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## **Charles Proteus Steinmetz Collection** Letter Book 2 – November 1908 - June 1909

| Page  | Date        | Description   |
|-------|-------------|---|
| 1     | 3 Nov 1908  | L. Burpee to J.L.R. Hayden. Requests Steinmetz letter on theory of          |
|       |             | static protector  |
| 2     | 4 Sept 1908 | C.P. Steinmetz to J.M. Darke, Lynn. Requests casting silicon sticks         |
|       | _           | containing various degrees of carbon.                                       |
| 3     | 4 Nov 1908  | C.P. Steinmetz to Eimer and Amend, NY City. Requests alloy sheets of        |
|       |             | aluminum, chromium, manganese, cobalt.                                      |
| 4     | 4 Nov 1908  | S.H. Blake, Lightning Arrestor Dept. Pittsfield to E.E.F. Creighton.        |
|       |             | Difficulty with electrolytes.   |
| 5     | 4 Nov 1906  | S.H. Blake, Lightning Arrester Dept., Pittsfield to E.E. F. Creighton. Test |
|       |             | of 114.000 Volt lightning arrestor.   |
| 6     | 5 Nov 1908  | Eimer and Amend, NYC to C.P. Steinmetz. Unable to supply alloy.             |
| 7     | 5 Nov 1908  | J.B. Whitehead, Johns Hopkins EE to C.P. Steinmetz. Requests new data       |
|       |             | on AC phenomena as subject for students' research.                          |
| 8     | 6 Nov 1908  | C.P. Steinmetz to Eimer & Amend. Renews request for alloys.                 |
| 9     | 9 Nov 1908  | J.L. Hayden to E.L. Harbour . Steinmetz photo.                              |
| 10    | 6 Nov 1908  | J.L. Hayden to Albert Spies, Electrical Record. Biographical sketch of      |
|       |             | Steinmetz.  |
| 11-17 | 6 Nov 1908  | C.P. Steinmetz to E.W. Rice, Jr. Tests on Gerard Ozone Generator.           |
| 18    | 6 Nov 1908  | H.W. Tobey(?), AIEE, Pittsfield, to J.L. Hayden. AIEE meeting.              |
| 19-24 | 7 Nov 1908  | Albert Ryzinski to C.P. Steinmetz. Advice on invention to eliminate         |
|       |             | commutator from DC motor.   |
| 25-28 | 9 Nov 1908  | E.D. Priest per E.F. Alexanderson to D.B. Rushmore. Characteristics of      |
|       |             | adjustable speed repulsion motor for mill work.                             |
| 29    | 9 Nov 1908  | J.L. Hayden to Albert Spies. Biographical sketch of Steinmetz.              |
| 30    | 9 Nov 1908  | C.P Steinmetz to W. S. Landis , American Electrochemical Society.           |
|       |             | Inquiry re J.P. Stone for membership.                                       |
| 31    | 9 Nov 1908  | C.P Steinmetz to A.L. Rhoher. Request for record of test man V.V.           |
|       |             | Vernschoten.  |

| 32    | 9 Nov 1908  | C.P. Steinmetz to John B. Whitehead, Johns Hopkins. Discontinued GE                          |
|-------|-------------|--|
|       |             | work on DC transformer for street lighting, 1900-1904.                                       |
| 33    | 12 Nov 1908 | J.L. Hayden to E.R. Barry, Lynn. Analyses of titanium carbide.                               |
| 34    | 12 Nov 1908 | J.L. Hayden to J.E. Larke, Lynn. Casting of silicon rods.                                    |
| 35    | 12 Nov 1908 | Walter L. Leland, MIT to C.P Steinmetz. Request for lecture on "Future of Electricity".      |
| 36    | 12 Nov 1908 | J.B. Whitehead to C.P Steinmetz. Constant current transformer.                               |
| 37    | 13 Nov 1908 | C.P Steinmetz to Walter S. Leland. Telegram re MIT lecture.                                  |
| 38-39 | 14 Nov 1908 | C.P Steinmetz (?) to H.F.T. Erben. Efficiency of large direct current                        |
|       |             | generators.  |
| 40    | Und.        | E.E.F. Creighton to C.P Steinmetz. Report on equivalent needle gap of a current transformer. |
| 41    | 16 Nov 1908 | C.L. Harrington, Academy of Music, Brooklyn. Lecture request.                                |
| 42    | 16 Nov 1908 | J.L. Hayden to E.R. Berry. Meeting.  |
| 43-44 | 16 Nov 1908 | Paul Spencer, AIEE Philadelphia. Lecture request for Chicago.                                |
| 45    | 16 Nov 1908 | C.P Steinmetz to Walter S. Leland. Lecture arrangement.                                      |
| 46-47 | 16 Nov 1908 | C.P Steinmetz to J. Lyons, Patent Dept. Regenerative magnetite arc                           |
|       |             | lamp.  |
| 48-49 | 16 Nov 1908 | C.P Steinmetz to E.W. Rice. I doubt the necessity at present to                              |
|       |             | undertake the development of 165,000 volt switches.  |
| 50    | 16 Nov 1906 | C.P Steinmetz to Albert Sypinske. Advise you not to waste any time                           |
|       |             | trying to invent a direct current generator without commutator.                              |
| 51    | 16 Nov 1908 | C.P Steinmetz to John B. Whitehead. Best type of condenser.                                  |
| 52-53 | 17 Nov 1908 | C.P Steinmetz to J.W. Ham, P&M Dept. Methods of testing large                                |
|       |             | commutating machines.  |
| 54-55 | 17 Nov 1908 | C.P Steinmetz to C.A. Kenyon, McGraw Publishing. Book corrections.                           |
| 56    | 18 Nov 1908 | Walter S. Leland to C.P Steinmetz. Telegram- lecture arrangements.                           |
| 57    | 18 Nov 1908 | Editor, Power Weekly to C.P Steinmetz. Lecture request.                                      |
| 58-59 | 19 Nov 1908 | E.E.F. Creighton to C.P Steinmetz. Equivalent needle gap of DCC choke coils.                 |
| 60    | 19 Nov 1908 | C.P Steinmetz to Percy Hodges, Aluminum Company of America.                                  |
| 00    | 19100 1900  | Request for aluminum alloys.   |
| 61    | 19 Nov 1908 | C.P Steinmetz to C.L. Harrington, Academy of Music, Brooklyn. Turns                          |
|       |             | down lecture request due to being unusually busy.  |
| 62    | 19 Nov 1908 | C.P Steinmetz to Paul Spencer, AIEE. Turns down lecture request due to                       |
|       |             | "increase in my work for the General Electric Co., resulting from the                        |
|       |             | business depression"   |
| 63    | 23 Nov 1908 | C.P Steinmetz to C.A. Kenyon, McGraw Publishing. Book manuscript.                            |
| 64    | 25 Nov 1908 | C.P Steinmetz to Preston S. Miller, Illuminating Engineering Society.                        |
|       |             | Lecture arrangements.  |
| 65    | 25 Nov 1908 | C.P Steinmetz to A.A. Buck, Patent Dept. "I do not think the attached                        |
|       |             | patent anticipates my invention" of commutation method.                                      |
| 66-67 | 25 Nov 1908 | C.P Steinmetz to W.C. Fish, Lynn. "Titanium carbide lamp not yet in in                       |
|       |             | such condition to be shown even to its friends". CPS is favorably                            |
|       |             | impressed with DC motor of S.R. Bergman.   |

| 68    | 25 Nov 1908 | C.P Steinmetz to Percy Hedges, Aluminum Company of America.   |
|-------|-------------|---|
|       |             | Aluminum alloys.  |
| 69    | 25 Nov 1908 | C.P Steinmetz to Macmillan Company. Turns down request that he write an elementary textbook .   |
| 70-73 | 25 Nov 1908 | C.P Steinmetz to E.W. Rice, Jr. Electric railroad equipment. Agrees with<br>Mr. Alexanderson and W.B Potter that "it is safest for our company to<br>be conservative" in the design of motors for long distance railroading."<br>DC motors will never compete with AC and "we now have the best<br>alternating current motor." It would be a pity if we were "too<br>conservative" and "let other companies catch up with us". In<br>transformers "we have gone far beyond the limits of safety." |
| 74    | 25 Nov 1908 | C.P Steinmetz to E.J. Berggren. Cupboards for laboratory.   |
| 75    | 27 Nov 1908 | C.P Steinmetz to J.H. Jenkins, Foreign Department. Patent on material for magnetite electrode.  |
| 76    | 27 Nov 1908 | C.P Steinmetz to Polk Miller Drug Co, Richmond, VA. Remedy for hair<br>loss of CPS's dog , a "cross between a short hair St. Bernard and a<br>mastiff."   |
| 77-78 | 27 Nov 1908 | C.P Steinmetz to A.C. Davis, Patent Dept. Patent application on<br>"incandescent lamp with magnesium wires attached to the leads, for<br>the purpose of guarding against deterioration of the vacuum." Aimed at<br>solving lamp blackening problem.   |
| 79    | 27 Nov 1908 | C.P Steinmetz to Charles E. Dressler & Co. New York City. Request for electrically operated gyroscope.  |
| 80-81 | 27 Nov 1908 | C.P Steinmetz to A.S. Marvin, Patent Dept. Evaluation of ideas for<br>reducing rectifiers with anodes that do not give off gases. Tungsten is<br>"especially suited."   |
| 82    | 28 Nov 1908 | M.C. Beebe, Univ. Wisconsin to C.P Steinmetz. Lecture request.  |
| 83    | 30 Nov 1908 | C.P Steinmetz to E.G. Jenks, Pittsfield. Titanium carbide analysis.   |
| 84    | 30 Nov 1908 | C.P Steinmetz to Preston S. Miller, New York City. Telegram. Lecture arrangements.  |
| 85    | 1 Dec 1908  | G.N. Chamberlin, Lynn, to C.P Steinmetz. Titanium Carbide lamps. Sent<br>by express 2.5 amp series carbide lamp and 4 amp multiple carbide<br>lamp.   |
| 86    | 3 Dec 1908  | C.P Steinmetz To E.C. Beebe Univ. Wisconsin. Turns down lecture request due to spare time being taken up with book revisions.   |
| 87    | 1 Dec 1908  | C.P Steinmetz to Jos. E. Richardson, Lehigh University. Request for copy<br>of paper on "Formation of Nitric Acid from Air by Means of a Low<br>Voltage Electric Current" by G.W. Norden.   |
| 88    | 3 Dec 1908  | Louis A. Ferguson, Chicago, to C.P Steinmetz. Telegram. Lecture arrangement.  |
| 89    | 3 Dec 1908  | C.P Steinmetz to G.N. Chamberlin, Lynn. Receipt of carbide lamps.<br>Single lamp is not sufficient to get satisfactory idea of performance, send another.   |
| 90    | 3 Dec 1908  | C.P Steinmetz to L.A. Ferguson, V.P. Commonwealth Edison, Chicago.<br>Telegram. Lecture title is "Light and Illumination."  |

| 91-92   | 4 Dec 1908   | G.N. Chamberlin, Lynn, to C.P Steinmetz. Titanium Carbide Arc Lamps.      |
|---------|--------------|---|
| 51 52   | + DCC 1700   | Are changing design, building 100 of the lamps. Will send you more        |
|         |              |   |
|         |              | when available.   |
| 93      | 4 Dec 1908   | J.W. Lieb, Jr , NY Edison, to C.P Steinmetz. Telegram. Requests address   |
|         |              | to employees after Illuminating Engineering Society talk.                 |
| 94      | 4 Dec 1908   | C.P Steinmetz to J.W. Lieb, Jr. Address to employees" impossible"         |
| 95      | 7 Dec 1908   | C.P Steinmetz to J.T. Mosman, Boston Office. Static Protectors for        |
|         |              | Mercury Arc Rectifiers.   |
| 96-97   | Und.         | E.R. Berry to Joseph Hayden. Samples and analysis of electrodes.          |
| 98      | 7 Dec 1908   | C.H. Sharp to C.P Steinmetz. Telegram. "Will you dine with small party.   |
|         |              | Freemans invitation Thursday evening please wire."                        |
| 99      | 7 Dec 1908   | C.P Steinmetz to C.H. Sharp, Test Officer, Electrical Laboratories.       |
|         |              | Telegram. "Unable to do so as already engaged."                           |
| 100     | 8 Dec 1908   | W.C. Fish, Lynn to C.P Steinmetz . "We want to make careful tests on      |
|         |              | quartz lamps I saw these lamps burning in Germany. They are a vast        |
|         |              | improvement over the old mercury arc."                                    |
| 101-102 | 8 Dec 1908   | D.B. Rushmore, Power & Engineering Dept. to J.S. Conover, Yorkshire       |
|         | 0 2 00 27 00 | Power Co. Past work on static dischargers for the protection of cables.   |
| 103     | 14 Dec 1908  | C.P Steinmetz to J.H. Darke, Lynn. Request for silicon rods.              |
| 103     | 14 Dec 1908  | C.P Steinmetz to C.E. Chamberlin, Lynn. "we have never received"          |
| 101     | 11 Dec 1900  | requested magnetite mixture."   |
| 105     | 14 Dec 1908  | C.P Steinmetz to C.A. Kenyon, McGraw Publishing. Progress in the          |
| 105     | 14 Dec 1900  | publication of "Transient Phenomena."                                     |
| 106     | 14 Dec 1908  | C.P Steinmetz to Macmillan Co Turns down request to be named co-          |
| 100     | 14 Dec 1900  | •   |
|         |              | author with Prof. C. Ferguson of book on the Problem of Electric Power    |
| 407     | 14 D 1000    | Distribution.   |
| 107     | 14 Dec 1908  | C.P Steinmetz to F. Skane, NY State Engineer. Request for information     |
|         |              | on new barge canal, especially Schenectady portion, and "what is the      |
|         |              | intention to do with the old Erie Canal."                                 |
| 108-109 | 16 Dec 1908  | Elihu Thompson to F.E. Gale, Schenectady Works. His evaluation of         |
|         |              | current ideas on the therapeutic value of light, as presented by new      |
|         |              | device from Victor Electric Co. especially very short (i.e., ultraviolet) |
|         |              | waves. "I have been somewhat of a skeptic as to the real value of many    |
|         |              | of the claims" including explanation of "difficulty the white race has of |
|         |              | living in the tropics."   |
| 110-111 | 18 Dec 1908  | F.H. Gale, Supply Dept. to G.F. Morrison, Harrison Works. "Mr Gale has    |
|         | 10 2 00 1700 | been requested by Mr. C.A. Coffin to investigate for exploitation a       |
|         |              | Therapeutic Incandescent Lamp similar to that put on the market by        |
|         |              | the Victor Electric Co. of Chicago." "Dr. Whitney has suggested the use   |
|         |              | of Tungsten Lamps with "Uviola" glass as having an undoubted              |
|         |              |   |
|         |              | therapeutic value to some degree." Gale requests Harrison to make         |
| 110     | 10 D 1000    | some lamps with ordinary and Uviola glass for test.                       |
| 112     | 19 Dec 1908  | C.P Steinmetz to W.D.K Wright, agent White Steamer. Request for           |
|         |              | dimensions of 1909 White Steamer for "door on our garage."                |

| 113     | 19 Dec 1908 | C.P Steinmetz to E.W. Rice, Jr. Covering letter for discussion of Alternating and Direct Current Railway Motors (not here).  |
|---------|-------------|--|
| 114     | 21 Dec 1908 | C.P Steinmetz to J.T. Broderick. Request to engage D.H. Couchey in "my   |
| 115-118 | 21 Dec 1908 | <ul> <li>laboratory" for pay of \$10/week.</li> <li>C.P Steinmetz to A.C. Davis, Patent Dept. "Will you please see if there is anything patentable in the following method of protecting very high power electric systems against the destructive effects of unlimited power short circuits?" "I especially thought of Chicago." Details of idea.</li> </ul> |
| 119     | 21 Dec 1908 | C.P Steinmetz to C.A. Kenyon, McGraw Publishing. Returning complete proofs of book, with questions answered.   |
| 120     | 21 Dec 1908 | C.P Steinmetz to C.A. Kenyon, McGraw Publishing. Changes to<br>"Transient Phenomenon," and plans for third edition of Ttheoretical<br>Elements of Electrical Engineering."   |
| 121     | 22 Dec 1908 | Albert G. Davis to C.P Steinmetz. "We have today docketed according to<br>your letter of Dec 21, 1908, a patent application on your invention<br>Protection Against Heavy Short Circuits."   |
| 122     | 24 Dec 1908 | C.P Steinmetz to C.D. Ogbury, Hospital Association, Schenectady. Re. bill " the nurse's board and room rent were paid in advance".   |
| 123     | 24 Dec 1908 | Albert G. Davis to C.P Steinmetz. We have today docketed according to<br>a report of the Advisor y Committee of the Research Laboratory 24<br>June 1908 a patent application on your invention Arc Carbon With<br>Titanium Carbide Cores.  |
| 124     | 2 Jan 1909  | C.P Steinmetz to Arcadius Avellanus, Philadelphia. "send me one copy<br>of all the numbers of palaestra in pamphlet form" [Arcadius Avellanus<br>Palaestra was a primer in the Tusculun system of learning Latin]  |
| 125     | 2 Jan 1909  | C.P Steinmetz to D.C. Houck. Magazine order.   |
| 126     | 4 Jan 1909  | C.P. Steinmetz to W.C. Fish, Lynn. Order an additional quartz mercury lamp for Lynn.   |
| 127     | 4 Jan 1909  | C.P. Steinmetz to J.T. Marshall, Harrison, N.J. Request for actual data on voltage and candle power of tungsten lamps, for UV lamp experiments.  |
| 128     | 4 Jan 1908  | C.P. Steinmetz to J.F. Morrison, Harrison Works. Have not received requested filtered cellulose solution.  |
| 129     | 11 Jan 1909 | C.P. Steinmetz to C.A. Kenyon. McGraw Publishing. Correction of errors in 2 <sup>nd</sup> edition of "theoretical Elements of Electrical Engineering."   |
| 130-131 | 11 Jan 1909 | C.P. Steinmetz to L.C. Ripley. "We desire to get rid of the unsightly<br>overhead wires which cross our property" and at the same time make<br>changes to the laboratory power supply. Private power feeder from<br>corner of Nott Terrace and Union St. will no longer be needed.   |
| 132     | 15 Jam 1909 | C.P. Steinmetz to W.B. Curtiss. L.E. Couchey's work for Patnt Dept is completed. Transfer him to the position which J.T. Appleton occupied.  |
| 133     | 15 Jan 1909 | C.P. Steinmetz to A.C. Davis, Patent Dept. Please investigate the patentability of lightning arrester resistances made of a silicon-carbon alloy. May also have uses as motor starting resistance.   |

| 134     | 15 Jan 1909 | C.P. Steinmetz to M. Day, GE. "I should like to have a long talk with you,<br>as soon as feasible, on refrigerating machinery and thermodynamic<br>engines, with special reference to heating and cooling types etc"<br>meeting should be "in my private laboratory on Wendell Ave."  |
|---------|-------------|---|
| 135-137 | 15 Jan 1909 | C.P. Steinmetz to W.C. Fish, Lynn. "I desire to bring to your attention<br>the still unsatisfactory state of the silicon rods used in lightning<br>arrestors." Details.   |
| 138     | 15 Jan 1909 | C.P. Steinmetz to E.B. Merriam, Switchboard Dept. We have examined<br>brass wire used in suspension insulators. Come to Wendell Ave Lab<br>and discuss.   |
| 139     | 16 Jan 1909 | C.P. Steinmetz to E.R. Barry, Lynn. Acknowledges "encouraging" Lynn results on magnetite electrodes.  |
| 140     | 16 Jan 1909 | C.P. Steinmetz to M.A. Oudin, Foreign Department. "I do not think we should give any information on the subject" of a particular kind of switch.  |
| 141     | 19 Jan 1909 | C.P. Steinmetz to R.W. Pope, AIEE. Protests against publication of CPS discussion or "Mr. Murray's paper" since editorial changes "essentially change the sense" of CPS remarks.  |
| 142     | 20 Jan 1909 | C.P. Steinmetz to F.H. Gale. Regarding the "therapeutic lamp of the<br>Victor Company I do not believe that our company should do<br>anything, as the matter is too much of a fake." Victor makes claims for<br>"red" light, while the only form of light of therapeutic value is<br>ultraviolet. Though mercury lamp does produce UV light, "I hardly<br>think, however, that it would be worth while developing such a lamp." |
| 144     | 20 Jan 1909 | C.P. Steinmetz to E.F. Peck, Schenectady Railway Co. Connection of<br>Steinmetz laboratory to trolley circuit.  |
| 145     | 20 Jan 1909 | C.P. Steinmetz to H.G. Stott, Interborough E.T. Co., NY City. "I intend to vote for Mr. Stillwell, and considered his the most desirable presidential candidate" (president of AIEE?)   |
| 146     | 20 Jan 1909 | C.P. Steinmetz to J.E. York, Bldg. 4. Suggests sending GE surplus "large sun printing frames" to Union College.   |
| 147     | 23 Jan 1909 | R.W. Bebb, Delaware & Hudson Co. to W.S.Andrews. Request for information on 3-phase generator.  |
| 148     | 23 Jan 1909 | N.R. Birge, GE, to J.L.R. Hayden. "Mr. Rice is very anxious to see results of tests" on quartz mercury arc lamp.  |
| 149     | 23 Jan 1909 | W.S Leland, MIT, to C.P. Steinmetz. Steropticon needed for lecture? CPS: no, only a blackboard.   |
| 150     | 23 Jan 1909 | E.B. Raymond, GE, to C.P. Steinmetz. Regarding CPS employment letter for Mr. Werbeck, nothing now available.  |
| 151     | 23 Jan 1909 | C.P. Steinmetz to J.T Broderick, GE. Mr J.T. Appleton hurt accidentally in laboratory. CPS recommends he be paid four weeks salary.   |
| 152     | 23 Jan 1909 | C.P. Steinmetz to Eimer & Abend. Order for "Uviol glass tubing" and "Uranium glass tubing"  |
| 153     | 25 Jan 1909 | C.P. Steinmetz to W.C. Fish, Lynn. Requests meeting at Lynn.  |
| 154     | 25 Jan 1909 | C.P. Steinmetz to D.C. Jackson, MIT. Lecture arrangements.  |

| 155     | 25 Jan 1909     | C.P. Steinmetz to Mr. Weintraub, Lynn. Will visit Weintraub lab on Fri    |
|---------|-----------------|---|
|         |                 | at Lynn, "Don't forget to have samples of all the curios you have."       |
|         |                 | [Ezekiel Weintraub, chemist, formerly with GE Research Lab in             |
|         |                 | Schenectady, was in 1909 running a GE Lab in West Lynn, Mass., where      |
|         |                 | he contributed to the mercury rectifier, and credited as, in 1909, the    |
|         |                 | first chemist to purify the element boron.]                               |
| 156     | 26 Jan 1909     | Eimer & Amend to C.P. Steinmetz . Will have to "importto order" the       |
|         |                 | Uviol and Uranium glass tubings.  |
| 157     | 26 Jan 1909     | Moses King, Publisher, to C.P. Steinmetz Requests CPS picture for use in  |
|         |                 | Booklet "Great Electricians."   |
| 158     | 26 Jan 1909     | C.P. Steinmetz to W.s. Leland. Telegram. Lecture arrangements.            |
| 159     | 26 Jan 1909     | C.P. Steinmetz to Parker House, Boston. Telegram. Room reservation.       |
| 160     | 7 Jan 1909      | Geo. W. Townshend, Brooklyn, to Corrine, Schenectady. Seeks help          |
|         |                 | from Hayden re GE motor.  |
| 161     |                 | missing   |
| 162     | 29 Jan 1909     | Edgar Bull, lawyer, New York City, to C.P. Steinmetz. Ordered a globe     |
|         |                 | from Gall & Lembke opticians to be sent to CPS.                           |
| 163-164 | Und. Feb 1909 ? | Reply to R.W. Bebb's request to W.S. Andrews of 23 Jan 1909 re three      |
|         |                 | phase systems and wiring (see above). Technical details.                  |
| 165     | 1 Feb 1909      | C.P. Steinmetz to J. Edgar Bull. CPS has received globe and is pleased    |
|         |                 | with it.  |
| 166-167 | 1 Feb 1909      | C.P. Steinmetz to J.W. Darke, Lynn. Sending silicon rod for analysis.Data |
|         |                 | on electrical characteristics of silicon rod included as enclosure.       |
| 168     | 1 Feb 1909      | C.P. Steinmetz to James F. Cooper, Albany. Declines dinner invitation.    |
| 169     | 2 Feb 1909      | Hugo Reisinger, NY City, to C.P. Steinmetz. Sends "Electra" Carbon        |
|         |                 | Fountain Pen to CPS.  |
| 170     | 1 Feb 1909      | N.C. Feuers, U. Missouri to C.P. Steinmetz. There is a "Steinmetz Club"   |
|         |                 | among the EEs at U. Missouri. Seeks CPS approval for extending idea to    |
|         |                 | other schools.  |
| 171     | 3 Feb 1909      | J.L. Hayden to D.M. Hosford, Cleveland. Plans for book from Robson &      |
|         |                 | Adee.   |
| 172-173 | 3 Feb 1909      | J.L. Hayden to George W. Townsend, Brooklyn. Reply with information       |
|         |                 | or three phase motor. Delay in reply caused by birth of Hayden's          |
|         |                 | daughter.   |
| 174     | 3 Feb 1909      | C.P. Steinmetz to Eimer & Amend. Requests import of Uviol and             |
|         |                 | Uranium glass tubing.   |
| 175-176 | 3 Feb 1909      | C.P. Steinmetzto C.A. Kenyon, McGraw Publishing. Covering letter for      |
|         |                 | second edition of "Theoretical Elements of Electrical Engineering.:       |
|         |                 | "Most of the manuscript is original."                                     |
| 177     | 3 Feb 1909      | C.P. Steinmetz to M.P. Rice, Publication Bureau. Attached four tables of  |
|         |                 | Line Constants calculated by CPS "some time ago." "As these tables are    |
|         |                 | very useful this would be a very good and dignified advertisement for     |
|         |                 | the company."   |

| 178-180 | 3 Feb 1909    | K. Fornberg, West Lynn, to J. L. Hayden. Discussion of whether<br>Steinmetz's new book should be published in Sweden in Swedish<br>translation or English. Asks Hayden for opinion on suitability of book |
|---------|---------------|---|
| 101     | Г.Б.h. 1000   | for those who "have not had the advantage of technical schooling."  |
| 181     | 5 Feb 1909    | S.H. Blake, Lighning Arresters, to J.L.R. Hayden. Advisability of tinning the ends of resistance sticks.  |
| 182-185 | 5 Feb 1909    | C.P. Steinmetz to A.G. Davis. "Will you please investigate the  |
| 102-105 | 5 1 60 1 90 9 | patentability of the following invention referring to insulating  |
|         |               | compounds." Idea is to replace mica or linseed oil in high voltage  |
|         |               | applications with a combination of brittle but excellently insulating   |
|         |               | bakelite with paraffins to provide a "tough and flexible" insulating  |
|         |               | material.   |
| 186     | 5 Feb 1909    | C.P. Steinmetz to Gano Dunn, Crocker-Wheeler Co. "thanks for Mr.  |
|         |               | Swinburne's paper on "Feminine Mind Worship" which I have read  |
|         |               | with great interest."   |
| 187     | 5 Feb 1909    | C.P. Steinmetz to D. R. Pratt, Elmira Mutual B.L. Assn. Enclosed \$75 for   |
|         |               | membership to issue to "our newest arrival, Miss Marjorie Hayden,   |
|         |               | represented by her father, Mr. J.L. Hayden."  |
| 188     | 5 Feb 1909    | C.P. Steinmetz to W.F. Story, GE. Change in telephone arrangement of  |
|         |               | CPS house.  |
| 189     | 5 Feb 1909    | C.P. Steinmetz to H. C. Feuers, U. Missouri. Am "very pleased" with   |
|         |               | news of Steinmetz Club, has no objection to its wider use.  |
| 190     | 8 Feb 1909    | C.P. Steinmetz to H.G. Jenks, Pittsfield. Making graphite resistance rods.  |
| 191     | 8 Feb 1809    | C.P. Steinmetz to W.E. Moody, Pittsfield. Request for data on standard  |
|         |               | 60 cycle lighting transformer.  |
| 192     | 8 Feb 1909    | C.P. Steinmetz to W.S. Moody, Pittsfield. Seeks opinion or definition of  |
| 100 101 |               | the ratio of a transformer, for the AIEE.   |
| 193-194 | 8 Feb 1909    | C.P. Steinmetz to L. Robson, published, Schenectady. Suggestions on   |
|         |               | publication of second edition of General Lectures on Electrical   |
| 105 106 | 0.5.1.1000    | Engineering.  |
| 195-196 | 8 Feb 1909    | C.P. Steinmetz to D.B. Rushmore. Production of silicon resistances was  |
|         |               | "asleep again in Lynn" but now looks "more hopeful all that is<br>necessary is that we push it energetically."  |
| 197     | 8 Feb 1909    | C.P. Steinmetz to Samuel Stein, GE. PLeise have attached paid to Eimer  |
| 197     | 0 1 20 1 90 9 | and Amend as "material was needed in a great hurry."  |
| 198     | 8 Feb 1909    | C.P. Steinmetz to K. Tornberg, Lynn. Not sufficiently familiar with   |
| 170     | 01001000      | conditions in Sweden to comment on your publication question (see   |
|         |               | above).   |
| 199     | 9 Feb 1909    | A.H. McIntyre, Electrical Journal, to C.P. Steinmetz. Suggests Steinmetz  |
|         |               | advertise his new book in this journal.   |
| 200     | 9 Feb 1909    | C.R. Nuttes, Appleton & Co, Publishers. Proposes CPS expanded his   |
|         |               | lecture on "The Future of Electricity" into a book.   |
| 201     | 9 Feb 1909    | J.W. Lieb, Jr. to C.P. Steinmetz. Telegram. Steinmetz lecture to New  |
|         |               | York Edison Trainees 18 Feb 1909  |

| 202-204    | 10 Feb 1909 | C.P. Steinmetz to R.C. Carpenter, Cornell. Efficiency of thermodynamic    |
|------------|-------------|---|
|            |             | cycles.   |
| 205        | 10 Feb 1909 | C.P. Steinmetz to J.W. Lieb, Jr. Telegram. Lecture to New York Edison.    |
| 206        | 10 Feb 1909 | C.P. Steinmetz to J.W. Lieb, Jr. Lecture to New York Edison.              |
| 207        | 10 Feb 1909 | W. Story, GE, to C.P. Steinmetz. Telephone service to Steinmetz           |
|            |             | residence.  |
| 208        | 12 Feb 1909 | C.P. Steinmetz to A.B. McIntyre, Electrical Journal. Advertising in       |
|            |             | Electrical Journal  |
| 209-213    | 12 Feb 1909 | C.P. Steinmetz to E.W. Rice, Jr. Magnetic saturation of transformer.      |
|            |             | "throughout all our transformer design we hav come to the use of          |
|            |             | magnetic densities which I consider higher than safe design I have        |
|            |             | not brought the matter up for discussion" awaiting further data. "I       |
|            |             | believe we have always taken the position not to sacrifice quality for    |
|            |             | cheapness."   |
| 214        | 12 Feb 1909 | C.P. Steinmetz to W.F. Story, GE. Telephone service                       |
| 215        | 15 Feb 1909 | Joseph B. McCall, President, Philadelphia Electric Co. to C.P. Steinmetz. |
|            |             | Mc Call has "placed in my house a cabinet electric bath" [sun lamp        |
|            |             | cabinet?] and wants to know if "blue lamps" would be "more beneficial"    |
|            |             | then "the usual white ones."  |
| 216        | 15 Feb 1909 | C.P. Steinmetz to F.N. Waterman, NY City. Solicits Waterman's             |
|            |             | suggestions for improvements to CPS book General Lectures on              |
|            |             | Electrical Engineering.   |
| 217        | 15 Feb 1909 | G.C Watner, NYC attorney, to C.P. Steinmetz. Reprint request.             |
| 218        | 16 Feb 1909 | A.J. Wirets [?] Carnegie Technical Schools, Pittsburgh. Request for 25-   |
|            |             | 30 reprints.  |
| 219        | 17 Feb 1909 | Telegram. C.P. Steinmetz to J. W. Lieb, Jr. "Home with severe cold.       |
|            |             | Impossible to come tomorrow to lecture"                                   |
| 220        | 18 Feb 1909 | C.P. Steinmetz to Semet-Solvay Co. Request for paint for aluminum.        |
| 221        | 18 Feb 1909 | C.P. Steinmetz to Louis A. Ferguson, President, AIEE. Lecture             |
|            |             | cancellation due to cold.   |
| 222        | 18 Feb 1909 | C.P. Steinmetz to J.W. Lieb, Jr. Lecture cancellation .                   |
| 223-226    | 18 Feb 1909 | C.P. Steinmetz to E.E. Pope, AIEE. Meeting and paper delivery             |
|            |             | cancellation. " I caught a cold and have a sore eye and the doctor        |
|            |             | diagnosed 'generally run down'". Summarizes point of his paper on         |
|            |             | prime movers, which is that an element in the cost of power that          |
|            |             | Steinmetz calls "reliability insurance" should be added to the            |
|            |             | conventional measure. Notes "the very unsatisfactory state of our         |
|            |             | present definition of what reliable power is." Economy and reliability    |
|            |             | are "to some extent in opposition."                                       |
| 221a [sic] | 18 Feb 1909 | C.P. Steinmetz to W.R. Whitney, GE Research Lab. Procedure for taking     |
|            |             | apparatus from your laboratory.   |
| 222a       | 19 Feb 1909 | W.L.R. Hayden to George E. Townsend, Brooklyn. Sending book based         |
|            |             | on Steinmetz's lecture.   |
| 223a       | 20 Feb 1909 | Thomas Sloss, Supt. Cedar Rapids and Iowa City Railway and Light Co.      |
|            |             | to C.P. Steinmetz Requests information on grounding of transformers.      |

| 224A-226A | 23 Feb 1909 | C.P. Steinmetz to J.B. McCall, President, Philadelphia Electric Co.<br>Suggests white rather than blue lamps for electric bath, as<br>"stimulating" effect is due to energy of light, not color. Effect of blue,<br>violet and ultraviolet light is largely destructive.  |
|-----------|-------------|---|
| 227       | 23 Feb 1909 | C.P. Steinmetz tp R.W. Pope, AIEE. Requests copy of discussion of CPS paper on Prime Movers.  |
| 228       | 23 Feb 1909 | C.P. Steinmetzto Theo. R. Swart, Collector of Taxes of the Town of<br>Glenville. Taxes on "cottage on Fagel farm owned jointly by Mr. J.L.R.<br>Hayden and myself," and tolls on Scotia bridge.   |
| 229       | 23 Feb 1909 | C.P. Steinmetz to George Coffing Warner, NY City. Sending paper.  |
| 230       | 23 Feb 1909 | C.P. Steinmetz to A.J. Wurts. Sending paper   |
| 231       | 23 Feb 1909 | Henry B. Dates, EE Dept., Case School of Applied Science. Requests<br>Schenectady visit by 20 of his students.  |
| 232-233   | 25 Feb 1909 | C.P. Steinmetz to A.G. Davis, GE Patent Dept. Patent letter on<br>manganese aluminum alloy for use in lightning protection and<br>rectifiers.   |
| 234       | 25 Feb 1909 | C.P. Steinmetz to M.W. Day, GE. CPS is very interested in Day's letter of investigation on "thermodynamic heating" [heat pumps?]. "What do you propose we do now in further carrying out experimental work to determine whether an apparatus of this kind could be built and operated economically?"                        |
| 235       | 25 Feb 1909 | C.P. Steinmetz to Prof. A.E. Kennelly, Harvard. Telegram. "Yes, can be in Boston March 17 <sup>th</sup> ."  |
| 235-238   | 25 Feb 1909 | C.P. Steinmetz to C.A. Kenyon, McGraw Publishing. "much astonished"<br>over inconsistent editing of CPS book Theoretical Elements of Electrical<br>Engineering. Warns that "high standing of your company" depends on<br>"careful editing," notes that the less careful McMillan Co. offers higher<br>royalties to authors. |
| 239       | 26 Feb 1909 | C.P. Steinmetz to Prof. Henry B. Dates, Case School of Applied Science.<br>Confirms visit.  |
| 240       | 26 Feb 1909 | C.P. Steinmetz to John F,. Deems, President, New York Railroad Club.<br>CPS cannot attend their electrical night due to previous engagement.  |
| 241       | 26 Feb 1909 | C.P. Steinmetz to W.C. Fish, General Manager, Lynn Works. Wants to<br>visit Lynn to see distributed winding direct current mortor in<br>operation, and hear how Mr. Darke is coming with processing of silicon<br>rods "to get a large diameter at high resistance."  |
| 242       | 26 Feb 1909 | C.P. Steinmetz to W.S. Moody, Pittsfield Works. Requests information<br>on definitions of transformer ratios for AIEE standardization, and also<br>various characteristics of lighting transformers.  |
| 243       | 26 Feb 1909 | C.P. Steinmetz to C.P. Nutter, D. Appleton Co. Wants to discuss further<br>idea of book "for the average intelligent reader, that is, avoid too<br>technical language" on "The Future of Electricity."  |
| 244-245   | 27 Feb 1909 | John F. Deems, New York Railroad Club to C.P. Steinmetz. Invitation to annual electrical night.   |
| 246       | 27 Feb 1909 | C.P. Steinmetz to L.G. Banker, GE. Roof for greenhouse.   |

| 247     | 27 Feb 1909 | C.P. Steinmetz to Gas Cannon Co., Bethlehem, PA. Order for electrical      |
|---------|-------------|--|
|         |             | ignition gas cannon.   |
| 248-249 | 27 Feb 1909 | C.P. Steinmetz to B.B. Hull, GE Patent Dept. Patent letter on method of    |
|         |             | compounding a secondary circuit to cause it to have constant voltage,      |
|         |             | for use in mercury arc rectifiers and other applications.                  |
| 250     | 27 Feb 1909 | C.P. Steinmetz to A.F. McDonald, Patent Dept. Regarding interference       |
|         |             | with Hedlund on patent for "elastic fluid turbine of the axial flow type." |
|         |             | CPS concludes "I would however prefer to be guided by the opinion of       |
|         |             | the Turbine Department." [ Per J. Hedlund, Stockholm, Sweden, got US       |
|         |             | patent on an axial flow steam turbine, US patent 767,689, in 1904]         |
| 251     | 1 Mar 1909  | Fred S. Filsinger, President, United Capital Limited, Toronto Canada to    |
|         |             | C.P. Steinmetz. "We understand that you have perfected an electrical       |
|         |             | apparatus which produces carbonic acid gas and which is used as a          |
|         |             | fertilizer. Can we buy a machine?"   |
| 252     | 1 Mar 1909  | J. L. R. Hayden to W. R. Whitney, GE Research Lab. We are moving           |
|         |             | "some material, as magnetite, rutile, chromite, etc." from "your           |
|         |             | laboratory" to "Dr. Steinmetz's laboratory."                               |
| 253     | 1 Mar 1909  | J.L.R. Hayden to W.D. White, the Whie [sic] Co., Troy. CPS wants to        |
|         |             | receive "machine" as soon as possible.                                     |
| 254-255 | 1 Mar 1909  | C.P. Steinmetz to Mr. MA. Pool, Nashville, TN. Arrangement illustrated     |
|         |             | in Pool's letter is "inoperative." CPS suggests "keep away from trying to  |
|         |             | invent a direct current machine without commutator or collectors."         |
| 256     | 1 Mar 1909  | C.P. Steinmetz to E.W. Rice, Jr. Answer to Rice's letter re overheating of |
|         |             | brass wedges in turbo alternator due to eddy currents. CPS suggests        |
|         |             | use of "Dempster metal."   |
| 257     | 2 Mar 1909  | C.P. Steinmetz to Carl R. Beach, Jr., Poultney, VT. CPS unable to offer    |
|         |             | summer job to this incoming Union College student.                         |
| 258     | 2 Mar 1909  | C.P. Steinmetz to Fred B. Filsinger, United Capital Limited, Toronto       |
|         |             | Canada. "at present the manufacture of this apparatus [for fertilizer      |
|         |             | production] has not yet progressed far enough to manufacture such          |
| 0.70    |             | apparatus for sale."   |
| 259     | 2 Mar 1909  | C.P. Steinmetz to Prof A.E. Kennelly, Harvard. Encloses note on            |
| 0.60    |             | temperature measurement for electrical apparatus.                          |
| 260     | 2 Mar 1909  | W.C. Fish, Lynn, to C.P. Steinmetz. Mr Bergman's motor will be in          |
| 0.64    |             | operation this week Mr. Darke has written you re silicon frods.            |
| 261     | 3 Feb 1909  | Ernest Merritt, Secretary, American Physical Society to C.P. Steinmetz.    |
|         |             | Requests list of GE men "engaged in those departments of the company       |
|         |             | where it would be natural to expect that they would take an interest in    |
| 0.00    | 0.14 4000   | the science of physics. "  |
| 262     | 3 Mar 1909  | C.B Walker, publisher, The American Jeweler to C.P. Steinmetz . Wants      |
| 0.60    | 4.14 4.000  | to know practical limits on the proportions of electromagnets.             |
| 263     | 4 Mar 1909  | S. R. Bergman, GE Lynn, to C.P. Steinmetz. Tests on direct current with    |
| 264     | 4.14 4000   | distributed winding. Results, described in letter, are "encouraging."      |
| 264     | 4 Mar 1909  | Dennison E. Matheny, School Tax Collector Scotia. Bill for 32 cents for    |
|         |             | school tax on \$200 value of "your camp name Camp Fagel."                  |

| 265-266 | 4 Mar 1909 | Charles R. Nuttes, C. Appleton Co. to C.P. Steinmetz. Requests CPS send<br>an outline of proposed book on Future of Electricity.   |
|---------|------------|--|
| 267-268 | 4 Mar 1909 | C.P. Steinmetz to J.T. Marshall, GE Harrison Works. CPS disagrees with<br>Marshall's results on blackening of tungsten lamps. Suggests changes in<br>tests.  |
| 269     | 5 Mar 1909 | Albert L. Pearson, AIEE, to C.P. Steinmetz. Lecture arrangements.  |
| 270-275 | 5 Mar 1909 | <ul> <li>C.P. Steinmetz to F.C. Pratt, GE. Present system of limiting admission to the engineering staff to college graduates results in wasted effort by our engineers in recruiting, "did not improve the reputation of the company, was harmful to the college, was more or less resented, and still most of the better graduates did not come to us, but took positions offering higher pay." At present "supply exceeds demand" and we can go back to practice of 10-15 years ago of asking professors to recommend their best students to us. "Open up test department to "all who have the required knowledge", not just graduates. Non-graduate "who has worked up the knowledge" has advantage in "common sense" over average college graduate. It is also now safe to let test men enter the design department, since nothing now done there is so "confidential or secret" as to be easily leaked by these men if they leave GE. Design work will make these me favorable to GE wherever they go. "I remember this from my own case: it was only accidental that I came with General Electric, and my own preference would have been strongly in favor of Westinghouse, as in my work at Eickemeyer a small Westinghouse machine and Westinghouse apparatus. In general, Westinghouse Company has always been more liberal in this respect". Also "Regarding the third point, our relation to foreign engineers, I do not believe we can be expected to run an international charitable institution, and therefore see no reason why we should admit foreigners on equal terms with Americans An exception hereto I would recommend only in case of countries in the early development of their industry, as Japan, where I can see a considerable advantage particularly of the General Electric Company The same applies to south America, Brazil, etc but I fail to see any object of educating for instance German or English engineers to go back and practice what they have learned from us."</li> </ul> |
| 276-278 | 5 Mar 1909 | C.P. Steinmetz to Thomas Sloss, Cedar Rapids and Iowa City Railway   |
|         |            | and Lighting Co. Suggestions on grounding of transformers, per<br>request.   |

| 279     | 6 Mar 1909  | C.P. Steinmetz to Ernest Merritt, American Physical Society. GE men "I  |
|---------|-------------|---|
|         |             | would expect to be interested in the Science of Physics" are E.E.F.   |
|         |             | Creighton, W.L.R. Emmet, W.S. Andrews, E.J. Berg, J.A. Capp, A.H. Kruesi,   |
|         |             | E.B. Raymond, E.W. Rice, Jr., M.P. Rice, L.T. Robinson, D.B. Rushmore,  |
|         |             | J.B. Taylor, W.R. Whitney.  |
| 280     | 6 Mar 1909  | J.L.R. Hayden to Albert L. Pearson, AIEE. Lecture arrangements.   |
| 281     | 6 Mar 1909  | C.P. Steinmetz to J.J. Brophy, GE. Order of storage batteries.  |
| 282     | 8 Mar 1909  | C.P. Steinmetz to J.M. Darke Seeks results of analysis of silicon-carbon rods.  |
| 283     | 8 Mar 1909  | A.E. Kennelly, Professor of Electrical Engineering, Harvard, to C.P.<br>Steinmetz. Acknowledges receipt of "Mr. Raymond's interesting<br>communication on the temperature measurement of electrical<br>apparatus" and looks forward to CPS visit 17 Mar 1909. |
| 285-287 | 8 Mar 1909  | C.P. Steinmetz to E.J. Berg, GE. Comments on design of NY Edison 8000   |
|         |             | KW turbo alternator. ""The new design appears to me a decidedly<br>better and safer machine." Suggests further detailed improvements and<br>investigations.   |
| 288     | 8 Mar 1909  | C.P. Steinmetz to S.R. Bergman, Lynn. Acknowledges receipt of letter re<br>direct current motor with distributed field windings, and requests<br>meeting 18 Mar at Lynn.  |
| 289     | 8 Mar 1909  | C.P. Steinmetz to C.A. Kenyon, Book Department McGraw Publishing.<br>Suggests meeting in Brooklyn at AIEE meeting to clear up<br>"misunderstanding" re Theoretical Elements of Electrical Engineering.  |
| 290     | 8 Mar 1909  | C.P. Steinmetz to R.W. Pope, Secretary, AIEE. Accepts position on AIEE<br>"Law Committee".  |
| 291     | 8 Mar 1909  | C.A. Kenyon, McGraw Publishing to C.P. Steinmetz. Will meet CPS at his hotel.   |
| 292     | 10 Mar 1909 | C.P. Steinmetz to A.E. Kennelly, Harvard. Will arrive Boston 17 Mar.  |
| 293     | 10 Mar 1909 | C.P. Steinmetz to C.A. Kenyon, McGraw Publishing. Confirms meeting at hotel.  |
| 294     | 10 Mar 1909 | C.P. Steinmetz to James G. Biddle, Philadelphia. Seeks catalog of Hilger<br>Wavelength Spectrometers.   |
| 295     | 10 Mar 1909 | C.P. Steinmetz to Dennison E. Mattheny, Tax Collector Scotia. Sends<br>payment for half of tax bill, suggests collection of other half from joint<br>owner J.L.R. Hayden.   |
| 296     | 10 Mar 1909 | C.P. Steinmetz to W.C. Fish, Lynn. Does not understand why Mr. Darke<br>is now saying that cost of new silicon-carbon rods would be 10 times as<br>high as old rods, which would "exclude the new rods from use."   |
| 297     | 11 Mar 1909 | C.P. Steinmetz to Walton P. Lewis. Telegram. "Sorry unable to be in time for dinner."   |
| 298     | 15 Mar 1909 | C.P. Steinmetz to C.B. Davis, Boston Office. Trip arrangements.   |
| 299     | 15 Mar 1909 | C.P. Steinmetz to T.C. Martin, Editor, Electrical World. Enclosed is a short article on "Even Harmonics in Alternating Current Circuits", which "you may use in the Electrical World. "   |

| 300       | 15 Mar 1910 | C.P. Steinmetz to E.J. Mauger., GE. IN answer to letters, aluminum and iron are the only metals safe for use in the preparation of food.   |
|-----------|-------------|--|
| 301       | 27 Feb 1909 | F.H. Gale, GE Supply Dept. to C.P. Steinmetz. Seeks comments on letters<br>with "claim that our cooking utensils are liable to develop poisonous<br>compounds."  |
| 301a-301b | 9 Feb 1909  | W.S. Andrews, GE, to F.H. Gale, GE. "Our present pint and quart water<br>heaters are made of tinned copper." This can lead to food that is<br>"contaminated" or "positively poisonous". Suggest aluminum or "white<br>enamel   |
| 301c      | 2 Feb 1909  | F.C. Sargent EE, Malden Electric Co. to J.P. Felton, Supply Dept, GE. A<br>"child was made quite sick" after use of a GE pint hot water device on<br>which scale containing lead was found. "I was led to believe these<br>devices were made of aluminum."   |
| 302       | 15 Mar 1909 | C.P. Steinmetz to Charles R. Nutter, D. Apleton & Co. Cannot find time<br>now to write outline of book on Future of Electricity.   |
| 303       | 15 Mar 1909 | C.P. Steinmetz to E.E. Pope, AIEE. Enclosed answer to criticisms of CPS<br>Prime Movers paper. ""If my answer is somewhat sharp, I am sorry, but<br>these gentlemen have brought a sharp answer on themselves. They<br>should have thought before they criticized." [The discussants, Mr.<br>Longwell and Mr. Lucke, had criticized what CPS presented as<br>elementary and well known, and his assumptions as arbitrary]. |
| 304-306   | 15 Mar 1909 | C.P. Steinmetz to C.E. Walker, Hazlitt & Walker, Chicago. IN answer to<br>his question, there is no limit to the force of electromagnets, it is<br>merely a question of size. Includes details.  |
| 307       | 16 Mar 1909 | J.L.R. Hayden to Frank Arthur, GE. Shop order for three signs.   |
| 308       | 16 Mar 1908 | C.P. Steinmetz to W.B. Curtiss, GE. Mr. J.T. Appleton has taken up work<br>in CPS laboratory after sickness. Resume his pay of \$10/week.  |
| 309       | 16 Mar 1909 | C.P. Steinmetz to W.B. Curtiss. Explains that J.T. Appleton's absence was the result of an accident. Has been in CPS employ since June 1907.   |
| 310       | 16 Mar 1909 | C.P. Steinmetz to C.A. Kenyon McGraw Publishing. "I herewith return<br>you by express the manuscript of my third edition of Theoretical<br>Elements."  |
| 311       | 17 Mar 1909 | C.P. Steinmetz to Parker House, Boston. Reserve room with bath tonight.  |
| 312       | 18 Mar 1909 | Fritz Krog, McClure's Magazine to C.P. Steinmetz. Requests interview<br>on subject of the coal supply.   |
| 313       | 18 Mar 1909 | John Wiley and Sons to C.P. Steinmetz. Have you received the complementary copy of Karapetiff's Experimental Electrical Engineering we sent you?   |
| 314       | 19 Mar 1909 | S.D. Ashley, Secretary, Board of Trade of Schenectady C.P. Steinmetz.<br>"We are in receipt of your application for membership in the Board of<br>Trade and at the last meeting you were elected a member. (Stationery<br>lists Board of Trade's Officers and Trustees)  |

| 315     | 20 Mar 1909   | D.B Rushmore, Engr. GE Power & Mining Dept. to F.R. Whittlesey.           |
|---------|---------------|---|
|         |               | "would say that the Lynn Works now have the silicon resistance rod        |
|         |               | situation well in hand and we expect they will soon be able to            |
|         |               | manufacture 2" rods having proper resistance for our multigap             |
|         |               | lightning arresters."   |
| 316-317 | 20 Mar 1909   | George T. Feva, EE, Columbia. Wants Steinmetz to meet with Dr. Lucke      |
|         |               | re discussion of CPS paper on Prime Movers, and "the inconsistencies      |
|         |               | which seem to appear as between his discussion and yours." "It is not     |
|         |               | well for readers of the [AIEE] Transactions to come across wide           |
|         |               | differences in facts."  |
| 318     | 22 Mar 1909   | C.P. Steinmetz to R.D. Ashley, Schenectady Board of Trade. CPS will       |
|         |               | send dues. "Please let me know what the dues are."                        |
| 319     | 22 Mar 1909   | C.P. Steinmetz to A.W. Burchard, New York Offices GE. Regarding trade     |
|         |               | name for tungsten lamp "I believe the name "kromak is horrible." Even     |
|         |               | "Get" lamp, like Gem [for Whitney's GE metallic carbon lamp] would be     |
|         |               | better. [Believe name eventually chosen was Mazda].                       |
| 320     | 22 March 1909 | C.P. Steinmetz to Chicago Varnish Co. Please send a quart of Navalite.    |
| 321     | 22 Mar 1909   | C.P. Steinmetz to Fritz Krog, McClure's Magazine. Will do interview on    |
|         |               | coal supply. Visit me at my private laboratory, Wendell Ave,              |
|         |               | Schenectady.  |
| 322-324 | 22 Mar 1909   | C.P. Steinmetz to R.W. Pope, 22 Mar 1909. CPS unwilling to modify         |
|         |               | either his discussion of Mr. Murray's paper on electric railroads, or his |
|         |               | reply to discussion of his prime movers papers.                           |
| 325     | 22 Mar 1909   | C.P. Steinmetz to C.F. Sever, Columbia. "Ishall find it very difficult to |
| 010     |               | adjust the differences between Prof. Lucke's discussion of my paper       |
|         |               | and may statements by personal conference I am not very much in           |
|         |               | favor of thereof either."   |
| 326     | 22 Mar 1909   | C.P. Steinmetz to John Wiley & Sons. Acknowledges receipt of              |
|         |               | Karapetoff's book.  |
| 327     | 22 Mar 1909   | A.A. Kenyon, McGraw Publishing, to C.P. Steinmetz. Editing of             |
|         |               | Theoretical Elements of Electrical Engineering."                          |
| 328     | 23 Mar 1909   | R.S. Lane, McGraw Publishing to C.P. Steinmetz. Unable to locate          |
|         |               | "Electrical Engineering mathematics" referred to in CPS, AC               |
|         |               | Phenomena.  |
| 329     | 24 Mar 1909   | C.P. Steinmetz to James J. McKenna, NY City. "My White car has now        |
|         |               | arrived and I am ready to insure same." [The White Steamer was            |
|         |               | manufactured by the White Car Co. in Cleveland from 1900-1909.            |
|         |               | There does not seem to be a White electric car.]                          |
| 330     | 24 Mar 1909   | C.P. Steinmetz to C.A. Kenyon, McGraw Publishing. Terminology in          |
|         |               | book.   |
| 331     | 24 Mar 1909   | C.P. Steinmetz to R.S. Lane, McGraw Publishing. Regarding CPS lectures    |
|         |               | on "Electrical Engineering Mathematics."                                  |
| 332     | 25 Mar 1909   | C.P. Steinmetz to Eimer & Abend, NY City. Order for materials.            |

| 333     | 25 Mar 1909  | C.P. Steinmetz to Robson & Adee, NY City. Order for "Mars as an Abode of Life" by Percival Lovell.  |
|---------|--------------|---|
| 334     | 26 Mar 1909  | C.P. Steinmetz to W.B. Curtiss, GE. Place J.T. Appleton on my roll temporarily.   |
| 335     | 29 Mar 1909  | C.P. Steinmetz to H. Rogers, Harrison Works. Requisition for a rotating pump.   |
| 336     | 29 Mar 1909  | C.P. Steinmetz to C.A. Kenyon, McGraw Publishing. Teminology for book.  |
| 337     | 29 Mar 1909  | C.P. Steinmetz to McGraw Publishing. Please send "Design and<br>Equipment of Small Chemical laboratories" by Richard E. Mead.   |
| 338     | 30 Mar 1909  | C.P. Steinmetz to G. Faccioli, Pittsfield. Will visit Pittsfield "to see the interesting high voltage work you are making."   |
| 339     | 30 Mar 1909  | C.P. Steinmetz to A.W. Henshaw, GE. Recommends Union graduate<br>Augustine Marx as a "first class reliable and capable man" for position<br>in Henshaw's department.  |
| 340     | 31 Mar 1909  | J.B. Perrine, Automobile Clearing House, to JL. Hayden. "Are you going to send us an order for a model "F" or a model "G" White Steamer.  |
| 341     | 31 Mar 1909  | Adolf Westman, GE Railway Drafting Dept, Schenectady to C.P.<br>Steinmetz. "For the past few years I have been working on the problem<br>of single phase action, and I believe to have perfected a system." |
| 342     | 1 Apr 1909   | J.L. Hayden to J.M. Darke, Lynn. "When do expect to ship rods?"   |
| 343-344 | 3 Apr 1909   | J.M. Darke, Lynn to J.L. Hayden. Have shipped rods. We have had no success in melting silicon. Dr. Weintraub is now trying.   |
| 345     | 3 Apr 1909   | Moses King, Publisher, King's Booklets to C.P. Steinmetz. Proof copy of CPS page in booklet "Great Electricians."   |
| 346     | 3 Apr 1909   | C.P. Steinmetz to J.J. McKenna, Insurance. Payment for insurance on my automobile, "a white car No 7046." [Steinmetz's1909 steam car still exists in 2016 and can be Googled under White Steinmetz car]     |
| 347     | 5 Apr 1909   | J.L. Hayden to J.B. Perrine, The Automobile Clearing House. "I have bought a new model "O" White Steamer."  |
| 348     | 5 Apr 1909   | C.P. Steinmetz to C.A. Kenyon, McGraw Publishing. Curves for book,  |
| 349     | 5 April 1909 | C.P. Steinmetz to Adolf Westman, GE Ry. Drafting Dept. Received your<br>letter and will be glad to see you some afternoon in my private<br>laboratory."   |
| 350     | 8 Apr 1909   | C.P. Steinmetz to J.M. Darke. Send us some of the [silicon] buttons from your electric furnace.   |
| 351     | 8 Apr 1909   | C.P. Steinmetz to R.W. Pope, AIEE. "I return you corrected proof of my discussion on Mr. Murray's paper."   |
| 352     | 8 Apr 1909   | C.P. Steinmetz to E.W. Rice. Attached I send you copy of a report of some work in progress in my laboratory." [report not attached]   |
| 353     | 12 Apr 1909  | C.P. Steinmetz to W.C. Fish, Lynn. Expect to be in Lynn Apr 15.   |
| 354     | 13 Apr 1909  | C.P. Steinmetz to Dr. Adams, Harvard. Telegram. Arrive 3:40 PM.   |
| 355     | 13 Apr 1909  | C.P. Steinmetz to Parker House, Boston. Reserve me room with bath.  |

| 356      | 13 Apr 1909 | C.P. Steinmetz to Moses King, Publisher. Returns proofs. "please send me a copy of the Edition deLux".   |
|----------|-------------|--|
| 357      | 14 Apr 1909 | C.P. Steinmetz to E. Rogers, GE Harrison Works. When are you going to ship rotating oil pump?  |
| 358      | 19 Apr 1909 | C.P. Steinmetz to J.J. Brophy, GE. Place requisition to cover attached order.  |
| 359      | 21 Apr 1909 | E.R. Berry, GE, West Lynn, to C.P. Steinmetz. Requests ten or twelve<br>booklets advertising Steinmetz "book from Robson & Adee", and<br>hopes to visit CPS.   |
| 360-361  | 22 Apr 1909 | E.G. Berg GE to H.G. Reist, GE, referred to C.P. Steinmetz, who was on cc<br>list. "Serious difficulties are met with parallel operation of some 1500<br>KW and 3000 KW turbo-generators operating in different stations in<br>Detroit." May require equipping our turbo-generators squirrel cage<br>windings  |
| 362-362a | 22 Apr 1909 | C.M. Grier, GE Lynn, to C.P. Steinmetz. Problems with mercury arc rectifiers. Problem detailed in Technical Report 10399, attached.  |
| 363      | 22 Apr 1909 | G.F. Morrison, Manager, GE Lamp Works, Harrison, to H.A. Oudin,<br>Manager, GE Foreign Department. Will ship Steinmetz oil pump today.   |
| 364      | 23 Mar 1909 | Charles McClair, GE, to J.L.R. Hayden. Seeks more information on packet docket filed in Haden's name on aluminum alloys for electrodes in aluminum cells.  |
| 365-366  | 26 Apr 1909 | W.F. Foster to E.J. Berg. Parallel operation of turbo generators.<br>Disagrees with Berg's idea of need for squirrel cage windings.  |
| 367      | 26 Apr 1909 | H.G. Reist to E.J. Berg. Are squirrel cage windings needed on 25 cycle as well as 60 cycle turbo-generators.   |
| 368-369  | 27 Apr 1909 | C.P. Steinmetz to E.J. Berg. Hunting in parallel operation of turbo<br>alternators. "The use of a squirrel cage low resistance winding would<br>stop the hunting, but it also would increase the secondary short circuit<br>current, and this is already bad enough in these machines. "<br>Recommends instead a reactive coil between the stations. Explains<br>cause of the problem. |
| 370      | 27 Apr 1909 | C.P. Steinmetz to J.L. Broderick, GE. "essential to have Mr. Appleton's place filled" due to "considerable work" pending in laboratory.  |
| 371      | 27 Apr 1909 | C.P. Steinmetz to E.A. Johnson, GE. Please send me four 6-volt tungsten lamps.   |
| 372      | 27 Apr 1909 | C.P. Steinmetz to D.R. Pratt, Elmira Mutual Bldg Loan Assn. Accepts offer to close off mortgage of CPS house against 150 shares of loan assn. Sends \$505.78.  |
| 373      | 28 Apr 1909 | D.O. Thomas to C.P. Steinmetz. Progress on oil pump order.   |
| 374      | 28 Apr 1909 | C.P. Steinmetz to E, R, Berry, Lynn Works. "will be glad to see you" in<br>Schenectady.  |
| 375      | 1 May 1909  | C.P. Steinmetz to Wilmer Atkinson Co., Philadelphia. Payment for<br>Briggle Orchard Book and Briggle Garden Book.  |
| 376      | 1 May 1909  | C.P. Steinmetz to D.C. Vrooman, GE. Rotating oil pump has been delivered.  |

| 377     | 3 May 1909  | Frank J. Sprague, New York City, to C.P. Steinmetz "you are too            |
|---------|-------------|--|
|         |             | generous with your checks." CPS sent the same \$19.50 payment twice.       |
| 378     | 4 May 1909  | Edward R. Berry. GE West Lynn, to J.L. R. Hayden. Will send requested      |
|         |             | arc lamp globes. "the company has closed the Boston deal which will        |
|         |             | mean something like 3000 magnetite lamps at 6.6 amperes."                  |
| 379     | 4 May 1909  | D.R. Cooper, Elmira Mutual Building and Loan, to C.P. Steinmetz. Details   |
|         |             | on Steinmetz account.  |
| 380-381 | 5 May 1909  | C.P. Steinmetz to A.G. Davis, GE Patent Dept. Patent letter on method of   |
|         |             | ventilating railway motors and transformers. Key idea is use of            |
|         |             | thermostat.  |
| 382     | 5 May 1909  | C.P. Steinmetz to Prof. E.H. Freeman, Armor Inst. Technology. Thanks       |
|         |             | for pointing out error in "Alternating Current Phenomena"                  |
| 383     | 7 May 1909  | C.P. Steinmetz to E.R. Berry, GE Lynn. Sending 2 pounds of titanium        |
|         | -           | carbide, and 25 g. of cerium fluoride to try as steadier in carbide lamp.  |
| 384     | 7 May 1909  | C.P. Steinmetz to Frank J. Sprague Acknowledges sending same check         |
|         | -           | twice.   |
| 385     | 8 May 1909  | Albert G. Davis, GE Patent Dept. to C.P. Steinmetz. Have opened patent     |
|         | -           | docket on Ventilating Railway Motors and Transformers.                     |
| 386     | 10 May 1909 | J.L. Hayden to J.M. Darke, GE Lynn. "Have you good news regarding          |
|         |             | silicon rods?"   |
| 387     | 14 May 1909 | C.P. Steinmetz to Dr. Alexander, Union College. E.J. Berg will be in the   |
|         |             | city at Commencement.  |
| 388     | 14 May 1909 | C.P. Steinmetz to D.L. Pratt, Elmira M.B.L. Assn. Seeks duplicate of       |
|         |             | certificate.   |
| 389     | 15 May 1909 | C.P. Steinmetz to Engineers Club, New York City. Telegram. Reserve me      |
|         |             | room with bath for Monday evening.   |
| 390     | 17 May 1908 | J.L.R. Hayden to White Company, New York City. Send me seven route         |
|         |             | books listed in Shite Steamer Catalogue 1909.                              |
| 391     | 19 May 1909 | C.P. Steinmetz to S.H. Blake, GE Pittsfield. Am requisitioning requested   |
|         |             | plain milk globe for standard lamp.  |
| 392     | 19 May 1909 | C.P. Steinmetz to S.H. Blake, GE Pittsfield. Kindly send us over two plain |
|         |             | milk globes for standard lamp"   |
| 393     | 21 May 1909 | C.P. Steinmetz to H. W. Darling, GE. Please send a map of the              |
|         |             | Schenectady Realty Company property, as a friend is seeking to locate      |
|         |             | there.   |
| 394     | 24 May 1909 | C.P. Steinmetz to W.F.M> Goss, Dean, Engineering, University of Illinois.  |
|         | 5           | Does not think that position at Illinois would appeal to Mr. E.J. Berg     |
|         |             | because "his present salary is far above what the University can           |
|         |             | offer"I have no doubt that he would succeed" "I suggested Mr.              |
|         |             | Hobart to Mr. Berg I have no doubt he would make a great success."         |
| 395     | 24 May 1909 | C.P. Steinmetz to C.A. Kenyon, McGraw Publishing. Terminology              |
|         | <b>,</b>    | regarding "time constant".   |
| 398     | 25 May 1909 | C.P. Steinmetz to Einer & Amend. Telegram. One domestic distilling         |
|         | <b>,</b>    | apparatus ship: Steinmetz.   |

| 399      | 25 May 1909 | C.P. Steinmetz to Manager of Shelburne, Atlantic City. Reserve single room with private bath, June 1-3.  |
|----------|-------------|--|
| 400      | 27 May 1909 | J.L.R. Hayden to W.D.K. Wright. Seeks advice on tire and water pump<br>repairs.  |
| 401-403  | 27 May 1909 | C.P. Steinmetz to E.J. Berg, GE. Cause of breakdown of 100.000 volt GE transformer. "I am rather inclined to think that our standard transformer design is not well adapted for high voltages." They are too "electrically rigid" to "withstand any high voltage shocks. Suggests possible changes to solve this problem, such as increased amount of iron, or larger coils.   |
| 404      | 28 May 1909 | C.P. Steinmetz to Manager Hotel Brighton, Atlantic City, N.J. Telegram.<br>Reserve room  |
| 405      | 28 May 1909 | C.P. Steinmetz to Eimar and Amend. Order from catalog  |
| 406-408  | 29 May 1909 | C.P. Steinmetz to E.R. Birge, GE. Advantages of 3/8" and 5/8" electrodes for magnetite arc lamp. Recommends 5/8" due to longer life.   |
| 409      | 1 June 1909 | E.J. Snow, Maple City Business School, Hornell, NY, to C.P. Steinmetz.<br>Wants facts for biographical sketch of C.P. Steinmetz.   |
| 410-416  | 2 June 1909 | C.P. Steinmetz to Nelson M. Flack, Hotel Astor, NY City. Harm of<br>ultraviolet light to eyes. C.P. Steinmetz experienced it when<br>experimenting with mercury arc lamps, and "I have not completely<br>recovered yet." Dr. Weintraub experienced even more serious effects.<br>Much detail on subject.   |
| 417      | 3 June 1909 | C.P. Steinmetz to C.a. Kenyon, McGraw Publishing. Corrected galleys.   |
| 418-419  | 4 June 1909 | J.L.R. Hayden to White Co. Automobile is "not yet satisfactory and acceptable." Details.   |
| 420      | 4 June 1909 | Paul Kenny, Kenny Electrical Mfg. Co. to C.P. Steinmetz. Requests criticism of his design for a metal mounting for use in alternating current circuits.  |
| 421      | 7 June 1909 | C.P. Steinmetz to American Steel Barrel. Co. Order for gasoline tank.  |
| 422-422b | 8 June 1909 | J.L.R. Hayden to E.D. Snow, Maple City Business School. "An outline of Dr. Steinmetz's early struggle (sic)." CPS was employed by Rudolf Eickmeyer as a draftsman at \$12.00 a week. When Steinmetz was working at drawing board, Eickemeyer came in with stain on his hands, and Steinmetz told him about a preparation that would remove the stain. "From then on Mr. Eickemeyer took a personal interest in Steinmetz." "Eickemeyer and Dr. Steinmetz did a great deal if not all of the pioneer railway work. One of the first electric railway equipments was sent to Toledo. "Dr. Steinmetz went with it and acted as motorman for several days." The Eickemeyer Company was afterwards absorbed by the General Elecrtic Company, and Dr. Steinmetz went to Lynn, Mass." Due to an oversight, Dr. Steinmetz is a practical engineer as well as a theoretical engineer, and derives his practical conclusions from a theoretical standpoint. Dr. Steinmetz is very much interested in nature and has a very even disposition" |

| 423      | 8 June 1909  | C.P. Steinmetz to Eimer and Abend. Requests catalog and 20 pounds of       |
|----------|--------------|--|
|          |              | crude potassium nitrate.   |
| 424      | 8 June 1909  | C.P. Steinmetz to Paul Kenny. Has not received Kenny's blueprint (see      |
|          |              | above).  |
| 425      | 9 June 1909  | Paul Kenny to C.P. Steinmetz. Blueprint and covering letter. with          |
|          |              | Steinmetz shorthand notes.   |
| 426-427  | 9 June 1909  | C.P. Steinmetz to J. Lyon, GE Patent Department. Test results for flame    |
|          |              | carbon electrode.  |
| 428      | 11 June 1909 | J.L.R. Hayden to American Steel Barrel Co. Telegram. When can you          |
|          |              | ship gasoline tank?  |
| 429      | 11 June 1909 | J.L.R. Hayden to American Steel Barrel Co. Request to ship gasoline        |
|          |              | tank.  |
| 430      | 11 June 1909 | C.P. Steinmetz to George E. Parson, Boston. Parson's bill for preliminary  |
|          |              | plans for addition to his house is too high.                               |
| 431      | 11 June 1909 | C.P. Steinmetz to Eimar and Amend. Receipt of two domestic distilling      |
|          |              | apparati instead of one.   |
| 432      | 11 June 1909 | C.P. Steinmetz to Paul Kenny. Describes electrical problems with           |
|          |              | Kenny's metal molding, and ways to fix them.                               |
| 433-433b | 12 June 1909 | American Publishers Association to C.P. Steinmetz. Receipt of              |
|          |              | Steinmetz's "representation for "The National Library of American          |
|          |              | Biography" and request for photograph.                                     |
| 434      | 12 June 1909 | C.P. Steinmetz to Eimer and Abend. Order of thermometers.                  |
| 435      | 14 June 1909 | J.L.R. Hayden to J.M. Darke, GE Lynn. Order of 200 lbs. of silicon.        |
| 436      | 14 June 1909 | J.L.R. Hayden to Mercantile Clearing House. Order of 2 Dow deflation       |
|          |              | tubes.   |
| 437      | 14 June 1909 | Fred M. Kimball GE to C.P. Steinmetz. Edward Kern mentioned in his         |
|          |              | Electrochemical Society talk an electrolyte known as silver fluo-silicate. |
|          |              | Has CPS heard of it? CPS shorthand.  |
| 438-439  | 15 June 1909 | C.P. Steinmetz to E.B. Raym9ond, GE. "Location of gasoline storage in      |
|          |              | our factory yard."   |
| 440      | 17 June 1909 | C.P. Steinmetz to Vacuum Oil Co. Order of 8 gallons of vacuum oil.         |
| 441      | 18 June 1909 | C.P. Steinmetz to Charles McClair, GE Patent Dept. "we have made           |
|          |              | experiments on the subject" (subject not described.)                       |
| 442      | 18 June 1909 | C.P. Steinmetz to James Wilson, U.s. Secretary of Agriculture. Requests    |
|          |              | Farmers' Bulletin on Soil Fertility.                                       |
| 443      | 18 June 1909 | C.P. Steinmetz to J.E. Dalemont, Montreal. Seeks discussion on paper       |
|          |              | "on the Value of Classics in Engineering Education" to appear in this      |
|          |              | month's Transactions (of AIEE?).   |
| 444      | 18 June 1909 | C.P. Steinmetz to Eimer and Abend. Orders catalogue of Chemicals and       |
|          |              | Drugs "as we are badly in need of them."                                   |
| 445      | 18 June 1909 | C.P. Steinmetz to D. DuBois, GE. "After looking over the sketch of the     |
|          |              | transmission system of the New Milford System, I am of the opinion         |
|          |              | that is would be extremely desirable to install two sets of aluminum       |
|          |              | arresters in the Waterbury sub-station"                                    |
| 446-447  | 18 June 1909 | C.P. Steinmetz to D. DuBois, GE. More detail on above.                     |

| 448     | 18 June 1909 | C.P. Steinmetz to F.M. Kimball, GE. Description of the electrolyte silver |
|---------|--------------|---|
|         |              | fluo-silicate, as requested above.  |
| 449     | 18 June 1909 | C.P. Steinmetz to Charles McClair, GE Patent Department. Tests show       |
|         |              | performance of "manganese of magnesium alloys: for "the aluminum          |
|         |              | cells" to be superior to pure aluminum.                                   |
| 450     | 18 June 1909 | C.P. Steinmetz to Caspar Whitney per his request for photographs of       |
|         |              | electrical farm machinery.  |
| 451-452 | 21 June 1909 | C.P. Steinmetz to F.C. Gartner, GE Patent Dept. Improvements in           |
|         |              | electrodes (for magnetite lamp)   |
| 453     | 21 June 1909 | C.P. Steinmetz to D.R. Pratt, Elmira, NY. Checks for Harry Rost and       |
|         |              | members of Hayden family.   |
| 454     | 21 June 1909 | C.P. Steinmetz to Eimer and Abend. Orders for piperazine tablets,         |
|         |              | mineral water, carbon bisulfide.  |
| 455     | 22 June 1909 | J.L.R. Hayden to E.R. Berry, GE Lynn. CPS unable to meet with Berry       |
|         |              | because he is going on vacation to the Thousand Islands.                  |
| 456     | 22 June 1909 | C.P. Steinmetz to Manager, Hotel Frontenac, Frontenac, NY. Hotel          |
|         |              | reservation.  |
| 457     | 24 June 1909 | C.P. Steinmetz to E.R. Birge, GE. Life of rectifier tubes at Camden.      |
| 458     | 24 June 1909 | C.P. Steinmetz to F.P. Fish, Boston. Seeks discussion of paper "The       |
|         |              | Value of the Classics to Engineering Education."                          |
| 459     | 24 June 1909 | C.P. Steinmetz to L.A. Hutton, Bacher & Hutton, Macleod (?). CPS will     |
|         |              | look at drawings and advise re "the arrangement is operative or not."     |
| 460     | 26 June 1909 | J.L.R. Hayden to W.D.K. Wright, White Co., Troy, NY. Problems with        |
|         |              | pilot flame for automobile.   |
| 461     | 26 June 1909 | C.P. Steinmetz to American Publishers' Association. Refusal to pay        |
|         |              | \$20.00 bill for use of CPS portrait in Encyclopedia of American          |
|         |              | Biography.  |