

from what has been written, much more than the general principle on which the experiment proceeds,—it is able to do even as much as that.

The principle on which the experiment depends is, that if a pendulum is suspended from a swivel, or other point not rigidly and indissolubly connected with the vibrating body, but so that the vibrator may swing in any direction, however, you may turn about, in its place, free—then, or whatever it may be in which the pendulum is hung—the plane in which the pendulum vibrates will always remain the same. It will always swing in the same direction. And if you move the frame or case about, carry it round in a circle, or turn it round on a pivot the plane in which the pendulum swings will still remain in the same parallel.

Thus, we repeat, is the whole principle on which the experiment rests; and when we enunciate it by saying as we have said just now,—that the several planes in which a pendulum, if carried round a circle on the earth's surface parallel to, but we will suppose at some very considerable distance from the Equator, will at different stages of its progress, be found to vibrate—are always in the same direction, or in other words parallel to each other,—we must of course be understood to mean that such a parallelism only holds in one direction, namely, the horizontal one, or the direction of the vibratory motion in itself—for vertically, of course, if these several planes of vibration be produced, they will meet in the centre of the earth, and are therefore not, in that direction, parallel. But speaking popularly—or supposing for an instant (as we may suppose), that the earth's centre is indefinitely distant—it is a rule that a pendulum swinging freely, and carried round in a circle round the earth's pole or axis, will always swing, at all parts of its progress, in the same direction, or in parallel planes.

Now apply this. Our new machine is a pendulum, swinging freely—carried round a circle on the earth's surface, of which the earth's axis is the centre,—or of which, if we suppose it to be indefinitely near the Pole, the Pole itself is the centre. The consequence is, that assuming any given horizontal line to represent the direction of the pendulum's vibration at any one point of its progress, a line in precisely the same direction will represent the direction of its vibration at every other point of its progress; say, for instance, when it has travelled round a quarter, a half, or three quarters of the circle round the earth in which it is moving. Now, if a circular table, or any other fixed body, is placed under the pendulum thus travelling in a circle round the earth's pole, it is clear that this table will not only move round with the earth, but that at different parts of its progress it will be in different positions: one and the same point in its circumference will, for instance, be nearest the Pole of the earth all the way round, and the opposite point in its circumference will be furthest away from the Pole all the way round. At the opposite side of the circle, therefore, from that at which it started, the table would be inverted, and on coming back to its starting point, the table would have gone completely round on its own axis, as well as have gone round the Pole. Now, in the course of this revolution on its own axis, the table would have been passing all the while under the stationary line made by the vibration of the pendulum. Or, reversing the case, and taking the table to be stationary, as it would appear to be, the line of vibration of the pendulum would appear to have moved, and to have travelled once round the table. By this apparent progress of the line of vibration of the pendulum round the table, but real progress of the table under the stationary line of vibration of the pendulum, the earth's diurnal motion is, in fact, represented and measured. For the table moves with the earth, while the line of vibration remains the same. Thus, a freely suspended pendulum becomes, as this ingenious plan proposes, an index or machine for measuring and exhibiting the diurnal motion of the earth.

In the case we have just supposed, the convexity of the earth has been neglected, or, in other words, a circle has been taken for the supposed progress of our pendulum,—indefinitely near the Pole. But on receding from the Pole, it becomes necessary to take into the account the increasing and no longer immaterial convexity of the earth; which, of course, complicates the problem,—though the principle remains the same. For the further from the Pole,—the less completely vertical does the plane of vibration of our pendulum become to that of the circle in which it moves round the earth's axis; and at the Equator, the axis of vibration of the pendulum becomes wholly merged in the circular plane in which the pendulum moves round the earth's axis (or in other words in the plane of the Equator) and there is no vertical elevation above that plane at all. Nothing, therefore, can in that case be indicated by the motion of the pendulum round the globe. For it is obvious that without some elevation of the axis of the pendulum above the plane of the circle in which it moves round the earth's axis, no plane of vibration is obtained at all distinct from the plane of rotation, or plane in which the whole system moves round the earth. In other words, if the pendulum is on the Equator, everything, vibration and all, will go round with the globe, preserving precisely the same relation, in every respect, to the rest of the system with which it is moving,—in one part of its progress as it does in any other. In such case, therefore, nothing is indicated. But in every other case there is an element in the motion of the pendulum—arising from the fact of the horizontal line in which it vibrates being always in the same direction—which is independent of its place in the circle described by it round the earth's axis, and which may, therefore, be used as a stationary point or index by which the earth's motion may be measured.

Such is the general principle of the machine for measuring the earth's motion, the invention of which is exciting so much interest; and if we have now succeeded in enabling any of our readers to comprehend without a diagram, the principle and operation of the invention, we shall consider that we have achieved a victory in the art of writing, which is not the less difficult from its lying in a department not commonly very highly esteemed.—*Guardian*.

EMERSON ELLIOTT.—A monument is to be erected in Sheffield to the memory of the *Corn Law Rhymers*. The sum of £230, has been already subscribed for that purpose.

ACCIDENT TO MR. GRAHAM.—A frightful accident occurred at Malta, in April, to a son of Sir James Graham, serving as a naval cadet on board H. M. S. *Queen*. Mr. Graham, who is a fine enterprising lad, was exhibiting some feats of activity to his young mess-mates above, when missing his hold, he fell from the mizen-top to the deck. Although, of course, much hurt, the young sufferer was progressing favourably.

THE GUILD OF LITERATURE AND ART.—Under this name it is proposed to erect and endow an institution, in connection with a Life Insurance Company, for the sole advantage of professors of literature and art. The

idea, which originated, we believe, with Mr. Charles Dickens, gathered head, and began to assume a positive and tangible shape under the hospitable roof of Sir Edward Lytton Bulwer, in the autumn of last year, when Mr. Dickens and his company of amateur players were visiting at Knebworth Hall, and entertaining Sir Edward's guests with their dramatic representations. The subject being then mooted, Sir Edward was so much struck with it, that he undertook not only to make a free gift of such land as should be requisite for the erection of the proposed residences or lodges, but also to write a play, (if Mr. Dickens and his company would undertake to perform it with other plays, in a series of representations), the whole profits of which should be devoted to further the ends of the institution. The bargain—if such it may be called—was struck upon the spot; the play, a comedy in five acts, was promptly written; has since been as promptly rehearsed and prepared; and is now upon the eve of representation. The first performance will take place at Devonshire House, which his Grace the Duke of Devonshire has devoted to the purpose, on Friday, the 16th of May, when her Majesty the Queen and his Royal Highness the Prince Albert will honour the performances with their presence. Other representations of the comedy, and an original farce, will afterwards take place at the Hanover Square Rooms, where the moveable theatre, constructed for the purpose, and opened at Devonshire House, will be erected for those occasions.

A MANX GIANT.—The inhabitants of Liverpool were lately much surprised to see a man of extraordinary dimensions walking up and down their streets.—He is a farmer from the Isle of Man, is only twenty-three years of age, stands seven feet six inches high, and weighs twenty-one stones.

CAPTAIN GUESDON, of the French whaler *Salamanca*, gives an account of the discovery of a cluster of islands, which is not marked on any chart. They lie in 172 degrees 56 minutes west longitude of the meridian of Paris, and 9 degrees 38 minutes south latitude. The islands are from 25 to 30 in number, three of them of some extent, and all covered with cocoa-nut trees.

Sir M. Shaw Stewart has most liberally presented a park to the town council of Greenock, in trust, for the use of the inhabitants.

LIVERPOOL AND THE BRAZILS.—There is to be a communication established between Liverpool and the Brazils, by means of screw steam ships. The line will consist of at least three vessels.

A RARE BOOK.—The first edition of *Cocker's Arithmetic*, a duodecimo volume, "Printed for Thomas Passenger of London Bridge, 1678," was sold last month, by Messrs. Puttick and Simpson, of Piccadilly. There is no copy in the British Museum, and but one other copy known. The volume brought £8 10s.

FATAL ACCIDENT TO THE HON. GRANVILLE EGERTON.—We regret to state that accounts of the untimely death of this young officer have been received in town. Mr. Egerton was a midshipman on board her Majesty's ship *Meander*, 44, Captain the Hon. Henry Keppel. The frigate was at California, receiving treasure for Conveyance to England. Mr. Egerton and a party of officers went on a shooting excursion, when Mr. Egerton's gun burst, and killed him on the spot. Intelligence of the afflicting occurrence has been forwarded to the Earl and Countess of Ellesmere, who, at the last accounts, had sailed from Malta to Sicily, in his Lordship's yacht. Mr. Egerton was in his seventeenth year.

The Prince of Prussia and Prince Henry of the Netherlands have arrived in England in order to be present at the opening of the Great Exhibition.

Lord Bloomfield has been appointed Ambassador of Berlin in the room of the Earl of Westmorland, who has been sent to Vienna. Sir Hamilton Seymour has been appointed to the embassy at St. Petersburg, and Sir Richard Pakenham to that at Lisbon.

The French are still occupied with the contemplated revision of the Constitution. The Fusionists are making a bold attempt for the restoration of the Monarchy; but the fear is not ripe yet. The dangers of anarchy are so great that, when the time for action comes, the majority of all parties will adopt that solution of the question which is most favourable to the preservation of tranquillity, and that certainly is the prolongation of the powers of the President. General d'Hautpoul has been rebuked by the Ministry for publishing an order of the day condemnatory of the conduct of one of his officers. The General has returned to France, and will most probably resign. The notorious Pellissier is acting as Commander-in-Chief *pro tempore*.

The Bishop of Ripon, during last week, made a pastoral visit through the rural deanery of Huddersfield, with a view of obtaining a personal acquaintance with the resident clergy, and cultivating a kindly sympathy amongst the parishioners, in promotion of their Christian obligations in connexion with the Church. In discharging this self-imposed duty, the Bishop has travelled in the most unostentatious manner, and with a degree of simplicity highly honourable to him. During his progress he has been the guest of the respective clergy of the parishes through which he has passed, and in the evening occupied the pulpits of their respective churches.—*Manchester Courier*.

On Sunday, the 20th instant, the Lord Bishop of Llandaff preached a most impressive sermon in Welsh, at the parish church of Raydr in this neighbourhood. The service was in the afternoon, during which this small but neat and picturesque church was quite crowded; and his lordship's correct pronunciation of the language was much admired.

His Excellency Baron de Schöpping, the *chargé d'affaires* for Russia, at Lisbon, has transmitted to Ireland £90,000, to be laid out in the purchase of encumbered estates.

THE CENSUS.—The estimate formed at the Census office of the number of schools in the country has been far below the reality. The number of forms for day-schools sent to Glasgow at first was 800, for adult evening schools 500, and the same number for Sunday schools; but it was found necessary to increase the number for day-schools to 1,500, for adult evening-schools to 800, and for Sunday schools to 1,000.

CURIOUS POTATOES.—We have been favoured with half a dozen specimens of a most curious description of potato, which, as far as our information enables us to judge, seems to be a new variety. They bear some resemblance to the kidney kind, but grow so long and twist into such extraordinary shapes as to prove themselves a different race from kidney. They taper away at the ends, and form a very close resemblance to a snake, the head, eyes, and mouth being remarkably well developed. Two of the specimens before us are twisted like a snake coiled up and sleeping, the head

resting up the tail. A single specimen was planted here and produced at the rate of seventeen fold, all sound and good.—*Inverness Courier*.

LADY FRANKLIN'S EXPEDITION TO THE ARCTIC REGIONS.—Mr. Kennedy and his crew of Orkney men are now at Aberdeen, where the little ship, the *Prince Albert*, is fitting out. The route to be followed is by Lancaster sound, then down Prince Regent's Inlet as far as possible. The ship is then to be moored in some harbour, and two boats will be despatched in various directions according to circumstances, or as the opening of the ice may present. One boat it is intended to bring overland to the Western shore, at Cresswell or Brentford Bay, in the direction of the magnetic pole. The other will be sent southwards to Felix Harbour, and will cross Boothia Isthmus, and after striking the sea-coast will proceed by Sir James Ross's Strait to meet the other boat. After meeting, they will again diverge and explore westward. It is then intended that one of the boats be dispatched in the direction of Simpson's Straits, whilst the other will be directed northward with a view to come on the track of Dr. Rae and his party. Mr. Kennedy has been thirteen years in the service of the Hudson's Bay Company, and spent eight years of that period in Labrador. Knowing the country, and the abundance of deer, salmon, and marine animals, he has the firm persuasion that at least a portion of Sir John Franklin's party are yet alive. He goes out without fee or reward, animated by a pure devotion to the service. The crew consists of seventeen persons, nearly all natives of Orkney. The ship carries three boats—one of mahogany, one of common materials, and one of gutta percha. Messrs. Duthie, of Aberdeen, are building a boat specially for Mr. Kennedy's use. It is to be twenty-two feet long, only two feet wide at the midships or broadest part, and after being covered with hide or gutta percha, with one person in it—canoe fashion—is calculated to draw only three inches of water; the depth of the boat is to be twelve inches at the seat. The person seated in it will be covered up with a skin dress buttoned to the chin and fastened to the deck, that, in the event of its being swamped, it can easily be righted again without any water getting into it. Mr. Kennedy contemplates not only using this boat for crossing rivers over ice and down rapids, but to make it his couch of repose all night, by simply pulling a blanket over him, and there repose in a temperature that makes one freeze to think of. He has been accustomed to these hardships, and has stood many nights in similar circumstances, with the thermometer 40 to 50 degrees below zero; often, too, with no covering but the canopy of heaven. The *Prince Albert* will be provisioned for two years.

Mr. F. G. Camp, a fine young man, aged only twenty-four, acting as principal Commissioner, from Holland, to the Exhibition of 1851, committed suicide by hanging himself, from fear that a threat of superseding him in his office should be carried out. He had been some time previously in a desponding state.

The *Journal de Havre* states that, a few days ago, as the funeral procession of a wealthy inhabitant of Ignoville was proceeding along the street, a poor cobbler remarked to a friend:—"How strange it is that a man who possessed every thing to make life happy should be cut off, whilst a poor fellow like I am, who have nothing to expect but misery, will probably live long!" and that the moment he had uttered the last word, he staggered, and fell dead.

The *Sunday Times* states, that the anticipated addition to the Royal family, this summer, announced a short time back, is not likely to take place; but, referring to some recent visits of Sir James Clark, says that her Majesty is now in the enjoyment of excellent health; but the *Observer*, a paper of better authority on such matters, informs us, "There is not the slightest foundation for a statement, circulated by a weekly paper, respecting her Majesty's health, which we are happy in being enabled to say, has not been interrupted for a single day. No arrangements whatever have yet been made as to the autumn excursions of the Court."

The inhabitants of Gloucester were alarmed on the morning of Good Friday by observing that in each of two Greek ships lying in the docks, a man was maltreated by the crew, and then hung by the neck to the yard-arm. The citizens shouted for the police, and some boarded the ships; when they found that the executions had been performed on straw-stuffed effigies of Judas Iscariot; the crew had been going through a ceremony usual in the Greek Church on Good Friday.

A few days ago Mr. Hodgson offered for sale the stock, copyright, stereotype, steel-plates and woodcuts of the Cabinet Cyclopaedia, projected by Dr. Lardner, and carried out with the assistance of Sir James Mackintosh, Sir John Herschell, Sir Walter Scott, Bishop Thirlwall, and many other eminent men. The series included copyrights in sixty printed works, for which, and an unpublished manuscript by Mr. T. Roscoe, £40,000 had been paid. The stock consisted of 46,000 volumes. A considerable number of publishers were present. The property was put up in one lot, and the first offer was £3,000; the biddings were continued with spirit until the sum of £9,500 was attained, at which price it was knocked down to Messrs. Longman.

The dissensions in the Western connexion of Dissenters are becoming increasingly serious. A great trial-dred case, "The Attorney-General v. Cosens, Hardy, and others," is now being argued in the Vice-Chancellor's Court, arising out of an organized attempt to alienate some of the Chapels from the Conference, and transfer them to the reforming party.—A general threat to that effect, contained in a pamphlet issued last year, has been practically carried out by the defendant in the Holt Circuit, Norfolk, by the sale and transfer of one of the Chapels. The question is of the utmost importance to the connexion, and affects trust property in general. The defendants were themselves trustees and mortgagees of Chapels, but are now among the "expelled," of whom they certify there are no fewer than 31,680, besides 2,000 and upward in Bristol.

A quantity of ammoniacal water having been turned into the river Deane from the Barnsley gas-works, not only that river, but also the Don, into which it runs, was poisoned: thousands of fish floated on the surface, dead; and the people of Doncaster found that their tea was undrinkable, or sickening.

FATHER IGNATIUS IN DUBLIN.

The extraordinary personage who rejoices in this denomination has been figuring away through the streets and chapels of Dublin at a tremendous rate during the last month. The Hon. and Rev. Mr. Spencer, as his name goes in unromanised English, is well known to all our readers. His zeal and rank, if not his talent, have rendered him famous in Tractarian

and present story. His removal to Dublin, in order to carry on the work of perversion, seems to have turned out rather an unlucky hit on the whole. The Rev. Father and his accomplices forgot that the clergy of Ireland, and the clergy of Dublin especially are thoroughly conversant with Romanism, and intimately acquainted with the direct rebuke of the apostacy which is so abundantly diffused through the sacred volume.

This strange emissary of Rome after parading the principal thoroughfares of Dublin, beside exhibiting in Popish chapels in the dress of his order as a Passionist, that is to say covered with an umbrella hat of enormous dimensions, a double cloak, girded with leather, jingling an iron chain from his side, to which is attached a paltry brass cross, bearing on his left breast two badges of brown cloth with illuminated letters, somewhat similar to what is called a scapular in this country, and to complete all, flourishing about with bare legs and bad sandals; this poor man we say evidently had come prepared to take the city by storm.—His method consisted in visiting all the Protestant clergymen, requesting them to join in a plan of united separate prayer (an Irish sort of request by the way) for unity in truth, and then gradually endeavoured to point out frivolous disagreements between the Protestant sections, get up a doubt and work it well, so as to commend the unity of the Roman Church.

In no one instance did this poor tool of Romanism meet with any thing but defeat, although treated with the greatest gentleness and forbearance. On one occasion he encountered by the Rev. Messrs. Nangle, Richie, Marable, McCarthy, and Bleakly.—The conversation was a protracted one, and when he was invited by Mr. Nangle to attend his sermon in Michan's Church, and hear a methodical refutation of his errors, he declined on the ground that he would not enter an heretical place of worship. He was then invited to attend an evening meeting in a public room in the Rotundo. He declined again. He was then requested to join in prayer for unity. His answer was—"That he would prefer being torn to pieces by mad dogs!" This was something of of the Passionist in reality. Subsequently he had two private interviews with the Rev. C. M. Fleury, and when this gentleman gave an outline of their conversation in a speech, delivered at one of the religious anniversaries, the Passionist published a latter denying the conversation as so reported, declared every sentence of the speech to be a misrepresentation, and the speech itself to be replete with positive falsehood. Mr. Fleury replied briefly, by showing that this denial intentionally and undesignedly corroborated his statements. And the Rev. Mr. Richie, whom he equally charged with falsehood, replied in like manner, appealing to the evidence of the four clergymen, who were present at his interview with the Passionist, for the precision and correctness of his assertions.

Now we are wonderfully pleased at all this. Something was to be done in Dublin to check the spirit of inquiry amongst Romanists, and turn the tide if possible in the opposite way, in favour of blind superstition. The Passionist was brought over, paraded about the streets, lauded to the echo by the popish journals, literally adulated, if not adored, by devotees of both sexes, beplumbed and platformed in the chapels, placarded and trumpeted forth as a specimen of piety and learning, and so forth—loured upon the ministers of the church; and to the poor man is sifted to the very heart's core and detected even on his own admission to be profoundly ignorant of his adopted creed; ready for every extravagant and ungentlemanly contradiction of truth; and in fact capable of nothing but stultified superstition and low cunning.—*Achill Herald*.

United States.

THE VOLUNTARY PRINCIPLE.—It will be recollected that, a few years since, there was a split in the American Methodist Church, in consequence of slavery, and the stand which the Northern Methodist took towards their Southern slaveholding brethren. The ground taken by the Northern Methodists, at the time, was, that it was unchristian, and in contravention of the law of God, to hold communion or have any intercourse with the owners of slaves. It is remarkable that this is, likewise, the motto of the abolitionists, who recently held their Convention at Syracuse, in this State. A very important and interesting law suit has arisen out of this separation. It seems the Northern brethren seized upon all the Church property in the Northeastern and Northwestern States, and insist upon retaining it for the exclusive use and benefit of the Northern Church. The Southern Methodists have accordingly filed bills in the United States Circuit Courts of all the States in which Church property has been located, and amongst the rest, in the Court of the southern State of New York, claiming an equal division of the property. It is said some very curious facts connected with the policy of the Northern Methodists, in relation to slavery in the South, will be brought to light on this trial.

The *New York Express* says:—"This suit is instituted by the Southern General Methodist Conference, (by commissioners and beneficiaries) against George Lane, Levi Scott, George Peck and Nathaniel Bangs, trustees of the Methodist Book concern in New York. Mr. Lord, in opening the case, stated that the stringent measures operating in the Methodist church in this country, whereby its members were prohibited from owning slaves, led in 1844, to the proposition for a division, which was acceded to, and, consequently, a separate and distinct organization took place in 1845, denominated the Methodist Episcopal Church South; that the Methodist Book concern in this city, worth about \$750,000, was established with a view to furnish books to ministers of the church, who sold them to members and others, and the proceeds after defraying the expenses of the establishment, were to be devoted to the maintenance of travelling and superannuated ministers, widows and orphans, &c.; that the said church South was declared to be composed of the Methodist churches in the slave-holding States; that it was fully understood that the annual conference at New York, in 1844, agreed to the measure, but it was subsequently urged by the church North that the measure of division was unconstitutional, and that the churches at the South were seceders, and not entitled to a participation in the profits of said establishment, and have refused to allow a division of said establishment, or to pay to the Church South its appropriate share agreeably to the division. The present suit, in consequence, is instituted, as if the Church South are declared to be seceders, they lose title to all the Methodist churches and other property at the South. The complaint states that the church is a voluntary institution and unincorporated. It consists of seven Bishops, 4,828 preachers—and in bishops, ministers and members under the organisation in the United States,