mately $28 and $15, respectively (Ency. Brit., s.v. “Money”). One troy ounce of % platinum-iridium wire is equivalent to approximately 378 feet of this diameter wire, or about 86 miles per hundred pounds troy (105 miles per hundred pounds avoirdupois).

This would constitute a substantial portion of the world’s production of the metal which, as Edison noted in his 1874 paper on platinum for the Operator (Doc. 489), “does not exceed two tons per year,” principally from the Ural Mountains.

The London firm of Johnson Matthey & Co., refiners of precious metals and manufacturers of platinum apparatus, advertised that its fusion process produced alloys “of the most perfect compactness, strength, and durability, and of increased resistance to the action of acid.” The company continued its experiments for Edison during the summer on platinum alloys with iridium and osmium. Johnson Matthey & Co., Paris Universal Exposition circular, Cat. 30,102, Scraps. (TAEM 27: 951–52; TAED SB796B:2–3); Johnson Matthey & Co. to TAE, 7 July 1879, DF (TAEM 50:82; TAED D7919ZBE).

Unidentified; presumably a clerk.

Edison had sent this telegram at 5:50 P.M. the previous day. Johnson and Matthey did not ship the alloys until 5 May. TAE to Johnson Matthey, 18 Apr. 1879; Johnson Matthey to TAE, 5 May, 1879; both DF (TAEM 50:40, 49; TAED D7919X, D7919ZAD).

---

May 31, 1879

Menlo Park.

Dear Father:

This month is nearly through and I hardly know where the time has gone, though I have learned and done quite an amount. Mr. was sick during the past week for three days and during that time I had a fine chance to experiment to my satisfaction.

One thing is quite noticeable here that the work is only a few days behind Mr. Edison, for when he was sick the shop was shut evenings as the work was wanting to keep the men busy. I had a note from Louisa saying that she expected to make me a visit. I expected her here yesterday but she did not come.

There still is hope that this summer will see a public exhibition of the electric light. There are thousands of difficulties to be overcome yet before it can be given to the public and Mr. Edison will overcome them if any does. I have not in the least lost my faith in him for I see how wonderful the powers he has, are for invention. He holds himself ready to make anything that he may be asked to make if it is not against any law of nature. He says he will either have what he wants or prove it impossible.
If he does not have a lamp to use electricity he will show that with present knowledge it cannot be had.

I hope to go home for a visit in about three weeks, and hope to find the family health good.

I am with much love Your Son

Francis R. Upton.

ALS, NjWOE, Upton (TAEM 95:527; TAED MU014).

1. Five days previously, Upton had reported to his father that he was “busy now with measuring currents, using two instruments that have just been made after my drawings. You see I have a chance to learn how to make instruments; and see them made. I shall be an expert on dynamo-electrical machines in the course of a short time for I see so many various trials of different devices. Nearly each week there is a new experiment to be tried.” Upton’s experiments were probably related to his effort to determine the voltage of a standard cell for use in dynamometer tests of generators. Upton to Elijah Upton, 22 April 1879, Upton (TAEM 95:525; TAED MU013); Upton 1880, 180; Cat. 1308:139 (Order Nos. 134–35), Batchelor (TAEM 90:736; TAED MBN003:43); N-79-04-21:50–153, N-78-12-20:16–35, both Lab. (TAEM 30:748–96, 29:807–16; TAED NO17:23–75, NO08:9–18).

2. The New York Herald reported that Edison had been confined to bed by a severe cold. His principal assistants continued to work under Batchelor’s direction but the Herald likened his absence to that “of the star performer from the cast of the play—the performance may go on, but the life of the acting is not there.” “Edison’s Electric Light,” New York Herald, 27 April 1879, p. 8, Cat. 1241, item 1173, Batchelor (TAEM 94:479; TAED MBSB21173a).

3. Probably Louisa Farley, the twenty-year-old daughter of Upton’s sister, Maria. Vinton 1874, 432–33.