

THE INTERNATIONAL ELECTROTECHNICAL CONGRESS OF TURIN.

A BRIEF REPORT TO THE FRANKLIN INSTITUTE, SUBJECT TO THE OFFICIAL REPORTS OF THE CONGRESS,

BY

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THE International Electrotechnical Congress, which was held at Turin, September 10-17, 1911, was organized under the auspices of the Associazione Elettrotecnica Italiana (A. E. I.) and of the Italian Committee of the International Electrotechnical Commission (I. E. C.), in relation to the Turin-Rome International Industrial Exhibition, which celebrated the semi-centennial anniversary of Italy's political union.

The organization consisted of:

- (1) A Committee of Honor, headed by H. R. H. the Duke Degli Abruzzi, and 28 members, principally either officers of the Italian government or of the Turin municipality, but including Prof. Elihu Thomson, the President of the I. E. C.
- (2) A Committee of Organization of 30 members, headed by Prof. L. Lombardi, the president of the A. E. I., and comprising the presidents of the various sections of that society, as well as the presidents of the national committees of the I. E. C. An American sub-committee was formed of the following members: J. W. Lieb, Jr. (president), and Messrs. A. E. Kennelly, C. O. Mailoux, T. C. Martin, H. G. Stott, and S. W. Stratton. The Congress secretaries were Messrs. C. A. Curti and G. Semenza.
- (3) An Executive Committee of 23 members, headed by Prof. G. Grassi, the president of the Turin Section of the A. E. I., and enrolling a number of active members of that section.

Notice was sent in 1910 to the various national committees of the I. E. C. that the Congress would be divided into eight sections, and offering a list of 31 official electrotechnical subjects, on which reports were requested, in advance, from specialists in the various countries, which reports should be laid before the Congress as the basis of its discussions. Papers were also invited, to be offered for acceptance in advance. The number of such accepted and presented papers amounted to 49, making a total of 80 communications read at the sessions, from writers in 14 different countries, representing 10 different languages. The American communications were 11 in all. The complete series of papers is expected to be printed in the Proceedings of the Congress.

Four official languages were selected—English, French, German, and Italian—in any of which a communication might be offered or a discussion contributed; but English, German, and Italian papers had to be accompanied by a brief French *résumé*. In the official notices and bulletins of the Congress only the French and Italian languages were used, side by side.

The total number of full-membership adhesions to the Congress printed up to September 15 was 453, while the total registrations of all classes exceeded 650.

The following officers were elected at the opening session on September 10:

President—Prof. Luigi Lombardi.

Vice-presidents—Prof. Guido Grassi, Ing. Emanuele Jona.

General Secretary—Ing. Guido Semenza.

Honorary Vice-presidents—

Antonio Pacinotti for Italy.

Silvanus P. Thompson and Alexander Siemens for England.

Gano Dunn, president of the A. I. E. E., for America.

Paul Janet for France.

Karl Strecker for Germany.

Alfred Graf for Austro-Hungary.

Pierre Ossactchy for Russia.

Gustave L'Hoest for Belgium.

Behn-Eschenburg for Switzerland.

De La Pena for Spain.

Poulsen for Denmark.

The following section officers were elected :

<i>Section</i>	<i>Subject</i>	<i>President of Section</i>	<i>Vice-Presidents</i>	<i>Secretaries</i>
I.	Electrical Machines and Transformers	BOUCHEROT (Francia)	MORELLI (Italia) FELDMANN (Olanda)	C. PALESTRINO
II.	Electrical Systems and Networks	DE BAST (Belgio)	FERRARIS (Italia) LANDRY (Svizzera)	DEL BUONO BOCCARDO
III.	Instruments and Measurements	KENNELLY (U. S. A.)	DINA (Italia) ARMAGNAT (Francia)	EMANUELI BARBAGELATA
IV.	Lighting and Heating	ROSSANDER (Svezia)	MENGARINI (Italia) SHARP (U. S. A.)	DANIONI FENZI
V.	Electric Traction	MAILLOUX (U. S. A.)	SARTORI (Italia) BARNET LYON (Olanda)	PONTI BELLINI
VI.	Telegraphy and Telephony	O'MEARA (Inghilterra)	LARSEN (Danimarca) DI PIRRO (Italia)	
VII.	Electrochemistry and Metallurgy	BECKMANN (Germania)	MIOLATI (Italia) RUMI (Italia)	
VIII.	Tariffs and Taxation	ARNO (Italia)	DETTMAR (Germania) BONGHI (Italia)	BOTTO GIULIETTI

Certain resolutions were presented by the sections, were printed in the official bulletin, and set for consideration at the plenary sessions of the Congress as a whole. The following is a synopsis of the more important resolutions thus adopted by the Congress at large :

(1) That the International Electrotechnical Commission is requested to accept the task of organizing future electrotechnical congresses, so far as concerns their dates, places of meeting, and objects, the details of the organization of each Congress being confided to the electrotechnical committee of the country in which the congress is to be held, with the assistance of its technical societies if necessary.

(This official request was duly received and accepted by the Council of the I. E. C., in session at Turin, on September 13.)

(2) That the International Electrotechnical Congress of Turin compliments the American Institute of Electrical Engineers on the practice it has adopted of inserting in its publications the metric equivalent value, in parentheses, after each expression of values in English measure.

And since this procedure greatly facilitates the reading of those publications in all the countries using the metric system, while constituting a worthy example towards, and in view of, the much-desired complete international unification of weights and measures ;

Resolved, That the technical societies of all countries in which the metric system is not yet official are invited to follow the above-mentioned example of the American Institute of Electrical Engineers.

(3) That industrial traction accelerations be expressed in kilometres per hour per second (or equivalent local national terms, such as miles per hour per second, or versts per hour per second).

(4) That the Congress favors the appointment of an International Commission for the general study of systems of illumination and of all technical problems connected with illumination.

A meeting of the A. E. I. was held on September 13, largely attended by Congress members, to celebrate the semi-centennial anniversary of Signor Pacinotti's invention of his ring-armature for dynamo machines, and to present to him a testimonial of recognition and esteem. President Lombardi presented to Signor Pacinotti a handsomely-illuminated copy of his original paper on the ring-armature machine, originally printed in *Il Nuovo Cimento* for 1865. A brief reply of thanks was made by Signor Pacinotti, which was received with acclamation.

Technical visits were paid by parties of Congress members to electric installations of interest in the vicinity, under the escort of their Italian hosts.

At the closing plenary session of September 16 the thanks of the Congress were voted to the Committee of Organization, and especially to President Lombardi and Secretary Semenza, for their very successfully performed services. The various national delegations joined heartily in these recommendations. The thanks of the Congress were also cordially expressed to the city of Turin, to the Italian National Committee, and to their Italian hosts generally, for the many courtesies and entertainments received by the members during their very pleasant stay at Turin. One of the many such entertainments was a dinner to the delegates on the summit of the hill "La Superga," about 400 metres above the city and some 10 kilometres to the north. The view of the Piedmontese Alps so obtained, by the light of sunset, above the intervening plain, was something never to be forgotten.

The American delegation consisted of H. B. Brooks, Gano Dunn, G. Faccioli, R. O. Heinrich, A. E. Kennelly, C. O. Mailoux, C. H. Sharp, E. Thomson, and Philip Torchio. This delegation was also separately entertained at a luncheon given by the Italian committee.

As a whole, the Congress was a great success, to which the prevailing fine and pleasant weather lent much aid. The Turin Exposition also added very notably to the interest of the meeting.

CORRECTION.

"THE Coefficient of Expansion of Tar," by John Morris Weiss," vol. clxxii, page 277.

$$\text{"Specific gravity: } t^{\circ}/t^{\circ} = \frac{c - a}{(b - a) - (d - a)} \text{"}$$

should read:

$$\text{"Specific gravity: } t^{\circ}/t^{\circ} = \frac{c - a}{(b - a) - (d - c)} \text{"}$$

Unsolved Problems in Electro-plating. G. B. HOGABOOM. (*Sci. Amer. Sup.*, 1846, 320.)—The problems most desired to be solved are: An electrolyte that will remove the fire-scale from brass; one that will produce a bright or a matte surface in place of using the present acid dips; an electric cleaner that will saponify the grease and dissolve it instead of drawing it to the top, whence it has to be constantly removed to prevent it adhering again to the work as the latter is removed from the solution; a heavy deposit of lead on the inside of iron pipes to prevent rapid corrosion; a method of coating electrogalvanized iron or steel with decorative metals without destroying the rust-resisting properties of the zinc; an alkaline nickel-silver solution that can be worked with a low voltage; a method of etching steel without destroying a resistance film of gelatine. Some alkaline substance to replace potassium cyanide would be universally welcomed.

Process for Increasing the Efficiency of Titanium. T. GOLDSCHMIDT. (*Ger. Pat.* 235, 461, 1909.)—In refining iron or steel by the addition of ferro-titanium it has not been found possible to attain good results with alloys containing more than 10 to 15 per cent. of titanium. However, if aluminum be added as a third component to the alloys, much richer titanium alloys can be used. Especially good results have been obtained with an alloy containing 24 to 25 per cent. of titanium and 3 per cent. of aluminum.