little boys and girls who lived centuries ago in times when there was no Christian religion and the Pagan gods were dutifully worshipped by all peoples on Easter morning. The egg was an ancient symbol of resurrection and were often tinted bright reds, blues and greens and sometimes even gilded and given by one child to another as a gift on the day that the Jews celebrated the feast of the passover, now also our Easter. The use of the eggs by the children of today is undoubtedly a Christian borrowing from the Pagan world.

Easter, the festival now celebrated by nearly all nations of Teutonic descent in commemoration of our Lord's resurrection also has quite a past history dating back to the feast of the Jewish passover when the Israelites by means of 10 plagues were freed from Egyptian bondage. It was first formally instituted to commemorate the resurrection of Jesus in about A. D. 68, and prior to this time every first day of the week was from the first what may be called a "resurrection festival." Such infinite importance was attached to the rising of Christ from the dead that the day—the first day of the week—appointed to commemorate it, superseded the keeping of another one, Saturday, designed to call to mind the Creator's "rest" after he had brot the world into existence. Both Saturday and Sunday for many centuries were peculiarly sacred to the Christians. No distinctly Christian name however, exists for the resurrection festival, this feast being of both Ethnic and Jewish origin.

Dispute Arose.

The resurrection took place just after the Jewish feast of the passover, which

was held on the 14th day of Nisan, the first month of the year, or, that is to say, the 14th day of the moon, which was not far from the time of the full moon. The Christians of Jerusalem, and after them those of the Asiatic churches generally were accustomed to hold the feast of Easter on this same day or simultaneously with the Jewish passover. This usage was unacceptable to the Gentile churches in Italy and the west generally, which preferred to celebrate Easter on the Sunday following the 14th day of the moon; and the difference of practice in this particular led to grave dissensions between the east and the west. The disagreement was the bitterest in the second century when a dispute as to the time of the observance of Easter arose between the Christians of Asia Minor and those of the west. The Asiatics, who said that they followed the example of John and Phillip, held their paschal feast on the same day as the Jews, viz., on the 14th day or full moon of the month of Nisan or Abib. The third day thereafter they kept the resurrection festival, while the Christians of the west, alleging that they followed the example of Peter and Paul, kept the Paschal feast on Saturday and Easter on the following Sunday. Bishop Victor, of Rome, finally took up this matter and those who adhered to the eastern practice were excommunicated for it. Later, in A. D. 325, a decree was issued by the council of Nice which proclaimed the western method the rule of all Christianity, thus establishing uniformity throughout almost all the countries of Europe. The British empire alone being excepted for she still recognized the eastern faith. It was not until A. D. 664, that England adopted the western method.

How to Derive Date.

Easter is a movable festival since it must always occur on Sunday and the days of the week do not always occur on the same date of the month and for



That reason it never can be assigned to any particular date. There are two rules that are most commonly known, year. One, and perhaps the one most to reckon when Easter shall be each familiar to all is "the first Sunday after

Date of Celebration Was for Many Years Matter of Grave Dispute, Finally Resulting in Decree Which Fixed the Method of Determination

the full moon which happens upon or next after the twenty-first day of March and if the full moon happens upon a Sunday, Easter day is the Sunday after." Easter may be as early as March 22 and as late as April 25, and regulates all the other movable feasts of the ecclesiastical year. In the second rule for finding Easter it is necessary to find two elements—the number of the year in the lunar cycle or the golden number which is somewhere between 1 and 19, and the dominical letter. The golden number is so called because of its importance on the Grecian calendar and it is also supposed to have been inscribed "in gold characters" on the columns of the temple of Minerva at Athens, whence its name. Other historians say that it is thus called because it was written in gold in the calendar tables publicly suspended in the Grecian cities; and later in the portable calendars in use among the early Christians. For the present century the paschal full moon is found as follows:

If the golden number is odd: To four times the golden number add ten; and if the golden number is even: To four times the golden number add 25.

The result in either case if greater than 30 and less than 50, is the date of paschal full moon, considered as a day of March—that is, if it happens to be, say, thirty-three, it is the thirty-third of March—April 2—and so on. If not greater than 30 or twice 30, if necessary to make it so, and the result is one more paschal full moon.

Then to find Easter: To the constant number 18 add the numerical value of the dominical letter, that is A-1, B-2 and C-3, and the sum if greater than the value of paschal full moon just found, is the date of Easter; but if not, add seven, or twice seven or three times seven, and so on till a total is obtained which exceeds that value; and this total is the date of Easter considered as a day of March.

Finding Golden Number.

To find the golden number and the dominical letter: In either case first separate the hundreds in the number expressing the given year of Our Lord from the years less than a hundred, and treat the parts independently of each

other. First, for the dominical letter: If the hundreds be divided by four, the remainder from the division will have one or other of the following values, viz: 0, 1, 2, 3, and the dominical letters belonging to the hundreds which give these remainders respectively will be C, E, G, —1, 3, 5, 7. These for convenience are called centurials. Then for the years take half the largest number divisible by four—i. e. half the number of the latest leap-year, increase this by seven, and subtract the excess of four (that is the remainder left in the previous division by four). To this result add the centurial, and the excess of seven in the sum will be the value of the dominical letter; it being observed that if there is no excess the dominical letter has the value of seven itself, or G. Leap-years have two dominical letters—one for January and February, the other, which is less than the former by a unit, for the remainder of the year. This last, which only is used in finding Easter, is that given by the rule.

For the golden number: Add a unit to the number expressive of the given year; then divide the result by 20, and add the quotient to the remainder. Next divide the centuries by four, and add the quotient to five times the remainder. Finally, add the two results, and the sum, if 19 or less, is the golden number. If it exceeds 19, drop 19, or, if necessary, twice 19, and the remainder, being not greater than 19, will be the golden number.

Take for example the year 1919 for the golden number: 1919 plus 1 equals 1920. Then 20 plus 20 equals 1 with no remainder and 0 plus 1 equals 1. Also, 19 representing the centuries plus 4 equals 4, with 3 remainder, and 3 times 5 plus 4 equals 19. Then 1 plus 19 equals 20 and 20 minus 19 equals 1, the golden number for the year 1919.

For dominical letter: 19 plus 4 gives 23 remainder, and the centurial is accordingly 7. The number of the latest leap-year was 1916 and half of 1916 is 958. Then 8 plus 7 equals 15 minus 3 equals 12 plus 7 with the seven suppressed is 5 equals E, which is the dominical letter of 1919.

For Easter: 4 plus 10 equals 14 plus 30 equals 44 the paschal full moon is the 44th day of March. To 18 add 4 equals 22 which is smaller than the paschal date but 23 plus 7 plus 7 plus 7 equals 51, which is greater than the date 44 and Easter is the 51st day of March or April 20.

PROBLEM OF TRANS-ATLANTIC TRANSPORTATION BY AIR ROUTES PROMISES AN EARLY SOLUTION

Out of the mass of rumor with which the papers have been filled since the trans-Atlantic flight was first mapped out it becomes possible at last to sift the real facts as to men and aircraft who will attempt the flight.

There have been eight entries altogether for the London Daily Mail prize of \$50,000 and the other money prizes, which amount altogether to approximately \$110,000. Out of the eight there is just one on the ground. A British Handley-Page, an Italian Caproni and a British Martinsyde Rolls-Royce have put up their entry fees, and possibly the last may attempt the passage. Capt. C. W. F. Morgan, navigator of the Martinsyde, is now in Newfoundland.

If it was not written in the book of fate that April, 1919, should be the month for the flight some highly expert guessers are wrong. Out of the following list it should be possible to pick the winner of the historic event:

United States navy: Three flying boats of the NC type, 126 foot 6 inches wing spread. Two will be equipped with four Liberty motors of 400 horsepower each, and the third with five Liberties.

United States army—Bombing plane, possibly Glenn Martin type, being built by U. S. Lieut. Roy N. Francis probable pilot.

British royal air force—Flying boat designed by Col. J. C. Porte, R. A. F., with three engines, 120-horsepower motor, power plant, five 300-horsepower Rolls-Royce motors, driving three pusher and two tractor propellers.

Sopwith biplane, Harry G. Hawker's entry, with 46-foot span, powered with one 300-horsepower Rolls-Royce motor. Lieutenant Fontan, French aviator, has left Dakar, Senegambia, the westernmost point in Africa, for Pernambuco, Brazil, via the Cape Verde Islands and the St. Paul Rocks.

British admiralty rigid dirigibles R-33 and R-34, one of which is expected will soon start across the ocean on the east-to-west course. These ships are 625 feet long, have five 12-cylinder engines, carry gasoline for 80 hours of flying at 60 miles per hour and develop a maximum speed of 80 miles.

Of this list only the Sopwith is entered for the London Daily Mail prize. Of the other entries thru the authorized channel, the Royal Aero club, but little is known as to how far they may have carried their preparations. They include: Fairley biplane, nominated by Sidney Pickles, a well known and skillful aviator of Australian birth. The Fairley is equipped with a 360-horsepower Rolls-Royce engine, and, it is claimed, can do 150 miles per hour.

Short Rolls-Royce biplane, equipped with one 300-horsepower Rolls-Royce motor. It is said this plane has a maximum speed of 95 miles per hour, a cruising range of 3,200 miles and can carry a load of 2,632 pounds.



Aviators and aircraft prominent in plans for transatlantic flight. Above, left to right: Lieut. Col. Raymond C. Collinshaw, Canadian; Col. J. C. Porte, British; Lieut. Fontan, French; R-3, giant British dirigible. Center: U. S. type; H. C. Hawker, British. Below: left to right, Lieut. Roy N. Francis, U. S. army; Lieut-Commander Patrick N. L. Balingier, U. S. navy, and Commander J. H. Towers, U. S. navy.

Whitehead biplane, entered some time ago by Capt. Arthur Hayne. Nothing has been heard regarding his intentions since he put up his entry fee.

Lieut. Col. Raymond Collinshaw of the Canadian flying force has also been mentioned as preparing to attempt the flight. Sifting the list of six really imminent attempts, we find there are only three in the class of competition for which this country has declared itself, namely, the effort to traverse the watery wastes which separate Europe and North America in a heavier-than-air machine.

Two Large Dirigibles Ready. The two great British dirigibles recently launched are in a class by themselves. There is very little, if any, doubt of their ability to fly from England to the United States at any time the admiralty elects to start them. The feat, momentous as it would be, would lack the sporting flavor of a flight with planes and would detract nothing from the prestige attaching to accomplishment of the passage with a heavier-than-air machine. As for the undertaking of Lieutenant Fontan, the Frenchman, it is undeniably

important and of first class interest, but from the American viewpoint it is "of a remoteness," to employ the French idiom. This is due in part to the route selected. The Dakar-Pernambuco course, as the albatross flies, is approximately 1,800 miles, about 100 miles less than separates Newfoundland and Ireland. The Cape Verde Islands lie 300 or 400 miles off Cape Dakar, almost due west, and the St. Paul Rocks, a barren group on which only absolute necessity would prompt a landing, are two-thirds of the way across.

Prevailing wind currents are from the northeast for half the distance, beyond which point calm and variable breezes are the common experience of the sailor. It is fair to assume that Fontan has based his plans on all the information available concerning wind and weather and has found April the best month for flight in those latitudes.

As the U. S. army has not, as far as is known, selected a plane for the flight, it is probable that its plans are not very far along.

In calculating the chances of the United States navy of winning the international air race across the Atlantic, then, it is actually necessary to consider only the preparations being made here and those of the royal air force, of Hawker and of Captain Morgan and his Martinsyde biplane. It is within the realm of possibility that some surprise effort, favored by phenomenal luck, will cheat the more careful planners. Heriot won the acclaim of the whole world by such an

accomplishment as that would be when on a July morning 10 years ago he crossed the English channel. If betting books were made on the outcome of this blue ribbon event of the hour, the wise depositor would in all likelihood write down the United States navy as favorite against the field. Commander John H. Towers of the U. S. navy is in charge of the naval plans. Lieut. Commander Patrick N. L. Balingier has been chosen as pilot.

THE ENGLISH CHANNEL TUNNEL

Would Connect the Whole of Europe, the Most Eastern Parts of Asia and North and South Africa, Without Leaving the Railway Systems of the World

In the house of commons the other day a question was addressed to the Prime minister asking whether, in order to find employment for discharged soldiers, he would approach the French government with a view to commencing immediately the construction of a tunnel under the English Channel.

Cheers greeted Mr. Bonar Law's announcement that he was in communication with the prime minister on the subject. Moreover, the French and British governments have agreed on the tunnel's construction.

Of course, the project is an old one, the first work having been done in 1874 by a French company. Always the case for it has been strong on the business side. The objections have been confined largely to the military, but modern military development has sapped their force. So-called "splendid isolation" has been expelled by human interdependence, by swift air and sea craft, by gun power and the submarine. Both England and France realize that they have much more to gain with a connecting tunnel than they can lose. Moreover, the link would be so constructed as to be made useless in case of military menace from either end, by flooding a mile-long depression and by covering the entrances with artillery. During the war the tunnel would have been embedded so deep in gray chalk as to be beyond the power of bomb or the sea's ravages. Its level will be about 280 feet below sea level and 100 feet of chalk will be left above the crown.

With the exception of the Panama canal it is the most stupendous engineering enterprise yet planned. The total length, including the approaches in England and France, will be 32 miles, of which 22 will be under the sea.

Owing to the extraordinary advance in the art of tunneling in recent years the work could be done quickly, and it is estimated that the tunnel itself could be completed in five or five and a half years.

Before the war the cost was estimated at \$80,000,000, which amount now has increased to \$100,000,000, or even \$125,000,000.

Before the Royal Geographical Society Sir Francis Fox, the eminent engineer, read a paper in which he described the main feature of the proposed tunnel:

"It would consist of two tubes, as in the case of the great Simplon tunnel (12 1/2 miles in length), in the Alps. It is proposed that the excavation shall be done by revolving cutters, fixed in Great-head shields, by which system a rapid rate of advance will be attained, the debris being removed from the 'face' by high-speed endless belts. These will be so arranged as to deliver their load direct into wagons without the necessity of shoveling or of manual labor. All the work will be carried on by electrically driven machinery.

"The workmen would be conveyed to their various duties, and brot out again at the end of their shift, by electrical trains. It is anticipated that the daily rate of progress would be such as has never been attained heretofore in any tunnel. To secure this no work will be permitted on Sundays, except for ventilation, pumping, and cases of urgent repair.

"The tunnel would be maintained under the authority of the war office, and a dip in the level of the rails, forming a 'water lock'—by which the tunnel could in case of emergency be filled with water from floor to roof for a length of a mile—would also be under the control of the commandants of Dover Castle and the neighboring forts. This water would not injure the tunnel works, and it could only be pumped out by the energy developed at the power station inland. Entrance and exit of both tunnels would likewise be under the gunfire of all the forts and of vessels in the naval harbor of Dover.

"Trains would be run direct from London to Paris in less than six hours. So soon as trains can pass under the Channel they will be able to traverse France, Austria-Hungary and Turkey as far as Constantinople without any difficulty as to gauge or minimum structures.

It is calculated that within a few years travelers from London could not only reach distant places in the whole of Europe, but the most eastern parts of Asia and North and South Africa, without leaving the railway systems of the world thru the medium of the Channel tunnel. Indeed, its horizon is so vast as to make the undertaking appeal to all people of imagination and foresight.—Cincinnati Enquirer.

A bill introduced in the Ohio legislature makes it unlawful to sing a German song in the Buckeye state. Oh, well, it won't make much difference. A man won't feel like singing: "Hi Lee, Hi Lo" when he has nothing in his system but H 2 O.

A sharp man may carve out his own fortune, but the dull fellow just bores his way thru life.