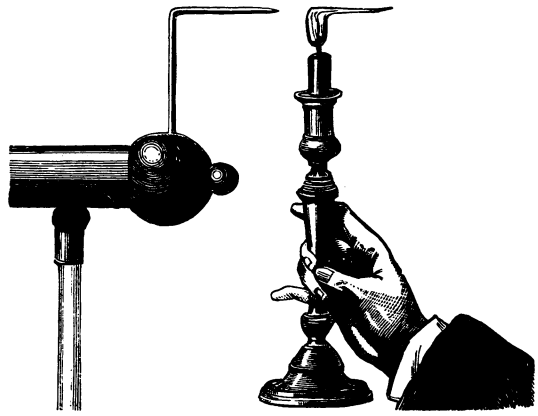
no circumstances or conditions be produced by calorific influence.



☞PLATE.

If a metallic rod terminating in a point be attached to the conductor of an electrical machine, electricity escapes in large quantities from the point. A continuous current is thus kept up and the flame of a taper, if placed in front of the current, is blown in a horizontal direction. If the point be removed from the conductor, a current of wind issuing from the conductor may be felt by the hand. Wind is thus *manufactured* on a small scale.

The ancient vague presentiment of electric and magnetic action is verified in our times. KUOPHO, a Chinese physicist of the third century, says: "the magnet attracts iron as amber does the smallest grain of mustard seed. It is like *a breath of wind* which mysteriously penetrates through both and communicates itself with the rapidity of an arrow."

We have seen the marks of electrical action in the cases cited, and since we know something of the subtlety of the agent—that it may be "amassed, condensed, and rarified," that it is not loose and wandering, and the mere plaything of fortuitous forces, as the atmosphere is supposed to be, but, on the contrary, has close and most sympathetic adjustment with the earth-force; and that *it* is the invisible hand that holds and manages the grosser atmospheric matters;—since we know this, we are now brought to the study of a great cosmical system.

NICKEL ELECTROTYPES.—Nothwithstanding the ease with which nickel is deposited now-a-days, it has required years of careful work to learn how to deposit a sufficiently thick and solid layer of nickel on wax or gutta-percha impressions. The *Revue Industrielle* says that the difficulties have now been successfully overcome, as the nickel electrotypes shown at the recent Paris Electrical Exhibition prove. Although costing double the price of copper electrotypes those made of nickel have the advantages of allowing a much greater number of impressions to be made, of not being so easily injured by oxidation, and of permitting colored inks which attack copper to be used.

METEOROLOGICAL REPORT FOR NEW YORK CITY FOR THE WEEK ENDING DEC. 10, 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.

DECEMBER.	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, 4	30.109	30.148	12 p. m.	30.078	1 p. m.	37.6	37.0	39	1 p. m.	38	1 p. m.	35	3 p. m.	35	3 p. m.	47.
Monday, 5	30.200	30.208	9 p. m.	30.148	0 a. m.	39.0	36.6	43	2 p. m.	39	2 p. m.	35	11 p. m.	35	12 p. m.	100.
Tuesday, 6	29.986	30.172	0 a. m.	29.712	12 p. m.	39.3	37.0	44	3 p. m.	40	3 p. m.	32	7 a. m.	32	7 a. m.	74.
Wednesday, 7	29.485	29.712	0 a. m.	29.410	2 p. m.	41.0	38.3	44	3 a. m.	41	3 a. m.	35	12 p. m.	35	12 p. m.	52.
Thursday, 8	29.855	29.958	12 p. m.	29.578	0 a. m.	33.3	31.0	37	3 p. m.	33	0 a. m.	30	9 a. m.	28	9 a. m.	94.
Friday, 9	29.981	30.008	12 p. m.	29.950	5 a. m.	37.7	35.0	43	2 p. m.	38	2 p. m.	32	7 a. m.	31	7 a. m.	95.
Saturday, 10	30.193	30.362	12 p. m.	30.008	0 a. m.	28.6	27.7	38	0 a. m.	35	0 a. m.	22	12 p. m.	22	12 p. m.	96.

		Dry.	Wet.
Mean for the week	29.972 inches.	36.6 degrees	34.6 degrees.
Maximum for the week	at 12 p. m., Dec. 10th 30.362 "	at 3 pm, 6th 44. "	at 3 am 7th, 41. "
Minimum "	at 2 p. m., Dec. 7th 29.410 "	" 12 pm, 10th 22. "	at 12 pm 10th, 22. "
Range	.952 "	" 22. "	19. "

DECEMBER.	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 30
Sunday, 4	n. n. e.	n. n. e.	n. e.	198	3¾	3.30 pm	.199	.229	.207	90	100	90	10	10	0	0 am	6 pm	18.00	.50	7
Monday, 5	n. e.	e.	n.	170	3¾	5.50 am	.191	.186	.186	90	67	81	4 cir. cu.	1 cu. s.	0	-----	-----	----	--	1
Tuesday, 6	n.	s. s. w.	s.	87	3	5.30 pm	.181	.186	.208	100	67	75	3 cir. s.	7 cir. cu.	8 cu.	-----	-----	-----	--	0
Wednesday, 7	s. w.	w. n.w.	w. n.w.	286	12¾	11.15 pm	.221	.231	.144	83	83	63	10	9 cu.	1 cir. s.	4 am / 1 pm	10 am / 1.30 pm	6.00 / 0.30	.19 / .01	9
Thursday, 8	n. w.	w. n.w.	w.	364	17	0.40 am	.149	.129	.155	89	61	79	0	1 s.	3 cir.	-----	-----	-----	--	0
Friday, 9	w. s. w.	w.	w. n.w.	182	3	7.00 am	.162	.164	.186	89	59	81	7 cir. cu.	9 cu. s.	4 cir. cu.	-----	-----	-----	--	8
Saturday, 10	n.	n. n. w.	n. n. w.	226	9	1.50 pm	.174	.119	.129	100	68	100	8 cu.	2 cir. s.	0	-----	-----	-----	--	8

Distance traveled during the week	1,513	miles.	Total amount of water for the week .70 inch.
Maximum force	17	lbs.	Duration of rain 1 day, 30 minutes.

DANIEL DRAPER, Ph. D.

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