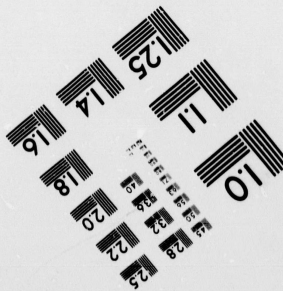
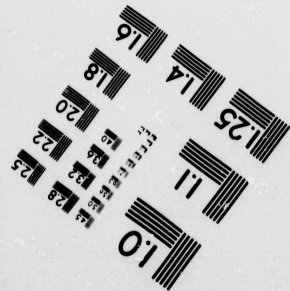
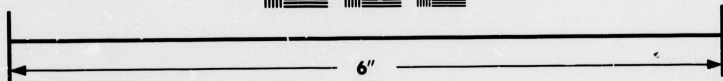
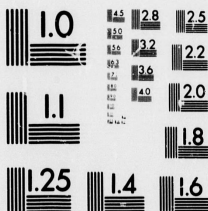


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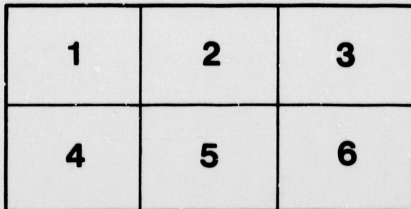
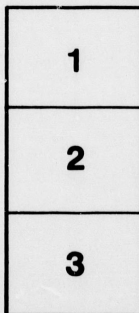
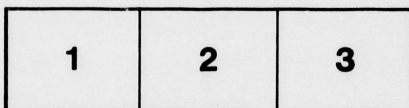
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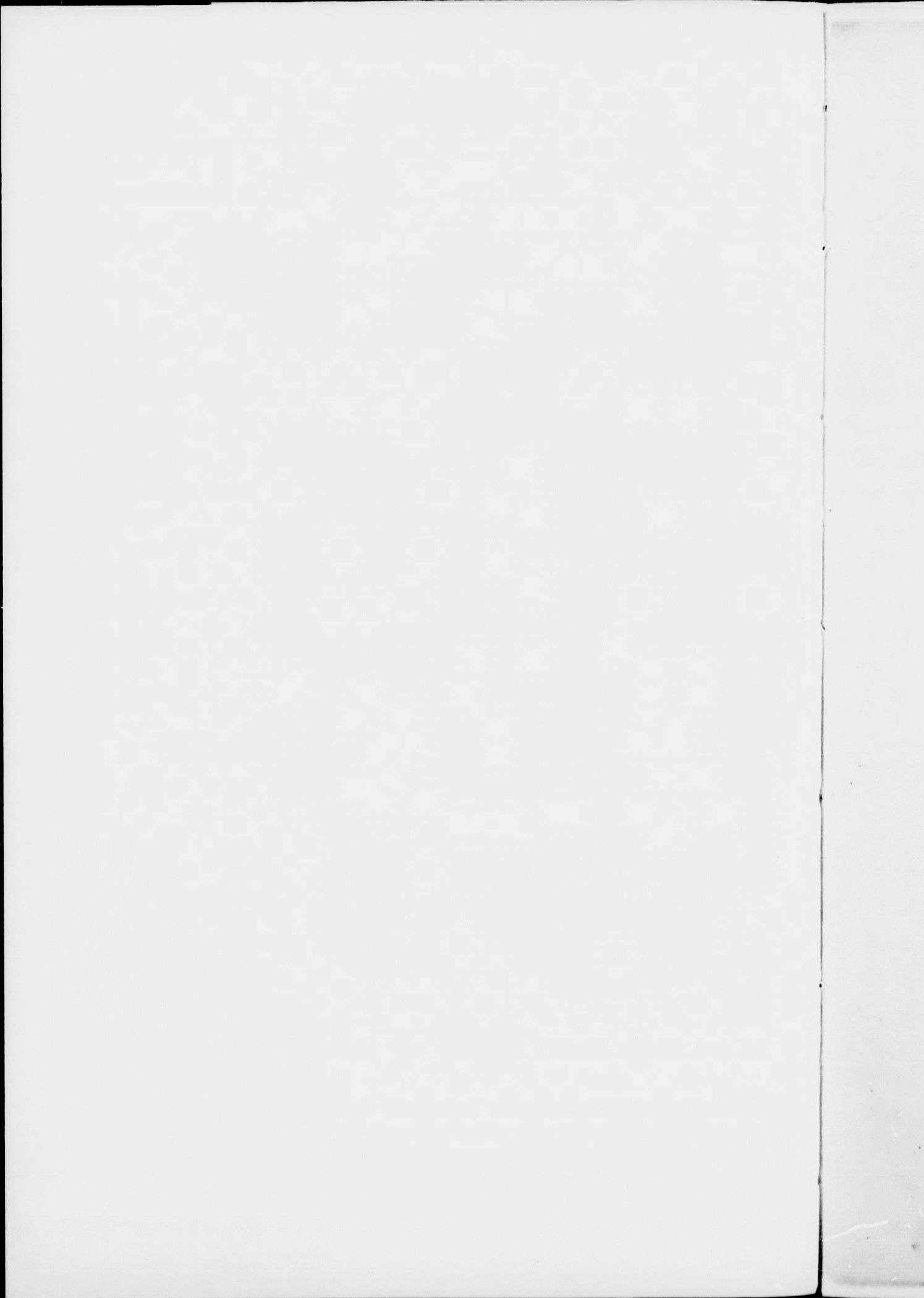
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STANDARD TIME.

REPORT OF SPECIAL COMMITTEE, American Society of Civil Engineers, —AT THE— WASHINGTON CONVENTION.

The Special Committee on Standard Time beg leave to submit the following report:

At the annual meeting of the Society on the 18th January last resolutions were passed directing the Committee to take such steps as seemed to them advisable to obtain some expression of general opinion on the important question of the establishment of Standard Time, with the view of submitting some definite recommendations as to the course it may seem expedient to take.

In accordance with these instructions the Committee issued the pamphlet herewith submitted, containing various documents bearing on the question. This *brochure* has been widely circulated, in every State of the Union, in the adjoining British provinces, and in Mexico. A series of questions prepared with the view of eliciting all shades of opinion were sent with the pamphlet, and attention to them at an early period was asked.

Replies have been received from many prominent men connected with the profession, with railways, with telegraphs, and with scientific bodies, and additional answers from the more distant parts of the continent are daily arriving.

The character of the replies received to date has been classified. The following synopsis may be presented along with each question.

Question 1.—Are you in favor of a comprehensive system of Standard Time for North America?

The replies to this question may be said to be unanimous. The opinion is emphatically expressed that there should be established, as early as possible, a comprehensive system of Standard Time for North America.

Question 2.—Do you favor the idea expressed in some of the documents referred to, of bringing the Standards of Time of all countries into agreement?

Ninety-five per cent. of the answers are in the affirmative; five per cent. in the negative.

Question 3.—In order to attain the object set forth in question No. 2, do you consider it advisable to secure a time system for this country which would commend itself to other nations and be adopted by them ultimately?

Ninety-five per cent. of the answers are in the affirmative and the opinion is frequently expressed that while we must primarily look to our own convenience on this continent, as we are likely to be the first to adopt a reformed time system, we should from the first make provision for its universal application. Five per cent. of the answers are adverse.

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Question 4.—Referring to the scheme for regulating time (page 28 of pamphlet issued by the Society), does it seem to possess any features which generally commend themselves to your judgment?

About 97 per cent. of the answers are in the affirmative—3 per cent in the negative.

Question 5.—Do you favor the proposal to have the standards of time differing by intervals of one hour, thus reducing the number of standards for the whole of North America to four, viz.: Meridians Q, R, S and T? (See 18 to 21, pages 30 and 31.)

Seventy-six per cent. of the answers are in the affirmative—24 per cent adverse.

Question 6.—Do you favor the suggestion to reduce the number of standards in North America to two, say Meridians U and R? (See 21.)

Six per cent. are favorable—94 per cent. adverse.

Question 7.—Do you prefer having only one Continental Standard, say Meridian S, and having one uniform time throughout the whole of North America? (See 21 page 31.)

Thirty-six per cent. are in the affirmative—64 per cent. in the negative.

Question 8.—If the scheme set forth in the document referred to (page 28) does not generally meet with your approval, is there any other scheme which you prefer? Please explain your preference for the information of the Committee.

The scheme is very generally and cordially approved. Several suggestions are made which are entitled to great respect.

Question 9.—Referring to the suggestions under the heading "Division of the Day into Hours" (page 31) please indicate which of the three following plans you prefer.

(A) The alternative plan No. 1, with the hours numbered from 1 to 24 without interruption?

Ninety-two per cent. are in favor of a notation of 1 to 24—8 per cent. are adverse.

(B) The alternative plan No. 2, with the forenoon hours numbered as at present and the afternoon hours lettered as described?

Eleven per cent are in favor—89 per cent. against this plan of notation.

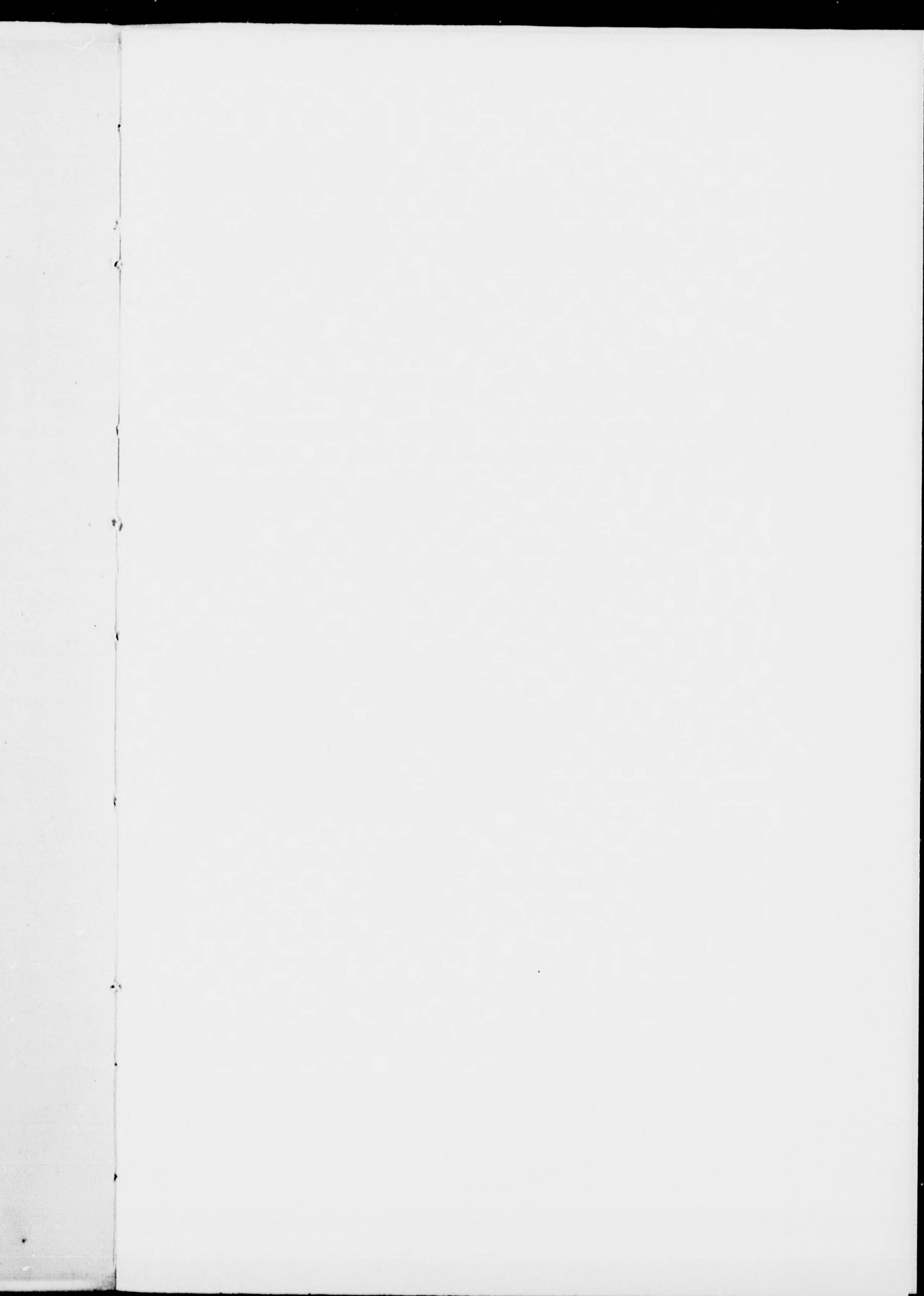
(C) The present division into half days, known as forenoon and afternoon, each half day having the hours numbered identically from 1 to 12?

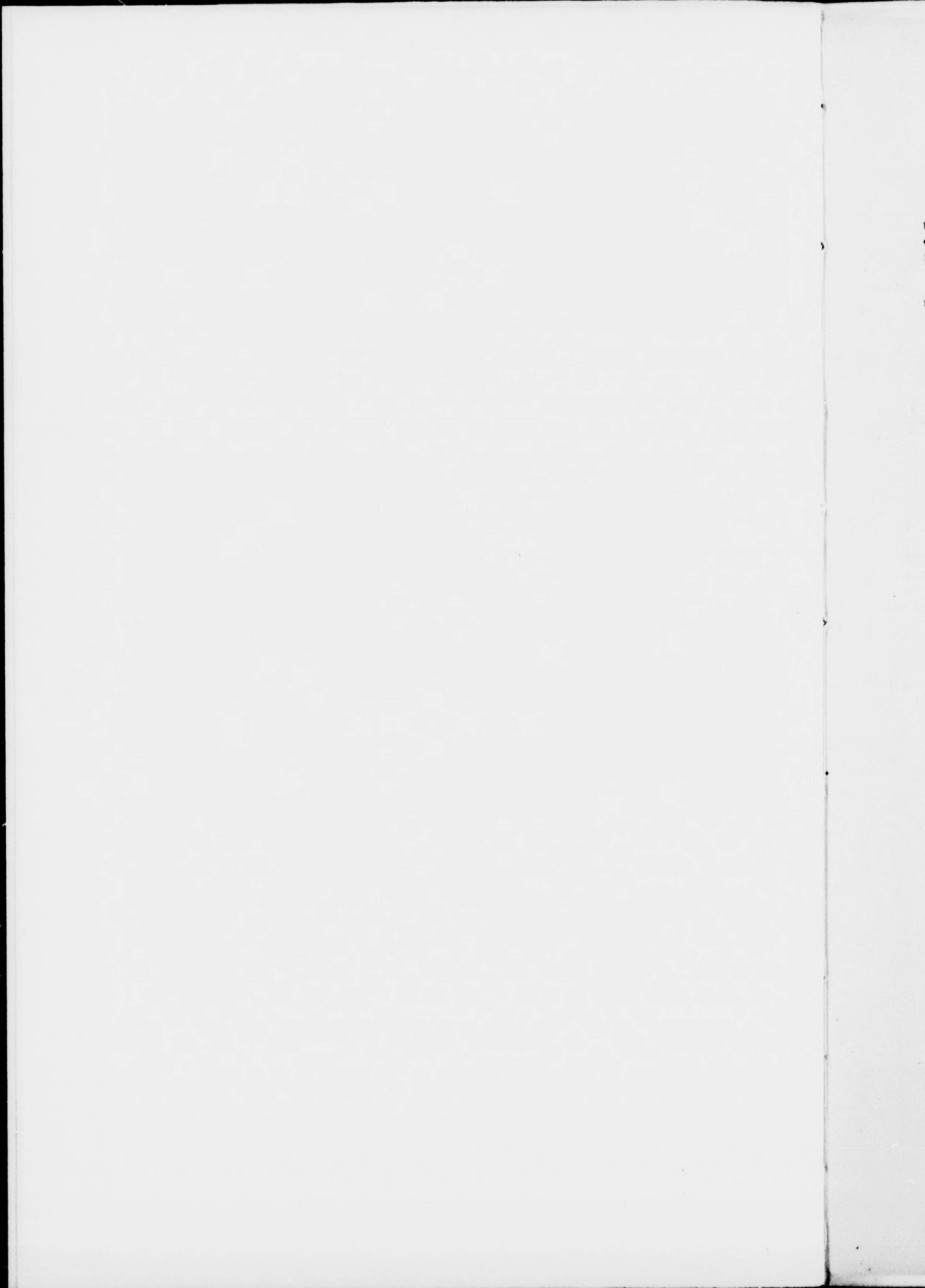
33 per cent. are in favour and 67 per cent. against the present system of dividing the day into two sets of hours, numbered from 1 to 12 and known as A. M. & P. M.

Question 10.—In order to secure perfect uniformity and accuracy, do you favor the proposal to have Standard Time disseminated throughout the country by central authority controlled by government? (Page 30.)

Ninety per cent. are in favor of the proposal, 10 per cent. against. In the latter the view is generally expressed that on account of the vast extent of country, there should be various central observatories, all operating in harmony and mutually assisting each other in the work of disseminating accurate time.

Question 11.—Have you any particular views on the question of Time Reform, not embraced in the questions and replies above given? If so, please state them for the information and guidance of the Committee. (If necessary, on a separate sheet.)





A very small percentage take an unfavorable view or propose modifications of the scheme submitted. The large majority are decidedly in favor of reform without delay. Much valuable information has been brought out which the Committee recommend should be printed.

It will be seen from the character of the replies received that a remarkable unanimity of opinion prevails in every section of the country heard from.

The Committee feel warranted in reporting that judging from the replies received there is a strong general feeling in favor of establishing a comprehensive system of Standard Time on the basis of the scheme set forth in the papers submitted. That an emphatic opinion has been expressed in favor of having four main standard meridians for the continent, distinguished as Q, R, S, and T, or by such geographical names as may hereafter be adopted and that a large majority of opinions expressed are in favor of numbering the hours in each day from 1 to 24 consecutively.

The opinion has also been generally expressed that while our time system should be in harmony with that of other nations, the necessity for reform on this continent is so urgent that we should not wait for other nations to move in the matter. That we should as soon as practicable inaugurate a system, the primary object of which would be to meet our own requirements. But that in taking the initiative we should by all means adopt a system capable of extension to the whole globe, and that we should to some extent give other nations an opportunity of co-operating with us.

The committee accordingly recommend that steps be taken to obtain the establishment of a zero meridian which would be common to all nations for reckoning time and longitude, and that concurrence with this measure be sought from as many nationalities as may be induced to assist in this determination.

That efforts be made to lead to the acceptance of this course on the other Continents to the fullest extent.

That failing in this effort the people of the Western Continent determine a zero meridian for their own use and guidance and especially with the view of establishing a system of Standard Time.

SANDFORD FLEMING,
Chairman of Special Committee.

WASHINGTON, 17 May, 1882.

RESOLUTIONS

Passed by the American Society of Civil Engineers, at the Washington Convention, May 17, 1882.

Motion by Mr. J. B. Francis, C. E. }
Seconded by Mr. F. Collingwood, C. E. }

Resolved, That this meeting entirely concurs in the recommendations contained in the report submitted and that the Committee be requested and is hereby authorized to continue their efforts to effect the objects set forth, and also to petition the Congress of the United States to take the necessary steps to have a prime or zero meridian established.

JOHN BOGART,
Secretary.

