

7. BATTERIES

DEPOSITING VATS IN "SERIES"

H. B. Slater

Vol. i—1884, pp. 1-4, paper No. 11

Description of practical experience in modification of electroplating vats, so as to double useful output of given generator.

Discussion, pp. 4-7, by Messrs. H. B. Slater, W. D. Sargent, N. S. Keith, E. A. Sperry, and Jas. Kelly.

General remarks on methods of connecting electrolytic vats.

DESCRIPTION OF A LARGE SECONDARY BATTERY PLANT FOR GENERAL COMMERCIAL DISTRIBUTION

E. P. Roberts

Vol. ii—1885, pp. 1-3, paper No. 5

Brief description of an installation of batteries according to the Brush system for arc lighting, there being a separate battery in each block.

Discussion, pp. 3-20, by Messrs. W. A. Anthony, E. P. Roberts, ——— Hall, F. L. Pope, R. W. Pope, E. P. Thomson, S. F. Shelbourne, Geo. A. Hamilton, ——— Card, H. B. Slater, T. C. Martin, Rowland Hazard and ——— Carey.

Further information concerning the Brush battery system. General remarks on electric lighting.

SECONDARY BATTERIES FOR LIGHT AND POWER

A. H. Bauer

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Account of the practical development of the pasted or Faure type lead storage battery in Baltimore, with details of construction and operation in lighting, telegraphing and motor car service.

Discussion, pp. 136-144, by Messrs. Frank L. Pope, C. O. Mailloux, Sidney F. Shellbourne, A. C. Fowler, Jos. Wetzler and G. C. Maynard.

General remarks on the lead storage battery, its practicability and the patent situation with reference to it.

STORAGE BATTERIES IN PRACTICE

E. P. Roberts

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Brief statement of reasons for abandoning the Brush distributing battery system in favor of the central station.

Discussion, pp. 131-137, by Messrs. T. C. Martin, C. O. Mailloux, Jos. Wetzler, Geo. A. Hamilton, Ralph W. Pope, Frank L. Pope and Edward P. Thompson.

General remarks on the storage battery and its uses in lighting and traction.

ELECTRIC ENERGY FROM CARBON WITHOUT HEAT

Willard E. Case

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Account of experiment with primary cell with graphite positive electrode.

Discussion, pp. 201-210, by Messrs. C. O. Mailloux, Townsend Wolcott, Jos. Wetzler, F. B. Crocker, C. S. Bradley, ——— Grimshaw and Willard E. Case.

Method of calculating theoretical e. m. f. of any primary cell.

IMPOSSIBILITIES AND LIMITATIONS OF CHEMICAL GENERATORS OF ELECTRICITY

Francis B. Crocker

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Description of method of calculating e. m. f. with large number of actual calculations compared with the observed values. Results of tests of e. m. f. of different metals, with free chlorine, bromine, and iodine in different electrolytes. Technical data on cells with zinc as electro-positive material and various depolarizers and electro-negative materials. Discussion of the efficiency and opportunities for improvement of chemical generators.

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General remarks on the chemical generation of electric energy.

SOME RESULTS WITH SECONDARY BATTERIES IN TRAIN LIGHTING

Alexander S. Brown

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Brief account of experience of the Pennsylvania R. R. with Faure, Brush, Electric Accumulator Co., and Julien Electric Company batteries.

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THE INHERENT DEFECTS OF LEAD SECONDARY BATTERIES

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General remarks on the losses in storage batteries.

SOME METHODS OF REGULATING ACCUMULATORS IN ELECTRIC LIGHTING

George B. Prescott, Jr.

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Discussion of the uses of storage batteries in connection with lighting plants to help out the load factor and to save distribution copper. Description of typical installation, showing the use of overload and under-

load circuit breakers and counter e. m. f. cells with automatic end cell switches. Circuit diagrams.

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Description of method of automatically maintaining constant e. m. f. at battery terminals.

NOTE ON A NEW GRAVITY CELL

P. B. Delany

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H. S. Carhart

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SOME STORAGE BATTERY PHENOMENA

W. W. Griscom

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General remarks on the performance of storage batteries.

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Storage batteries in central stations, covering performance characteristics, economics and experience in various classes of service. Factors which affect the design of batteries for different kinds of service. General discussion of the storage battery situation. Storage battery vs. gas engine for standby service.

ELECTRIC ELEVATORS WITH DETAILED DESCRIPTION OF SPECIAL TYPES**Frank J. Sprague**

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Comparison of electric and hydraulic elevators as to operation and maintenance. Test of electric elevator plants and heating required in various buildings. Economics of application of storage battery to elevator plant.

A NOVEL FORM OF THERMO-ELECTRIC BATTERY**C. J. Reed**

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STORAGE BATTERIES AND RAILWAY POWER STATIONS**Robert Mc A. Lloyd**

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Experience with different types of storage batteries in power stations. Depreciation of storage batteries.