ADVERTISEMENT OF A LOST DAY.

BY MRS. L. H. SIGOURNEY.

Lost! lost! lost!
A gem of countless price,
Cut from the living rock,
And graven in Paradise.
Set round with three times eight
Large diamonds, clear and bright,
And each with sixty smaller ones,
All changeable as the light.

Lost—where the thoughtless throng
In fashion's mazes wind,
Where trilleth folly's song,
Leaving a sting behind;
Yet to my hand 'twas given
A golden harp to buy,
Such as the white-robed choir attune
To deathless minstrelsy.

Lost! lost! lost!
I feel all search is vain;
That gem of countless cost
Can ne'er be mine again;
I offer no reward,
For till these heart-strings sever,
I know that heaven-intrusted gift
Is left away forever.

But when the sea and land.
Like burning scroll have fled,
I'll see it in His hand
Who judgeth quick and dead;
And when of scathe and loss
That man can ne'er repair,
The dread inquiry meets my soul,
What shall I answer there?

PROVIDENCE, March 29, 1847.

Mr. Editor.

In my communication on "Evaporating in Vacuo," published in the Scientific American of the 27th ult., I made the remark that there appeared to be a prevailing opinion in regard to the subject, which was erroneous and ought to be corrected. Your remarks at the time, and the remarks of your correspondent "T. H." have fully confirmed me in the assertion I then made. I had commenced preparing a communication on the subject illustrative of the position I then assumed, and which I pledge myself to maintain; but, belonging as I do, to that unfortunate class who have to work for subsistence, and viewing the subject as one of considerable importance, I was obliged to defer it for the present, in order that I might give it that consideration to which it is so justly entitled. Without going into a discussion of the main question I ask your indulgence, while I correct some of the misconstructions of your correspondent, and refute some of his erroneous statements. "T. H." says that "the pressure of the atmosphere is the greatest obstacle to overcome in producing evaporation; and the only obstacle which prevents many liquids from existing as vapors, at ordinary temperatures." This I conceive to be an entire new theory. I was aware that the evaporation of liquids below the temperature at which the tension of their vapors would be equal to the tension of the atmosphere, would be retarded; but that it is prevented, I cannot at present admit; I want proof. Dr. Dalton (α) says that "the quantity of vapor from a volatile body, which can rise into a confined space, is exactly the same, whether that space be a vacuum or already filled with any air or gas, in any state of rarefaction or condensation." The case "T. H." cites of evaporating small quantities of ether or alcohol under the receiver of an air pump, is not strictly a parallel case, and will not apply to large quantities, for reasons which will be shown hereafter. In regard to the condensation of the vapor of ether by admitting air into the receiver, I can only say if it is so (which I am inclined to doubt) give us the theory. "T. H." says again "water will boil in a vacuum at the temperature of 32° F." (β) and then goes on to say that there is a loss of fuel sustained in evaporating the open air, equal to that which would overcome a pressure of 14 1-2 pounds on every square inch of the surface of the liquid, and it has been ascertained that to overcome this pressure it requires 140 F, which is the loss sustained. In regard to the first statement I would say that I have known water to freeze at 32° F., but 65° is the lowest point at which it can be made to boil. (γ) I would merely state in re-

ply to this last statement, that equal quantities of heat, produce equal weights of vapor, without regard to temperature; this point I intend to prove in my next. "T. H." says again, "the writer says that steam or air is more rare at a temperature of 100 than at 212° and also that is lighter and less elastic at the former than at the latter." How he could put such a construction upon what I said is beyond my comprehension, as the word air is not in my communication at all. What I said there, I repeat now, and that is, that steam at 100 is much more rare and expanded than at 212° (δ) and that its rarity increases with a decrease of temperature; but if it be detached from the liquid that produced it, it obeys the same natural laws as air, and increases in rarity with an increase of temperature. But "T. H." in endeavoring to prove me in error in what I did not say, has himself made a most egregious mistake in supposing that a pint of air can be increased by rarefaction to four times its volume in a bladder. According to the experiments of Dr. Dalton, Gay Lussac, and Mr. James Crichton of Glasgow, air at a temperature above the freezing point, expands 1.480 of its volume for every degree of heat or that it requires 480 degrees of heat to double its volume: now one volume at 100 is two volumes at 580, and four volumes at 880—1880 = 1060, which is 80° above red heat. I will reconsider my theory, Mr. Editor, not because I have any misgivings as to its correctness, but in order to substantiate more fully and beyond a doubt the position I have assumed.

Respectfully yours,

A (true) SUBSCRIBER.

REMARKS.—(α) Dr. Dalton's theory is erroneous, and your reliance thereon furnishes one of the many instances in which the knowledge of true scientific principles is greatly retarded by the publication by A. M.'s of erroneous conclusions drawn from results of imperfect experiments; or more probably from the published opinions of those of former ages.

(β) He did not say 32 but 62: but our types (more correctly) made it read 32.

(γ) We intimated in our former answer, and now aver most positively, that we have frequently produced rapid ebullition of water, with a copious escape of vapor, till by the consequent reduction of temperature, ebullition was prevented by congelation.

(δ) It is difficult to know what is meant by steam at 100°, unless the atmospheric pressure is removed; and in that case, its rarity may approach infinity under any temperature. Under the atmospheric pressure, there can be no such thing as steam below 212°: but vapor only, consisting of particles floating in air.

In conclusion, we remain firm in the opinion that water may be evaporated more than twice as rapidly under a partial vacuum, with equal fuel as under atmospheric pressure.—Ed.

Boiling Ponds in New Zealand.

On the edge of a great swampy flat I met with a number of boiling ponds; some of them of very large dimensions. We forded a river flowing swiftly towards the lake, which is fed by the snows melting in the valleys of the Tongariro. In many places in the bed of this river the water boils up from the subterranean springs beneath, suddenly changing the temperature of the stream, to the imminent risk of the individual who may be crossing. Along whole tracts of ground I heard the water boiling violently beneath the crust over which I was treading. It is very dangerous travelling; for if the crust should break, scalding to death must ensue. I am told that the Roturua natives, who build their houses over the hot springs in that district, for the sake of constant warmth at night, frequently meet with fatal accidents of this kind; it has happened that when a party have been dancing on the floor, the crust has given way, and the convivial assembly have been suddenly swallowed up in the boiling cauldron beneath. Some of the ponds are 90 feet in circumference, filled with transparent pale blue boiling water, sending up columns of steam. Channels of boiling water run along the ground in every direction, and the surface of this calcareous flat around the margin of the boiling ponds is covered with beautiful incrustations of lime and alum, in some parts forming flat saucer-like figures. Husks of maize, moss, and branches of vegetable substances, were incrustated in the sam-

THE WEATHER, &c.

WEDNESDAY, MARCH 31st.

HOURS, A. M.												HOURS, P. M.											
4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Therm.	—	—	33	33	33	33	32	32	34	35	36	37	36	34	33½	32½	31	29	—	—	—	—	—
Wires,	—	—	49	49	49	49	49	48½	50	51	51	52	50	48	48	48	46½	—	—	—	—	—	—
THURSDAY, April 1st.																							
Therm.	—	—	23	25	28	30	32	34	36	36	38	39	39½	36½	33½	32	—	—	—	—	—	—	—
Wires,	—	—	45	47	49½	50	51	52	52½	52	52½	53	52	50	48	48	—	—	—	—	—	—	—
FRIDAY 2d.																							
Therm.	—	—	—	34½	36	37½	39	40	43	45	47	49	50	49	47	44	43½	40½	—	—	—	—	—
Wires,	—	—	—	49½	51	52	52½	53	54½	55	56	57	57	56	54	52	51½	49½	—	—	—	—	—
SATURDAY, 3d.																							
Therm.	—	—	—	35½	36	42	44	46½	49	50½	53	54½	56	57	51	48	45	43½	42	40	—	—	—
Wires,	—	—	—	49	50	53	56	57½	59	60	61½	63	64	64½	58½	56	53	51½	51	50	—	—	—
SUNDAY 4th.																							
Therm.	—	—	—	—	42	44	48	49	50	50	50½	—	—	—	46	44	43	42	40	—	—	—	—
Wires,	—	—	—	—	52	54	56½	56	57	56	56	—	—	—	52	51	50	50	49	—	—	—	—
MONDAY 5th.																							
Therm.	—	—	—	41	40½	47	48	49½	50½	51	51½	52	52	51	49½	47½	—	—	—	—	—	—	—
Wires,	—	—	—	52	54	55½	56	57	57	57	57	57	57	56	54	53	—	—	—	—	—	—	—
TUESDAY, 6th.																							
Therm.	—	—	—	43	43	42½	42	44	46	46	46	46	45	45	43½	43	43	44	44	—	—	—	—
Wires,	—	—	—	52	52	51½	51	53	54	54	53	53	52	52	51	51½	52	52	52	—	—	—	—

[Equilibrium.]

REMARKS.

Wednesday, March 31.—Morning cloudy.—Snow fell the previous night to the depth of two or three inches. Thursday, April 1.—Morning clear—evening cloudy. Friday, April 2.—Morning cloudy—snowing at 6 A.M. and snow on the ground. Rain from 7 30 to 9 30 A.M.—Afternoon and evening clear. Saturday, April 3.—Sky clear all day. Sunday, April 4.—Scattered clouds all day. Monday, April 5.—Sky clear all day; light clouds in the evening at 11 P. M. thermometer 44—wires 51. Tuesday, April 6.—Rain from 6 A.M. to 8.15, then turned to hail for about five minutes; then rain for about 20 minutes—then came a

manner. I also observed small deep holes or wells here and there amongst the grass and rushes, from two inches to as many feet in diameter, filled with boiling mud, that rises up in large bubbles, as thick as hasty pudding; these mud-pits send up a strong sulphurous smell. Although the ponds boiled violently, I noticed small flies walking swiftly, or rather running, on their surface. The steam that rises from these boiling springs is visible at a distance of many miles, appearing like the jets from a number of steam-engines.—Angas's Scenes in New Zealand.

RAILROAD INTELLIGENCE.

Hudson River Railroad.

Two routes for this Road have been suggested, one passing immediately along Verplanck's Point near the Hudson, and the other a few miles east of the Point, and the people on both routes are striving to obtain the selection of that nearest their own locality. The directors, however, will probably be governed in their choice by what promises to be of the greatest interest to the company, and the vast amount of freight afforded by the brickyards, at and near the point, is calculated to have a weighty influence on their decision.

Harlem Railroad.

This company have nearly completed a new Engine House above 31st street, of gigantic proportions. It is of brick, with sixteen sides, and three entrances. Its diameter is 126 feet, that of the turn tables 35 feet, and the height of the dome from the ground 54 feet. The building will accommodate 16 engines with their tenders. In the rear of the main building, the foundations are being laid for a machine shop 100 feet by 40.

Portland and Bangor Railroad.

The enterprising citizens of Bangor Me., are determined on having a railroad direct from Bangor to Waterville, to meet the Kennebec Railroad from Portland. A meeting of the Androscoggin and Kennebec Railroad Company, was held at Winthrop on the 5th ult., to organize. The meeting is represented to be the largest one of the kind ever held in Maine. 8750 shares had been subscribed—5 per cent. had been paid in—and a resolution was passed, by acclamation, in favor of a union at Waterville, of the Androscoggin and Kennebec, and the Penobscot and Kennebec Railroad Companies, by which a continuous line of Railway from Bangor to the Atlantic and St. Lawrence Railroad, will be secured. The subscriptions to this road now amount to \$805,000. The Directors have laid an assessment of five per cent, on the stock to commence the work with. It is intended to grade the whole road from Portland to Augusta the present season. If this is done, the track will be ready for the cars a year from next fall.

little hail, and continued raining until 10 A.M. Chain clouds at 12 and 1 P. M.; commenced raining again at 4 P. M., and continued all the evening.

E MERIAM.

Brooklyn, April 6th, 1847.

Singular Weather.

A correspondent writing from Albion N.Y., states that on the 30th ult., at 6 P. M., there was at that place a violent snow storm with thunder and sharp lightning; wind from the south east. It will be seen by our meteorological table that on that evening from 6 to 10 there was a rise in both thermometer and wires, though both at an equilibrium, which continued for nearly 17 hours.—Ed. Sci. Am.

Syracuse and Oswego Railroad.

The capital stock for this road is all subscribed, and the ground will be broken this spring. It will greatly add to the prosperity of Syracuse and Oswego.

Boston, Concord and Montreal Railroad.

There is now every prospect of this road being prosecuted vigorously. It is expected that 18 miles from Concord to Sanbornton Bridge, will be fit for use by July next. Nine miles more will early be finished, extending to Meredith bridge, and the remaining distance to Plymouth, making 50 miles, will be pushed to completion, which it is thought will pay well by its local travel.

Macon (Ga.) and Western Railroad.

A correspondent of the Savannah Republican says that the stockholders of the Macon and Western road have determined, in conjunction with the people of Columbus, to construct the railroad to Columbus forthwith. It is to be built for cash, and will be completed by the first of January, 1848, if possible.

A capital stock of the Richmond and Danville Railway Company is \$1,500,000; and the State of Virginia takes three fifths of it \$900,000—leaving only \$600,000 to be subscribed by individuals.

Thirty miles of the Saratoga, N. York and Washington Railroad Co., road, from Saratoga Springs to Fort Ann, have been let to contractors to be completed by the 1st of July, 1848, for \$448,000, inclusive of iron.

A Boa Constrictor.

In the marshes of the valley the boa constrictor is often met with of considerable size. It is not uncommon throughout the province, particularly by the wooded margins of the lakes, marshes and streams. Sometimes they attain the enormous length of 40 feet,—the largest I ever saw at this place, but it was not alive. Some weeks before our arrival at Sape, the favorite riding horse of Senhor Lagoeria, which had been put out to pasture not far from the house, could not be found, although strict search had been made for it all over the fazenda. Shortly after this, one of the vanqueiros, in going through a wood by the side of a small river, saw an enormous boa suspended in the fork of a tree which hung over the water. It was dead, but had evidently been floated down alive by a recent flood,—and, being in an inert state, it had not been able to extricate itself from the fork before the water fell. It was dragged out to the open country by two horses, and was found to measure 37 feet in length. On opening it the bones of a horse in a broken condition, and the flesh in a half digested state, were found within it, the bones of the head being uninjured. From these circumstances, we concluded that the boa had devoured the horse entire.—Gardner's Brazil