

MOON FLEW TRACK CENTURIES AGO

Was About 12 Miles Ahead of the Schedule at Recent Eclipse, Cable Reported—2 Seconds Gain a Century.

(New York Times.) The moon has been off its course for at least 250 years, according to Dr. Ernest William Brown of Yale, author of "A New Theory of the Moon's Motion" and other works on the moon, who discussed yesterday the cable from London saying that observations during the late eclipse showed that the moon was about twelve miles ahead of its schedule.

"It has been known for forty or fifty years that the moon's motion did not perfectly follow the path calculated for it," said Dr. Brown. "It apparently gains a second of time and then gradually falls back again. The late Dr. Simon Newcomb studied observations of the moon over a period of 250 years and discovered that this unaccountable motion had taken place during the entire period."

The sun and earth are known to be great magnets. The moon is probably a magnet also, and one guess is that the interaction of these magnets produces an observable effect on the moon. There is no other known effect of magnetism on the motion of astronomical bodies and no way to check up this theory. It has been suggested that some undetected and comparatively small mass of matter may move around the earth and disturb the moon by gravitation, but Dr. Brown said that it had been established positively that gravitational forces did not account for occasional bursts of speed and periods of slowing-up exhibited by the moon.

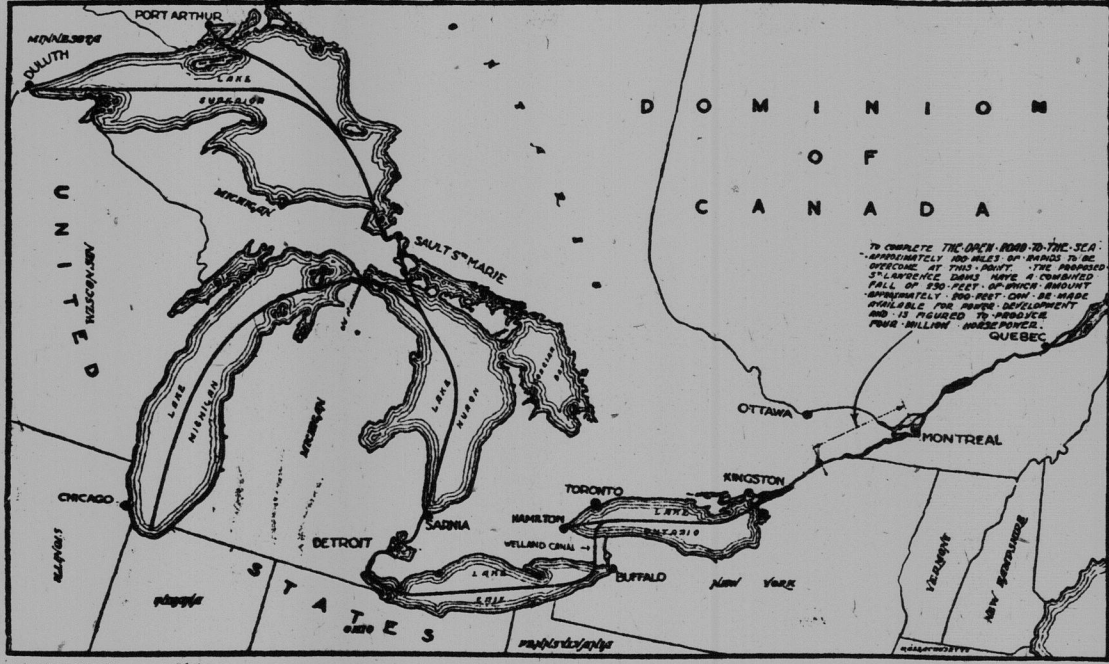
Although the moon was reported to be twelve miles ahead of its schedule, this only means that it is one second ahead of time. This is not enough to make almanac changes necessary, especially in view of the fact that the moon has already probably crept from over-running its schedule. Dr. Brown said that one second of time, however, was a matter of great importance to astronomers, who are able to detect an ascertained in the moon of a few one-thousandths of a second.

There is a doubt, according to the astronomer, however, whether the motion of the edge, or limb of the moon, as it turns round, has been established with exactness. A slight error here, he said, might account for the effect now credited to magnetism or unknown forces.

In one of his publications Dr. Brown has shown that the moon's course falls by something less than one-millionth of 1 per cent. to agree with what would be expected of it under Newton's law of gravitation. In spite of the fact that the moon regularly loses most of the time it has gained, it is calculated that it makes a net gain of about two seconds a century in the time of its revolution around the earth, shortening the months to that extent. The attraction of gravity exercised by the planets accounts for slightly more than one second of this gain. But there still remains a fraction of a

FORMER SAINT JOHN MAN AT THIS IMPORTANT CONVENTION

The following is the executive of the Canadian Deep Waterways and Power Association, who will attend a convention in Hamilton, on Nov. 1 and 2nd:



MAP OF THE PROPOSED "OPEN ROAD TO THE SEA"

The proposed Great Lakes-St. Lawrence route over which ocean vessels are someday expected to make direct voyages from European ports to the head of Lake Superior is illustrated in the accompanying map and will be the subject of discussion at a two days' convention to be held in Hamilton on Nov. 1 and 2 under the auspices of the Canadian Deep Waterways and Power Association. The convention will be one of the most important of the year.

The campaign for the improvement of the St. Lawrence River Canals and Locks, has made great progress in the past two years. The improvement affects only 40 miles in the St. Lawrence out of a total of 2,500 miles of inland waterways. When the New Welland Canal is completed it will be capable of accommodating 95 per cent. of all the vessels in the world.

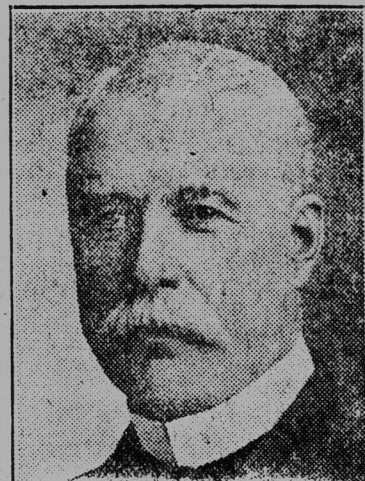
Engineers representing the governments of Canada and the United States have reported that the improvement of the waterway can be accompanied by an ultimate development of 4,000,000 horsepower of electrical energy, and an initial development of 1,460,000 horsepower, and the whole of the navigation works can be constructed at a cost of \$282,000,000. The power developed, they claim, will pay for the cost of the entire works.

second per century which the moon gains in some mysterious way. A similar observation in the latter part of the seventeenth century led to one of the greatest discoveries in physics. This was the fact that the satellites of Jupiter apparently fell about 16 minutes behind their schedule when Jupiter was at its greatest distance from the earth. Ole Roemer, in the last decade of the seventeenth century, figured out that the loss of time was not in the satellites of Jupiter but in the time it took the light to travel from the satellites of Jupiter to the earth. He very closely estimated the speed of light which experiments in the last century showed to be approximately 186,300 miles per second.

Among the members and their instruments are: George Lytton, vice-president of the Hub, bass violin; S. L. Hypes, Marshall Field & Co., and Dr. O. G. Stark, cellos; Lloyd R. Steere, Central Trust Company, and C. H. Babe, advertising, French horns; Emory C. Andrews, vice-president of the Philip Ruxton Company, Inc., violin. Other violinists are: Bennett Griffin, insurance man, head of the violin section of the orchestra; R. F. Babcock, artist, and Attorney Paul H. Munn. Mr. Steere is secretary of the organization.

The orchestra is now rehearsing the fifth symphony of Tchaikowski and the fourth symphony of Brahms, which will be given publicly soon. It is planned to have concerts monthly at the Art Institute, which will be free to the public. All Ardent Music Lovers.

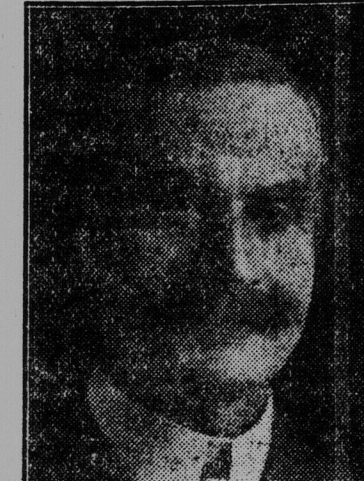
Many well-to-do business and professional men in Chicago who have made a thorough study of instrumental music and who have played at their own homes have been desirous for a long time of getting an opportunity to express their musical skill in public, said Mr. Clark. "It goes without saying that they are ardent lovers of music and play for the joy of the art. These men have formed themselves into a symphony orchestra. For the first time in this country promenade concerts will be given out in the open at the Art Institute. "This orchestra is the contribution of these music-loving business men to Chicago and its people who find delight in music. There will be no charge for concerts to the general public." Rehearsals are being held at the Art Institute every Friday from 6 to 8 p. m.



W. M. German, K. C., of Welland, Honorary President.



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BUSINESS MEN IN ORCHESTRA

"Amateur" Organization Soon to Give Public Concerts at Art Institute.

(Chicago Journal) Among Chicago's business and professional men there are so many highly skilled musicians without an audience and without opportunity for musical ex-

Petrole Hahn advertisement with image of a bottle and text describing it as a French Hair Tonic.

Wilson's Bachelor advertisement with text: "The National Smoke", "Still the most for the money 10c", and "ANDREW WILSON & CO. TORONTO" with decorative border.

Large advertisement for Dominion Rubber System's Winter Overcoats and Rainproof Garments. Includes text: "WE HAVE BOUGHT FROM DOMINION RUBBER SYSTEM'S ENTIRE STOCK (AT ST. JOHN BRANCH) OF Winter Overcoats and Rainproof Garments Ladies', Men's and Children's all Guaranteed and carrying the factory label THESE coats are the very newest and the factories latest out put, and consist of Tweeds, Velours, Paramettes, Gabardines, in all shades, also Black and Fawn surface Rubberized Coats. This is positively Canada's biggest mercantile event, and something in Rainproof Garments of a quality second to none which are being slaughtered at 1-3 the cost of manufacture, not counting material. THE DISPLAY ROOM IS OPEN FROM 9 A.M. TO 10 P.M. Don't forget the address as we have been successful in obtaining the spacious Oldsmobile Showroom at RAILSTON SALES CO., 45 Princess Street"