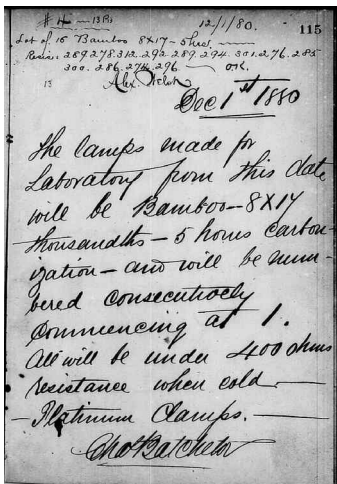
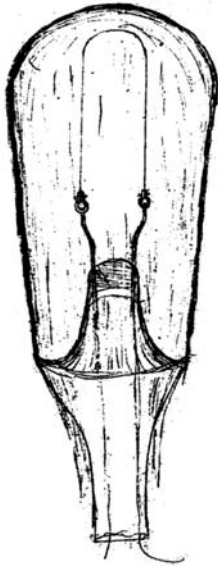




-2027-

Notebook Entry:
Electric Lighting



Drawing of 12 October of
the proposed new shape of
"Edison's Electric Lamp."

[Menlo Park,] Dec 1st 1880

The lamps made for laboratory from this date will be Bamboo— 8×17 thousandths—5 hours carbonization—and will be numbered consecutively commencing at 1. All will be under 400 ohms resistance when cold—¹ Platinum clamps.—²

Chas Batchelor

X, NjWOE, Lab., N-80-09-28:115 (*TAEM* 36:515; *TAED* N106:56).
Written by Charles Batchelor.

1. This limit was presumably to avoid excessive "electrical carrying"; see Doc. 2033.

2. It is not clear what prompted Batchelor to issue this directive but during the preceding week he had received from the lamp factory dozens of bast and bamboo filaments carbonized in slightly varying ways. The decision to use only platinum clamps was made on or before 26 November, when Charles Mott reported that glass blowers in the factory were "removing the carbons from four or five hundred lamps in which they had been secured by clamps other than Platinum to put them in Platinum clamps and Pear shaped globes with wires through the flat seal." This form of globe was suggested in mid-October as being less expensive. Edison adopted the design after a satisfactory trial a few days later, and at the end of November he applied for patent protection on it. N-80-09-28:109-15; Mott Journal N-80-07-10:222, 160, 163; N-79-08-28:205; all Lab. (*TAEM* 36:512-15, 37:413, 382-83; 35:1154; *TAED* N106:53-56, N117:111, 80-81; N088:100); U.S. Design Pat. 12,631.

During the second week of December experiments were made with fractional lengths of the standard carbon "for use in series or instead of one across in multiple arc." On 15 December Alex Welsh, who assisted in the lamp factory, noted that "From this day all regular carbons are to be distinguished as follows. A. 6 in[ches]— B 3— C. 2. D $1\frac{1}{2}$ by direction of Mr. Batchelor." Subsequent records of lamp tests generally use these letter designations. Mott Journal N-80-07-10:245, N-80-09-28:129-35, both Lab. (*TAEM* 37:425, 36:522-25; *TAED* N117:123, N106:63-66).