

WHY IS THERE NO FROST IN A CLOUDY NIGHT?

The remark is frequently made that "there will be no frost to-night, for it is too cloudy." A correspondent of the Buffalo Commercial Advertiser thus explains this phenomenon, so familiar to all, but the why and wherefore of which so few have taken the trouble to ascertain:

All bodies emit heat in proportion as they contain it; two bodies of equal temperature placed beside each other will mutually give and receive equal quantities of heat, therefore one will not gain of the other. But a piece of ice placed in a warm room will receive much more heat from the surrounding objects than it imparts; it will therefore gain in temperature, and melt. The earth during the day, receives much more heat from the sun, than it imparts to the surrounding space in the same time. But during a clear night, the surface of the earth is constantly parting with its heat and receiving none; the consequence is, that it becomes so cold that the humidity contained in the surrounding air, becomes condensed, and attaches itself to objects in the form of dew, in the same manner that a tumbler or a pitcher containing cold water "sweats," as it is called, in a hot day; the surface is cooled by the water, and this surface condenses the humidity of the contiguous air. If the surface of the earth, after the formation of dew, loses heat enough to bring it to the freezing point, the dew becomes frozen, and we have a frost. But if it be cloudy, then the heat, radiating from the earth, will be received by the clouds, and by them the greater portion of it will be returned to the earth; thus the surface of the earth very nearly retains its temperature, which not only prevents a frost, but almost always prevents even the formation of dew.

A LOTTERY SCHEME.—A beautiful carrier dove during a recent storm alighted in a gentleman's yard in the rear of the College at New Haven. The Courier says:—It was exhausted with its flight, and hunger compelled it to seek food. It is a timid bird, and there was much difficulty in securing it. Around one of its legs was a strip of red morocco, with the number "41" marked upon it, and doubtless this, like the one found in Bridgeport the other day, was sent off from New York for Providence or Boston by some lottery operator. This beautiful bird is unlike the ordinary pigeon. It has a long, richly carved neck, with a thick bill and large lustrous eyes. Its wings are very long, and project in front of the breast, and its formation, in every respect, admirably adapts it for speed when on the wing. Between Brussels and Paris, they have been known to fly at the rate of fifty miles within the hour, and consequently are trained for carrying important despatches. Before sending them on errands they are nearly deprived of food for one or two days, and as they are sent up from strange places to return to their homes, hunger hastens their journey. When ready for the start, they ascend to an immense height, circle through the atmosphere, and then, having taken their bearings, dart off with incredible velocity toward their place of destination.

CIVIL INTELLIGENCE.

PROVINCE OF CANADA.

UNION OF THE NORTH AMERICAN PROVINCES.

This is the next great political subject which will engage public attention in this Colony, and it is more than probable that the agitation which has been occasioned by the attempt now making to remove the Seat of Government from Upper Canada will hurry it on. Every one who has read Lord Durham's Report must be satisfied of the absurdity of keeping up a number of petty Governments on this Continent, each one too weak and too much divided by party feelings to be able to protect itself; whereas, by uniting them all in one Government, they would present a front such as would render any enemy cautious how he insulted them. The time is probably not yet arrived when this question can be discussed in the spirit it ought to be; but that time is not far off; and it is even now worthy of consideration whether, in settling the future Seat of Government for the Canadas, it would not be well to place it at such a point as would be most convenient for the assembling of a convention of members from all parts of the British North American possessions.—*Transcript.*

LATEST FROM EUROPE.

The Cunard Mail Steamet made her passage this time in fourteen days, after experiencing very rough weather. Her London dates are to the 18th ult., and Liverpool to the 19th ult., inclusive.

The commercial news that she brings is very satisfactory. The improvement in trade still continues, and the state of the country is tranquil. In Ireland the Ministry have struck a bold blow against the Repealers, by dispersing the meeting at Clontarf, and arresting Mr. O'Connell and others of the leaders.

ARREST OF O'CONNELL AND EIGHT OTHERS.

Mr. O'Connell, and his son, Mr. J. O'Connell, were arrested on Saturday, Oct. 14, upon warrants issued by Judge Burton, on information sworn in on the day previous.

Mr. O'Connell entered into cognizances, himself in £1000, and Mr. McLoughlin and Mr. Dunne in £500 each, to answer a charge of conspiracy and misdemeanor on the first day of term. Mr. John O'Connell having done the same (the same gentleman being bail in both cases,) the crown solicitor gave to each the copies of the informations required, which he said he could not before, as the bail was not then perfected.

Mr. O'Connell immediately caused the following address to be issued:—

"TO THE PEOPLE OF IRELAND.

"Beloved fellow-countrymen!—I announce to you that which you will hear from other quarters, namely, that I have this day given bail to answer to a charge of 'conspiracy and other misdemeanors,' the first day of next term. I make this announcement in order to conjure the people, one and all, to observe the strictest and most perfect tranquility. Any attempt to disturb the public peace may be most disastrous; certainly, would be criminal and mischievous.

"Attend, then, beloved countrymen, to me.

"Be not tempted by anybody to break the peace, to violate the law, or to be guilty of any tumult or disturbance. The slightest crime against order or the public peace may ruin our beautiful and otherwise triumphant cause.

"If you will, during this crisis, follow my advice, and act as I entreat you to do, patiently, quietly, and legally, I think I can pledge myself to you, that the period is not far distant, when our revered Sovereign will open the Irish Parliament in College Green.

"Every attempt of our enemies to disturb the progress of Repeal hitherto has had a direct contrary effect. This attempt will also fail, unless it be assisted by any misconduct on the part of the people.

"Be tranquil, then, and we shall be triumphant. I have the honour to be, your ever faithful servant,

"DANIEL O'CONNELL.

"Merrion Square, Oct. 14, 1843."

It appears that the arrests are to have a very wide scope, including several editors of journals, and the gentlemen connected with the working of the association. The magistrates were instructed by the government to remain in their offices till they received intimation from the Castle that their attendance was no longer required.

Warrants were issued against the following:—D. O'Connell, M.P., T. M. Ray, Dr. Gray, Thos. Steele, J. O'Connell, M.P., R. Barrett, Rev. Mr. Tierney, Rev. Mr. Tyrrel, C. G. Gavan Duffy.

"Two inspectors of police have just waited upon Mr. Duffy to put him under arrest, and make arrangements for receiving bail."

It was generally believed, that warrants were to be immediately issued against the Right Rev. Dr. Higgins, the Most Rev. Dr. McHale, and Lord French.

Notwithstanding the quietude with which the meeting at Clontarf was abandoned, more troops have been poured into Ireland, and more are under orders for the same destination. Three regiments of infantry have been landed at Dublin within the last few days. Two more are already on their way, and three regiments of cavalry, the Royals, the Scots Greys, and the Carbineers, are under orders to follow them. Arrangements have also been made by means of which the whole Household troops may be transferred to Dublin on twenty-four hours' notice; and it is said that the King of Hanover has placed at the disposal of Her Majesty 20,000 of his troops, which could be landed at any point of the Irish coast within four

days. These preparations certainly go far to show that Government is at length determined to bring matters to an issue, and at once terminate an agitation which has been so ruinously injurious to the best interests of Ireland, as well as alarming to the whole United Kingdom.

Arrangements have been made with the Directors of the Great Western and London and Liverpool Railways to have trains at the disposal of Government, to start at any time an order to be sent from the Horse Guards, without the slightest delay. At Bristol and Liverpool steamers are also ready.

REPEAL.—OFFICIAL NOTICE TO PENSIONERS.—An official notice, from the lord and others, Commissioners of the Royal Hospital at Chelsea, was issued, on Tuesday last, cautioning the out-pensioners against attending or countenancing repeal meetings, under pain of forfeiture of their pensions.

In Scotland, the rioting still continued at Roskeen. In Wales, the Rebeccaes were going on with the demolition of toll-gates; a government proclamation had been issued for the suppression of the disturbances, and a commission appointed to investigate the grievances.

All was peaceable on the continent, except in Spain, which is in much the same unsettled state as at the date of our last advices; and in Italy, where the troubles in the state of the Church are said to be far from being at an end.

The revival of trade continues the theme of general congratulation. The cotton market is more active than it has been for years; indeed, during the past week, a greater amount of cotton has been sold than in any week since 1825.

CHINA.—There is very gratifying intelligence from the East; the signature of the Emperor of China has been at last affixed to the treaty, and a tariff agreed on for regulating the rates of duties to be levied on articles of English manufacture.

Custom House frauds continue to be detected in London, and it is believed that a clue has been obtained to a system of illicit trade almost fearful in extent; but owing to the secrecy with which the investigations are conducted, the peculiar nature of the transactions have not yet been made public.

SPAIN.—The affairs of Spain continue in a most deplorable state. One military reaction after another—"treachery destroying treason, and mutiny repaying the suborner." The conspirators who overthrew Espartero appear to be quarrelling about the division of the spoils—and our opinion is that if the Regent were to return and plant his standard manfully, as did Napoleon when he escaped from Elba, he would soon gather round him all the chivalry of Spain.

The Greenock Advertiser states that a secret expedition has been fitted out at that port, and that several vessels have sailed under sealed orders, which are not to be opened until they have crossed the equator. It is said that the expedition is going in search of an island reported to have been discovered to the southeast of the Cape of Good Hope.

There has been a desperate affray between the police and some people at Outerard, in Galway.

It is stated that the contract entered into with the Darings by the Republic of New Grenada for the construction of a ship canal across the isthmus of Darien, cedes to them the land on the line of the canal, and eighty thousand acres in the interior.

The latest accounts from Syria represent that country as generally tranquil, though there were occasional indications that the old feud between the Druses and Christians was not entirely healed.

RUSSIA AND THE CIRCASSIANS.—Letters from Tiflis of the 10th September, contain rumours of the surprise and capture by the Circassians of a Russian fortress in the Black Sea.

The Russians are building a superb fortress on the frontiers of Turkey and Asia. It is situated on a hill that rises in the midst of an extensive plain, at the distance of half a league from the river Aspathal. The barracks are sufficient to lodge an army of 50,000 men.

There are in the Romish Church eight patriarchs, one hundred and two archbishops, and four hundred and ninety bishops, besides eighty-one episcopal sees, now vacant or filled by bishops suffragan. These numerous vacancies are owing to the state of religion in Spain, Portugal, Russia, and Ireland.