

would require a whole lecture to explain the properties of these ingredients of the ash, and I shall not, therefore, attempt to do so: with most of them you are familiarly acquainted, as the common pearl ash, the soda, and lime; oxide of iron is the rust of iron, and oxide of manganese is very like the oxide of iron; phosphoric acid is the substance called phosphorus, which I hold in my hand, and which commonly ignites when placed against a piece of warm iron; the sulphuric acid is the common oil of vitriol; chlorine and silica are the two remaining ingredients of the ash which I mentioned. Now these exist in all plants; and having explained that to you, let me tell you further, that every plant obtains a certain portion of its substance from the soil and a part from the air. Now the substance which is got from the air all plants may get, although I do not say they always do; but the substances out of which is formed gluten are got from the soil. I have now explained what a plant consists of, and where it gets the substance of which it does consist; and allow me to tell you that the plant lives on its food as we do.

It draws its food from the air and the soil, and that which it draws from the soil must contain those things which form gluten. If, gentlemen, the soil contains the whole of these things, then it is naturally productive; if it does not contain them, it is not naturally productive soil. We must then add those things of which the soil is deficient, and those things which it does not contain at all. This is the way in which I wish you to act. In feeding your stock you give them plenty of that food which you know is good for them, and if you give them plenty of good food you know that they will grow fat and large, if not they are starved and stunted. Now you must just do the same to your crops. You must put plenty of suitable food in the soil; previous care being taken to know what is required.

[To be concluded].

European News.

Arrival of the 2nd August Mail.

From Wilmer and Smith's European Times, August 19.

DOMESTIC.

The events of the last fortnight, unlike the parliamentary doings, furnish food for reflection. The humanity which takes fire at the laceration of the soldier's back, has found a voice in the press. The appearance of public opinion was never more palpable than on occasions like the present, when the executive government is forced to bend before the blast. The power of the press in a free country like England, for all purposes of practical utility, is complimentary to the talent with which it is wielded, and the indignation it can evoke against injustice or tyranny.

The Protectionists have had one or two dinner parties on a large scale. The constituents of Lord George Bentinck paid him the compliment last week of a public dinner, at which many of the leading members of both Houses of Parliament, who opposed Peel's commercial reform, were present, and took part in the proceedings, and more recently a similar, certainly a less merited, compliment has been paid to the Marquis of Granby.

The speeches at these gatherings show two things—first, the soreness of the party towards Sir Robert Peel; and secondly the confidence which they have, like Mrs Parkington of old, in rolling back, if not the waves of the Atlantic, at least the tide of popular opinion. As to Peel, he is above their hate. Principles depend on no man—certainly on no Prime Minister. He was the creature of circumstances, and acted under the influence of a stern destiny. The country laboured under the sense of injustice during the continuance of the Corn-laws. Is it likely to become again enamoured of a taxed loaf?—more especially when the tax went into the pockets of the landed proprietors, not into the Queen's exchequer? To suppose that the old system can be revived—that the nation will become enamoured of dear bread for the benefit of a class the most wealthy, and possessing the least sympathy with the world at large, argues, on the part of such sanguine spirits, great ignorance of human nature, and great faith in human credulity. True, the landowners are rich; they can manufacture votes and coerce tenants. But the commercial and middle classes do not lack either wealth or spirit. The League beat the landlords

hollow at the purse strings; and if the game is to be repeated, they will beat them again.

But the anger and disappointment under which the Protectionists writhe, as developed at the late dinings-out, will have one tendency—it will keep alive that battle in the "registration courts," the fighting of which successfully made the great Conservative party that Peel destroyed. The Free-traders will have to keep their victory by resting on their arms; and to prevent surprise, they are already buckling for the conflict. In a couple of months, anticipatory of the general election, the revising barristers—those sentinels of the constitution, who keep strict guard as to the qualifications of the parties who enter the portals—will be traversing the country, and then "we shall see what we shall see."

The potato blight is general. East, west, north, south, the cry is "still it comes." In Ireland the devastation is general. Everywhere the root is rotten, or progressing towards decay. Science is at fault, alarm is rife. As regards society it is serious—as regards the poor it is a melancholy visitation. Under any circumstance, if the Corn-laws had not been repealed in the present session, they would inevitably have been repealed in the next. Influenced by the bad weather, and acted upon by the destruction of the chief food of the poor, the price of grain is advancing, and the belief is, that it will continue to advance.

The feud between Old and Young Ireland is now regularly consummated. They are distinct parties. Mr. O'Connell has denounced their policy and disdained their aid. The "Nation" has been expelled from the rooms of Conciliation Hall, and the quarrel stands little chance of ever being cemented again.

We stated two months ago that the accession of the Whigs would dismember the Repealers. It has done so. The most earnest and enthusiastic of that body—in short, the Young Irelanders—well knew that the return of the Whigs to power would act as a wet blanket on the popular movement. O'Connell, for years past, has been the private friend and the boon companion of most of the Whig leaders, while to the Tory party,—certainly to the prominent members of it,—he was always personally obnoxious. Talk as public men will before the world, private sympathies and partialities are not without their influence on public conduct. O'Connell could make better terms with the Whigs, although it was his cue to abuse them frequently; he knew their private feelings, and was more closely identified with their political views, impaired, his popularity jeopardised by an open rupture with the most able and earnest of his auxiliaries—the Young Irelanders.

The Young Irelanders have submitted to their expulsion from the Repeal Association with a quiet resignation that contrasts amusingly with their previous ranting. A spark, it might be supposed would have caused such inflammable gentlemen to explode. But discretion is the better part of valour; and it now appears that instead of setting up in business on their own account in the agitation line,—for it was rumoured they had taken the Abbey-street Theatre, in Dublin, to hold weekly meetings in, in opposition to those of Conciliation Hall,—they have, in vulgar parlance "drawn in their horns."

At a weekly meeting of the Repeal Association, on Monday, a long letter was read from Mr. Smith O'Brien, the principal feature of which was the expression of his admiration of the vigour and ability of the "Nation" newspaper, and his annoyance at the unfairness with which it had been treated in being expelled from the association. Mr. O'Brien adhered, in this letter, to his physical force views. "He could not agree that the Irish people had for ever foresworn the use of the sword as the final vindicator of their national liberties." Mr. O'Connell's speech, in reply, showed how the breach had been widened with his quondam colleague; he implored him to throw away his "sword," and declared that he never could act with him so long as he entertained his present views. It is palpable that the cold and studied politeness between the actual and the prospective leader of the Irish people, conceals feelings beneath it which neither party would like to avow. But O'Connell has his opponents "on the hip," and he seems every way disposed to "use them up."

Amongst the proofs which the new Government is giving of its wish to conciliate the Irish people, may be mentioned the fact that the Repeal magistrates, who were deprived of their commissions

on account of their politics during the administration of Sir Robert Peel, are to be restored. This is highly politic, and what is more, a judicious step. Already Mr O'Connell and Lord French have been re-invested with the commission. The papers publish a correspondence between the Irish Lord Chancellor and Mr. O'Connell on the subject, in which the latter, after expressing his willingness to accept the magistracy for Kerry again, declares, at the same time, that he ought never to have been deprived of it for seeking to procure the repeal of an Act of Parliament by means perfectly legal and peaceful—an opinion in the justice of which most persons will agree.

The redoubtable Captain Warner is before the public again, in connexion with his secret of blowing up vessels at the distance of several miles. While in opposition, the aspirants for power promise much,—more than they find it prudent to perform when in office,—and it would seem that the Whigs are now compelled to give the captain's "long range" a trial. Another candidate, also, the celebrated Lord Cochrane, now Earl of Dundonald, is in the field for destroying mankind by the most wholesale and speedy process, and his invention, like that of the redoubtable Warner, is to be experimented on by the Governments officers; who will then say "Yes" or "No" to the proposition.

FOREIGN.

We give in our paper to-day the new tariff of the Papal States—a document which will be perused with much interest, less on account of its commercial results, than as an indication of the new and enlightened policy by which in future the Vatican will be guided. The new Pontiff is an enlightened man—a reformer in commerce as in politics—and he has shown the kindness of his nature by an amnesty, which releases hundreds of prisoners, who had been confined for political offences, from jail, and restores them to their families and friends. His policy is too liberal for the narrow-minded jealousy of Austria; and even in defiance of the remonstrances of that power, it is believed that the new Pope will complete the good work he has begun by extending the municipal and other rights of his subjects. Private letters from Rome speak in high terms of his popularity, and of his liberal views.

The French elections have terminated, and great has been the success of the Guizot ministry. Its majority in the new chamber is expected to be 100, and may possibly reach 110 votes. This says much for the popularity of the pacific march for the prosperity and content which now happily reigns throughout France. It will go a long way to establish more firmly the dynasty of Louis Philippe, now an old man, who cannot, in the course of nature, last much longer. He has played his cards cleverly—established his power firmly, so that the republicans on the one hand, the Legitimists on the other, will have their work carved out to shake his throne. But the French are proverbially a fickle people; and when their present popular ruler has been called to his great account, they may possibly remember, with vexation, that they are not free agents, inasmuch as he was the only Monarch who had the temerity to make the French metropolis one huge barracks—to surround it with forces, presenting to them the pleasing alternative of accepting his successor, or being riddled with grape-shot—a pleasant predicament for a spirited people.

COMMERCIAL.

The state of the weather during the last fortnight has given the greatest uneasiness to the people of this country—more particularly to those engaged in agriculture. There have been frequent thunder storms, with copious falls of rain which have seriously injured the crops. The sun at times has been brilliant; and preceding the storms, the warmth ripened prematurely the produce of the fields, which it was found necessary to cut without delay. Any statement of the average produce must, of necessity, be mere guess work, but there is great reason to apprehend that in various parts of the kingdom irreparable damage has been done to the grain. In the course of another fortnight, however, the harvest will have been completely gathered, and then a more definite result can be arrived at.

The Money market is easy, and, for legitimate business, cash can be had on easy terms. The half-yearly meetings of some of the great railway companies are being held, and the accounts which the directors give of their position and their prospects, are, upon the whole, favourable. But it is hardly necessary to say that some uneasiness prevails as to the

enormous quantity of railway bills which have passed through Parliament during the present session, involving an outlay which must, in the nature of things, affect the currency of the country. A list has been recently published, from a parliamentary document, of the amount of shares held by the leading capitalists in various parts of the country. The merchants of Liverpool, who have always been foremost in the promotion of railway undertakings, figure conspicuously in this document.

The Cotton market has been in a quiescent state. In the manufacturing districts business is the reverse of satisfactory, and some of the mills in Blackburn have already commenced working short time. The news which arrived recently from the United States respecting the tariff having passed the Senate, will, there is every reason to believe, give a new fillip to trade.

The works on the Holyhead line of railway are progressing most rapidly. Nearly 13,000 men are daily employed. When finished it will form one continuous line of railway from London and Liverpool. Holyhead will then be established as the great packet station of England, at which place the Irish, the American, and most probably the West India Mail Steam Ships will arrive at and depart from.

PARLIAMENTARY.

The parliamentary business of the session is rapidly drawing to a close. London is all but deserted by the great world. The commencement of grouse shooting on Wednesday last, nearly completed the desertion; and the few stragglers about St. Stephen's hardly suffice to wind up, with becoming dignity and grace, the tag-end of one of the most extraordinary sessions on record.

The Whig Ministers must sigh for the termination of their labours. Unexpectedly called to power, they have been groping in the dark, as it were, since the retirement of Peel. Their plans have been necessarily crude, and obnoxious to the charge of bungling; and not knowing exactly how much to ask previous to the recess, they have determined to ask enough, and take as much as they can get. For instance, they prayed for the renewal of the act for the branding of arms in Ireland, and urged its extension over two years; but finding that it was regarded in the light of a new Coercion Bill, they were content to solicit its continuance until May next, on the promise to supersede it by a more comprehensive and satisfactory measure. But the subject gave so much dissatisfaction in and out of the house, that Lord John Russell has since withdrawn it.

The Sugar question, which threatened at one time to knock the new ministry on the head, has been got rid of with amazing alacrity. The protectionists, dispirited by recent failures, have given way, and the bill has been twice read without a division in the hereditary strong—in talk, but declined to divide the house; while Lords Brougham and Denman indulged in the harmless folly of placing their opinions on the journals of the house in the shape of a "protest." All this shows the lethargy—the absence of "pluck," which a combination of causes has been instrumental in producing. On Monday night the House of Lords read for the third time, and passed the Sugar Bill.

Parliament is expected to rise about the 23rd—certainly before the sailing of the next steamer. A variety of minor business has been disposed of, and the House of Commons is making double tides—working early in the day, and late in the evening.

The destitution in Ireland, consequent on the failure of the potatoe crop, occupied the attention of the House of Commons on Monday. Lord John Russell made known the intentions of the Government. It seems that £852,481 has been expended on the relief of the Irish last year, of which £494,851 was either repaid or will be repaid. To the principle of making the executive the corn merchant of the Irish nation Lord John Russell is opposed. But as provision against famine is the first duty of a parental government, a sum of money is to be advanced from the consolidated fund for the employment of the people on public works under the inspection of the government official, and the sums so advanced are to be repaid in ten years, at the rate of 3 1-2 per cent, the lowest rate of interest. Lord John Russell states, ever taken for works of this kind. A power is to be invested in the Lord Lieutenant to summon county sessions in districts where the poor require employment, and where public works of utility are to be undertaken. This proposition met with general approbation.

The following is the Report of the Select Committee of the House of Commons upon the subject of the North American Mail Contract:—

"The select committee appointed to inquire into the circumstances connected with the granting of the present contract for the conveyance of the mails from England to Halifax and Boston, and also into the circumstances connected with the granting of any new or the extension of the existing contract for the same purpose, have considered the several matters to them referred, and have agreed to the following report:—

"That your committee have inquired into the circumstances connected with the granting of the present contract for the conveyance of mails from England to Halifax and Boston, as well as other matters referred to them, and are