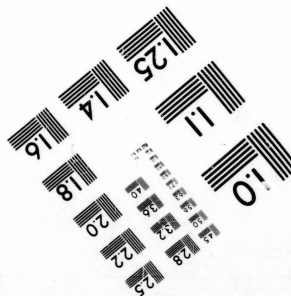
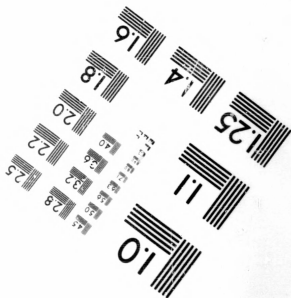
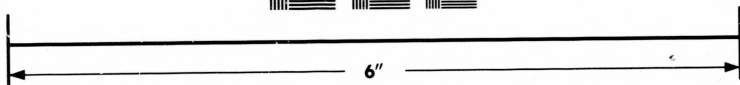
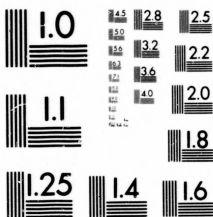


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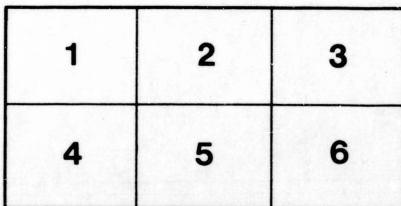
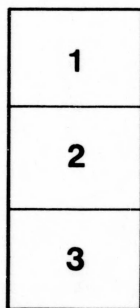
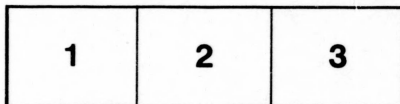
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PRE

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BY

*American Society of Civil Engineers.*

*Special Committee on Standard Time.*

# LETTER

TO THE

PRESIDENT OF THE AMERICAN SOCIETY  
FOR THE ADVANCEMENT OF SCIENCE,

ON THE SUBJECT OF

# STANDARD TIME

FOR THE

UNITED STATES of AMERICA,  
CANADA and MEXICO,

BY SANDFORD FLEMING, C.E.

*Chairman Special Committee Am. Soc. Civil Engineers,*

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PRESENTED at the MONTREAL CONFERENCE,

AUGUST, 1886.

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## LETTER FROM MR. FLEMING, C.E.

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OTTAWA, JULY 31st, 1882.

TO THE PRESIDENT OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

SIR,—I am desirous of bringing under the notice of the Association a subject of general public interest, and as I find it will be impossible for me to be present at the meeting to be held in Montreal next month, I take the liberty of addressing you in this form.

I beg leave to direct your attention to the subject of regulating time, and the establishment of a Prime Meridian, to be common to all nations for the purpose of reckoning time and longitude.

The subject has attracted attention on both sides of the Atlantic. In Europe, within the last two or three years, it has been considered by scientific societies in Russia, Prussia, Italy, Switzerland, Spain, France and England. On this continent it has been discussed in the United States and Canada: at the American Metrological Society, the American Society of Civil Engineers, at the Royal Society of Canada, and the Canadian Institute, Toronto. The Association I am now addressing has equally had the subject under consideration.

Last year the American Society of Civil Engineers met in convention in Montreal. The question was then discussed and referred to a special committee. This committee has examined the subject with attention, and it has from time to time reported such recommendations as the members felt it incumbent upon them to make. At the meetings held in New York on the 18th February, and at the Washington Convention on the 17th



May, they were authorized to take steps to gain information, and invite the co-operation of other societies with the view of promoting a settlement of the question.

As Chairman of the special committee referred to, I beg leave to bring the matter under the notice of the American Association for the Advancement of Science. I respectfully submit, it is entitled to their consideration as one of special importance to the whole continent of North America, and as one having a general interest to the inhabitants of every country throughout the world.

The first report of the Special Committee was submitted to the meeting of the American Society of Civil Engineers in January last. It set forth that it was expedient to obtain an expression of opinion as to the main proposition, and the best means of carrying it out; and it was recommended that the papers which had been read on the subject should be printed, and, together with a series of questions, be submitted to men prominent as engineers, as railway managers and operators, and to others of scientific reputation.

A series of questions were accordingly drawn up and obtained the approval of the Society. Together with a scheme for the general notation of time, and such papers as were held to throw light on the subject they were published in the form of a *brochure*, and forwarded to prominent men throughout the United States, Canada and Mexico.

The replies received were submitted to the Convention held at Washington in May, and the Committee reported that, judging from the replies, there is a strong feeling throughout the country for establishing a comprehensive system of time-reckoning, based on a main zero or prime meridian, with twenty-four secondary or hour meridians  $15^{\circ}$  of longitude apart, so chosen that no national preponderance with regard to it can be asserted. The zero meridian to be identical with the prime meridian for reckoning the terrestrial longitude, and to be established by international conference, so as to be acceptable to the civilized world.

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The replies received are published in full.

The Committee accordingly recommended that steps be taken to effect the result desired. The selection of a prime meridian was deemed the first great object to be accomplished; and it was considered of primary importance that this initial step should be concurred in equally on the European as on the American Continent, and that every effort should be made to this end. Failing, however, to secure general acceptance, the Committee recommended that the people of the Western Continent should determine a zero meridian for their own use and guidance, with the view of establishing, as speedily as practicable, a suitable time system for the United States, Canada and Mexico.

This report was adopted, and it was resolved to petition the Congress of the United States to take the necessary steps to have a prime meridian established. Other societies, notably the Metrological Society having petitioned and influenced Congress to take the matter into consideration, the resolution appended, after due deliberation and investigation by committees, passed the House of Representatives on the 6th instant, and concurrence of the Senate was sought by message. The resolution was referred to the Committee on Foreign Relations, which Committee reported favorably a few days ago (18th July), recommending the passage of the Joint Resolution with the single amendment that the number of delegates to represent the United States be increased from three to five.

Respectfully I conceive that I am warranted in assuming that the Congress of the United States will concur in the passage of the Joint Resolution "To authorize the President of the United States to call an International Conference to fix on and recommend for universal adoption a common prime meridian to be used in the reckoning of longitude and in the regulation of time throughout the world."

The benefits resulting from the action of Congress, as in all international intercourse, will tend undoubtedly to develop a wider, a more cosmopolitan tone of thought, and will create a common ground of action

in all civilized peoples. In no limited extent it will aid in the encouragement of enlarged sympathies unmarked by national selfishness. Directly, it will provide the only key to true time reform throughout the globe. Thus the Congress of the United States on passing the Joint Resolution will have taken a forward step in the world's progress. A prime meridian determined upon as contemplated, and assented to by all nations, will afford the basis for establishing a great time system or a series of time systems, each one in accord with the other, to meet the demands of science, and of commerce, and of social life in every country of the world.

So soon as a zero meridian shall have been established in the manner set forth, it is proposed to hold a convention of delegates representing Scientific societies, Railway corporations, Chambers of Commerce, Departments of State, and other bodies interested throughout the United States, Canada and Mexico. It is proposed to hold the convention in New York or Washington, and its object will be to examine into all the considerations which bear upon the question, and to determine and recommend a system for regulating time which will secure the greatest advantages to all interested, in every locality in North America.

As Chairman of the Special Committee to which I have referred, I desire respectfully to express the hope that the Association for the Advancement of Science will be disposed to co-operate as far as practicable in this movement. With this object in view, I further beg leave to suggest that delegates be appointed to represent the Association at the proposed convention.

I have the honour to enclose copies of the several papers to which I have referred.

I have the honour to be,

Sir,

Your obedient servant,

SANDFORD FLEMING.

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STANDARD  
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IN THE STATE OF THE UNITED STATES  
REPLIES TO QUESTIONS  
1882

## DOCUMENTS ENCLOSED.

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- 1 Joint Resolution of the Congress of the United States.
- 2 Report of the Special Committee of American Society Civil Engineers,  
17th May, 1882.
- 3 Brochure issued by American Society Civil Engineers, with plates, &c.
- 4 Replies to Questions submitted by Special Committee of American  
Society Civil Engineers.

# IN THE SENATE OF THE UNITED STATES.

JULY 6, 1882.

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## JOINT RESOLUTIONS.

To authorize the President of the United States to call an international conference to fix on and recommend for universal adoption a common prime meridian to be used in the reckoning of longitude and the regulation of time throughout the world.

1       *Resolved by the Senate and House of Representatives of the United States of*  
2 *America in Congress assembled,* That the President of the United States be  
3 authorized and requested to extend to the governments of all nations in  
4 diplomatic relations with our own an invitation to appoint delegates to meet  
5 delegates from the United States in the city of Washington, at such time as  
6 he may seem fit to designate, for the purpose of fixing upon a meridian  
7 proper to be employed as a common zero of longitude and standard of  
8 time-reckoning throughout the globe; and that the President be authorized  
9 to appoint delegates, not exceeding five in number, to represent the United  
10 States in such international conference.

Passed the House of Representatives July 6, 1882.

Attest :

EWD. McPHERSON, *Clerk*

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NOTE—While these papers are passing through the Press, information has been received that the resolution was carried in the Senate of the United States, on July 3<sup>rd</sup>, without amendment, and was then in the hands of the enrolling Committee. The International Conference for the determination of a common prime meridian, has now received the high authority of the Parliament of the United States.

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