BEFORE leaving New York, King Kalakaua called on Mr. Edison. He was accompanied on his visit by the Attorney-General of his island kingdom, Mr. Armstrong, and by an intimate friend residing in this city, whose acquaintance he made in Vienna. Punctually at nine o'clock in the evening his majesty alighted from the carriage of his friend in front of the Fifth-avenue mansion. He was introduced to Mr. Edison, who escorted him through the building, and by means of models, maps, drawings, and the 55 lamps in operation, explained the theory of the conversion of steam-power into electricity and the generation of light in the carbon loop.

Escorting his distinguished visitor to the library, Mr. Edison first explained the science of the light, and then, by reference to maps of the district that his engineers are preparing for the experiment, the application of his system to the practical requirements of a city. The region to be lighted will require 22,000 lights, all of which are to be supplied from a central station in Pearl street, where 12 engines of 185 horse power are to be placed. Ten of these will be in constant operation, the other two being held in reserve to meet the emergencies of accident. The engines will be run at a rate of speed equal to that of a locomotive at 60 miles an hour, and a new feature of the system is that no belts are employed to transmit the power to the dynamo-electric generators, and the power is applied directly, avoiding the irregularity and vibration arising from the slipping of the belt which seems inseparable from the old practice. The mains consist of large iron pipes, in which the crescent-shaped positive and negative conductors are carried, being insulated from such by means of a non-conducting material with which the pipes are filled when in a pasty condition, induced by heat, but which hardens like a concrete pavement in the process of cooling. These mains in their passage through the streets are all connected with each other by means of ingenious connection boxes, the whole forming a subterranean net-work of electrical conductors comparable to the capillary circulation in the skin of an animal body.

His Majesty listened with intense but almost silent interest, and examined the cross-sections of the electrical mains and the interior arrangement of the connection boxes with critical closeness, now and then asking a question in the purest English imaginable, and with a voice that was strikingly low, mellow, and muscial, and yet so sharply defined in the articulation of the consonants as to impress the ear at an unusual distance. He seemed particularly interested in the statement that after steam power had been transformed into electricity and carried to a great distance in that form it could again be converted into motive power by means of an electrical motor, and sold to customers for the purpose of running elevators or operating hoist-ways. His eyes lighted when he was told that one of the most profitable departments of the business of the company would be the sale of power to manufactories and business firms in quantities as small as a single horse-power, costing, under circumstances of ordinary use, not more than eight cents a day.

From the library Mr. Edison led the way to the front parlor, brilliantly lighted. Pressing the toe of his shoe upon a knob projecting from the floor, every lamp was instantaneously extinguished and as suddenly blazed out again. The inventor next turned the stop-cock of a single lamp among the group and extinguished it. The party then ascended to the upper floor, where more wonders were in store, and then descended two flights beneath the street level, where, in a low-ceiled vault, a small engine was operating, with nearly absolute silence, a generator whose cylinder performed 1200 revolutions per minute. After inspecting every detail, his Majesty took leave of the inventor, and repaired to his carriage. One of the points that appeared to impress him most was the steadiness of the light, and its freedom from vibration.—*N. Y. Times.*

METEOROLOGICAL REPORT FOR NEW YORK CITY FOR THE WEEK ENDING SEPT. 24, 1881.

Latitude 40° 45′ 58″ N.; Longitude 73° 57′ 58″ W.; height of instruments above the ground, 53 feet; above the sea, 97 feet; by self-recording instruments.

SEPTEMBER.	BAROMETER. MEAN FOR THE DAY. Reduced to Freezing.	BAROMETER. MAXIMUM. Reduced to Freezing.	BAROMETER. MAXIMUM. Time.	BAROMETER. MINIMUM. Reduced to Freezing.	BAROMETER. MINIMUM. Time.	THERMOMETERS. MEAN. Dry Bulb.	THERMOMETERS. MEAN. Wet Bulb.	THERMOMETERS. MAXIMUM. Dry Bulb.	THERMOMETERS. MAXIMUM. Time.	THERMOMETERS. MAXIMUM. Wet Bulb.	THERMOMETERS. MAXIMUM. Time.	THERMOMETERS. MINIMUM. Dry Bulb.	THERMOMETERS. MINIMUM. Time.	THERMOMETERS. MINIMUM. Wet Bulb.	THERMOMETERS. MINIMUM. Time.	MAXI'M In Sun.
Sunday, 18--	30.094	30.228	0 a. m.	29.964	12 p. m.	68.3	60.6	78	3 p. m.	64	5 p. m.	53	6 a. m.	53	6 a. m.	142.
Monday, 19--	29.831	29.964	0 a. m.	29 788	4 p. m.	75.0	65.3	84	3 p. m.	70	6 p. m.	64	6 a. m.	60	6 a. m.	140.
Tuesday, 20--	29.869	29.898	9 a. m.	29.810	5 p. m.	73.3	63.3	83	4 p. m.	69	4 p. m.	63	6 a. m.	58	7 a. m.	134.
Wednesday, 21--	29.999	30.068	12 p. m.	29.892	0 a. m.	60.7	59.3	73	4 p. m.	64	4 p. m.	62	12 p. m.	56	7 a. m.	130.
Thursday, 22--	30.069	30.108	10 a. m.	30.012	5 p. m.	66.6	62.3	70	4 p. m.	65	4 p. m.	60	5 a. m.	59	5 a. m.	87.
Friday, 23--	29.940	30.046	0 a. m.	29.882	4 p. m.	74.6	67.3	85	4 p. m.	70	2 p. m.	67	6 a. m.	64	6 a. m.	139.
Saturday, 24--	29.985	30.004	9 a. m.	29.942	0 a. m.	77.3	68.3	85	4 p. m.	73	4 p. m.	68	6 a. m.	64	6 a. m.	141.

Mean for the week	29.969	inches.	Dry. 71.7 degrees — Wet. 63.7 degrees.
Maximum for the week at 0 a. m., Sept. 18th	30.228	"	Maximum for the week, at 4 pm. 24th 85. " at 4 pm 24th, 73. "
Minimum " at 4 p. m., Sept. 19th	29.788	"	Minimum " " 6 am. 18th 53. " at 6 am 18th, 53. "
Range	.440	"	Range " " 32. " 20. "

SEPTEMBER	WIND. DIRECTION. 7 a. m.	2 p. m.	9 p. m.	VELOCITY IN MILES. Distance for the Day.	FORCE IN LBS. PER SQR. FEET. Max.	Time.	HYGROMETER. FORCE OF VAPOR. 7 a. m.	2 p. m.	9 p. m.	RELATIVE HUMIDITY. 7 a. m.	2 p. m.	9 p. m.	CLOUDS. CLEAR, 0 OVERCAST. 10. 7 a. m.	2 p. m.	9 p. m.	RAIN AND SNOW. DEPTH OF RAIN AND SNOW IN INCHES. Time of Beginning.	Time of Ending.	Duration. h. m.	Amount of water	OZONE. 0 10
Sunday, 18-	n. n. e.	n.	n. e.	60	¼	9.00 am	.380	.436	.482	76	48	66	0	1 cir. s.	4 cir. cu.	-----	-----	-----	--	2
Monday, 19-	n.	n. n. e.	n.	130	1½	12.00 m	.425	.447	.628	64	39	72	2 cir. cu.	2 cir. s.	5 cu.	-----	-----	-----	--	8
Tuesday, 20-	n. w.	n. n. w.	w.	90	1¾	2.00 am	.403	.438	.519	67	41	60	0	2 cir. cu.	3 cir. cu.	-----	-----	-----	--	8
Wednesday, 21-	n. e.	e. s. e.	s. s. e.	152	1¼	7.30 am	.356	.390	.483	62	50	78	0	0	0	-----	-----	-----	--	0
Thursday, 22-	s. s. e.	s.	s. s. w	153	2¼	7.20 pm	.447	.529	.543	77	74	79	3 cir. cu.	10	10	-----	-----	-----	--	0
Friday, 23-	w. s. w.	s. w.	w. s. w.	236	7	1.40 pm	.556	.558	.604	84	49	72	10	6 cir. cu.	0	-----	---- -	-----	--	0
Saturday, 24-	w.	s.	s. s. w.	129	¾	3.30 pm	.529	.583	.612	75	50	62	1 cir.	4 cir. cu.	0	-----	---- -	-----	--	0

Distance traveled during the week	950	miles.	Total amount of water for the week .00 inch.
Maximum force	7	lbs.	Duration of rain 00 hours, 00 minutes.

DANIEL DRAPER, Ph. D.

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