THE

Weekly Chronicle.

Terms—15 shillings per annum:] "*Nec Rege, Nec Populo, sed utroque.*" 12s. 6d. if paid in advance.

Vol. 1. SAINT JOHN, (N. B.) FRIDAY, NOVEMBER 25, 1836. No. 12.

The Chronicle,

Is published every Friday afternoon, by Lewis W. Durant & Co. at their Office in Sands' brick house, Prince William Street.

Terms—15s. per annum, or 12s. 6d. if paid in advance.—When sent by mail, 2s. 6d. extra.

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Weekly Almanack.

November.	S. R.	S. S.	Moon	H. W.
26 Saturday,	7 12	5	6 4	0 43
27 Sunday,	7 14	5	7 49	1 20
28 Monday,	7 15	5	8 55	1 59
29 Tuesday,	7 16	5	9 58	2 41
30 Wednesday,	7 18	5	11 2	3 27
1 Thursday,	7 19	5	morn	4 19
2 Friday.	7 19	5	0 10	5 21

Last Quarter, 1st, 5h 38m morn.

Public Institutions.

Bank of New-Brunswick.—Solomon Nichols, Esq. President.—Discount Days, Tuesday and Friday.—Hours of business, from 10 to 3.—Notes for Discount must be left at the Bank before 3 o'clock on the days immediately preceding the Discount Days.—Director next week: R. F. Hazen, Esq.

Commercial Bank.—Charles Ward, Esq. President.—Discount Days, Tuesday and Friday.—Hours of business, from 10 to 3.—Bills or Notes for Discount must be lodged before 3 o'clock on the days preceding the Discount days.—Director next week: A. S. Perkins, Esq.

City Bank.—John V. Thurgar, Esq. President. Discount Days, Mondays and Thursdays.—Office hours, from 10 to 3.—Bills or Notes for Discount must be lodged at the Bank before three o'clock on Saturdays and Wednesdays.—Director next week: E. D. Ratchford, Esq.

New-Brunswick Fire Insurance Company.—John M. Wilmot, Esq. President.—Office open every day, (Sundays excepted) from 11 to 1 o'clock. [All communications by mail, must be post paid.] Committee for October: R. M. Jarvis, Gilbert T. Ray, Mark Dole, Esquires.

Savings Bank.—Office hours, from 1 to 3 o'clock on Tuesdays.—Cashier and Register, D. Jordan.—Acting Trustee for October: T. Millidge, Esq.

Marine Insurance.—I. L. Bedell, Broker. The committee of Underwriters meet every morning at 10 o'clock, (Sundays excepted.)—Committee for October: William Jarvis, F. A. Wiggins, James Whitney.

Miscellany.

From the Diary of a London Clergyman.

THE WIDOW.

[CONCLUDED.]

Port Jackson.—The widow's occupation.—Contributes to a newspaper.—Her success.—Mr. ——, —Reversal of the sentence.—Lady H.——'s generosity.—The union.—Its result.—She is left a widow.—Returns to England.—Her seclusion.—The separation.

"We at length landed at Port Jackson. A thrill of inexplicable emotion passed through me, as I descended the side of the ship, to be conveyed to the scene of my future destination. In a few months after my arrival, I raised myself above the degraded level of those who had been the companions of my voyage. My accomplishments gave me an advantage in this growing colony, which I soon turned to account. I was a perfect mistress of music; drew with considerable promptitude; spoke Italian and French with fluency;—qualifications not readily found at Port Jackson. I gained more than a competency in giving lessons, and afforded such satisfaction, that I had soon a greater number of pupils than I could conveniently attend to.

"I now made money. My conduct since my arrival had been irreproachable, and I found myself so generally respected that I was soon enabled to increase the amount of my terms for tuition. My own story of the charge upon which I had been sentenced to transportation was at length received with implicit credit, and I was generally considered the innocent victim of evil machinations.

"My occupation tended to restore the tone of my mind. I had little time to dwell upon the gloomy events of the past, and the future was sufficiently promising. It was a consolation to me to perceive that, in the land to which I had been exiled upon a charge of the greatest moral enormity, I was treated not only with respect, but my society was courted, and my talents extolled. This naturally flattered me, and spurred me to greater exertions.

"I frequently contributed to the columns of a newspaper, established by a person under circumstances very similar to mine. He had been transported upon a charge of forgery, and his innocence was discovered just when six years of the period for which he was condemned had transpired; but he preferred living in the country where he was now settled, and making money, to returning to a home where disgrace might still point at him the finger of scorn, and malice stamp upon his character the opprobrium of unmerited shame. The second year after his arrival, he established, at Port Jackson, a paper, which met with such success, that it soon brought him an excellent income. He was still a young man, in his thirty-sixth year. After his innocence had been declared, and his pardon proclaimed, his society was courted by the first people in the colony. He proved to be a person of good talents, and showed great discretion in conducting his journal.

"I occasionally sent him short articles, which were gladly received and inserted. As my initials always appeared to those articles, it was soon know by whom they were written, and my talents were still more extolled. My life might be now considered one of unbroken prosperity. I earned money rapidly, and was amassing a comfortable income. The first year I put by four hundred pounds, and by the end of the fourth, I was worth upwards of two thousand. I had now nothing to repine at.

"My contributions to the newspaper brought me in contact with its editor. I found him to be a mild gentlemanly man, and our confidence increased with our literary intercourse. He believed me to be innocent of the crime for which I had been condemned, and his sympathy towards me was no doubt stronger from having similarly suffered. I was pleased with his good opinion, and he seemed no less pleased with mine. Mine had been a difficult and dangerous position. Thrown among the most profligate of my sex, an outcast from my country, degraded under the sentence of its laws, I had still not suffered the contact of pollution to taint the principle of virtue, which was ever strong within me. I had elevated myself, from the deepest moral debasement, to a respectable position in society; and though the brand of infamy remained still upon me, I had come out of the furnace of affliction spiritually purified, though legally degraded.

"Our literary intercourse, which brought us a good deal together, had continued upwards of a year, when Mr. —— made me an offer of his hand. I was taken by surprise: I never once entertained a suspicion that our friendship was likely to lead to such an issue. It was indeed natural enough, but the thought had not for an instant occurred to me, and I felt painfully embarrassed. He was an innocent man, proved innocent, absolved from guilt, by the very laws which had condemned him, while I was still a criminal—still under the odium of a crime which I could not think of without a harrowing pang. I was distressed by his proposal, because I foresaw that it would force me to give him pain, for I was determined never to go a degrading thing to the arms of a husband. While I continued single, the glowing spot of infamy by which I was encircled, surrounded only myself; the moment I united myself in the sacred bands of marriage, I should draw the man partaking of this union within the same sphere of moral polution. Why should I spread the blight of contagion upon another? No! I acknowledged the generous preference with which he flattered me, but peremptorily declined his proposal.

"He urged the respect which was entertained for my character in the colony, the general opinion of my innocence, and implored me, unless my heart were decidedly opposed to a union with him, to make him happy.

"I was not to be moved. My principles were too fixed to wander, when once it had become the settled conviction of my soul that I was acting rightly. I felt bound not to involve another in the shame, however unmerited, which had so unhappily fallen upon me.

"About this time an unexpected event occurred. A remission of my sentence arrived from England, and I was no longer a convict; yet it imparted no triumph to my heart. That had been seared, and the cicatrice was not to be eradicated. If the wound was healed, a deep unsightly scar remained, and I never could forget having suffered transportation for robbery. My innocence, indeed, had ever been a solace to me. It was known to my God, in whose sight, and in communion with him, I enjoyed the consciousness of it, with a lofty sense of devotion. But in the eye of the world, a canker had been upon me, and even though the canker was removed, the foul dark spot remained, which nothing could expunge. It was, however, a satisfaction to me that my innocence had been proclaimed, though the stain left upon my name was not to be effaced.

"By the same ship which conveyed my liberty, I received a letter from my mother, fully detailing the singular revelation of my innocence. It was as follows:—The house maid who had suggested the search of my things, when I quitted the service of Lord H——, was taken suddenly ill. The terrors of death overcame her, and stung by remorse, she sent for my mother, to whom she declared that she had herself placed the trinkets in my trunk, in order to fix the guilt of the robbery upon me, for whom she entertained a violent antipathy. The girl recovered, but her conscience had been so severely probed, that she maintained the truth of her statement. She was dismissed from her service, and I restored to freedom. To my mother, who had quitted the lodge in the Earl of H——'s park immediately upon my conviction, his noble lady sent a ten pound note, by way of compensation for the injury I had sustained in being sentenced to fourteen years' transportation, under a false sentence, but the expected beneficiary had the spirit to return it.

"No sooner was I placed on the same footing with himself, than my generous friend again proposed to marry me; observing, that the objection which had directed my former determination, could no longer exist. This was true; nevertheless, I still had some difficulty in acceding to his wishes. I was indeed declared to be innocent, but I had paid the degrading penalty of guilt. I had placed myself in a comfortable independence as a single woman, and was, comparatively happy: why, then, should I alter my condition, upon the chance of not improving it? He, however, continually urged me with the tenderest importunities; and I at length consented. He had already accumulated more than a competency, which he justly considered our united exertions would much augment.

"We were united just as I had attained my twenty fourth year. Our union was a happy one. He was the kindest of husbands, and used in his fondness to say, that I was the best of wives. We had no children; a circumstance, to my mind, not to be regretted,—as their names would have been ever coupled with the legal expulsion of their parents from home and country. By our united endeavours the property of the paper greatly increased.

"We were five years married, and during the whole of that period, to the best of my recollection, we never exchanged one unkind word. The chastenings with which we had each been visited, tamed the rebellious spirit, and wore down the edge of our passions. We had both been improved by what in many is a great source of moral mischief. Our society was everywhere courted. We were invited to the governor's table; he visited us at our own, and we could hardly be said to have a wish ungratified. But this cloudless state of things could not last. The course of human events must have its interruptions, or we shall pass through no probation. The sky lowered, at length, and the gloom of desolation visited our dwelling. My husband died, after a short illness of three days. This was indeed a severe shock to my feelings; but they had endured heavier trials, and I was therefore able to bear it with that fortitude with which the unfortunate are ever familiar. My loss was great; for I was once more left alone in the world. He had been an excellent husband, and an endeared friend. I mourned for him with a deep and enduring sorrow. I was, however, satisfied that his change from time to eternity was one from corruption to incorruption. His harvest was reaped in heaven. He had gone to his inheritance, where, I trust, once more to join him, when the frail thread of existence shall be snapt, and I shall be laid in the grave remote from that in which his ashes were deposited.

"His death left me a widow, with twenty four thousand pounds. My hand was almost immediately sought: but I appreciated the motive, and rejected with silent scorn several interested suitors. When the year of my widowhood had expired, I returned to England.

"It was not without regret that I quitted a country to which I was sent under such evil auspices, but, nevertheless, in which I had enjoyed much true happiness, and stored up the elements for future enjoyments in that country where it is for evermore,—"Where the wicked cease from troubling, and where the weary are at rest." I quitted it, however, and arrived in England just two years since. I have secluded myself from society, because I do not choose to expose myself to the risk of those mortifications which none can escape from, when they court communion with the great and the gay, upon whose name the brand of obloquy has once fallen. Seclusion is now so entirely my habit, that society would be to me a penance. I avoid it, therefore, because it would furnish no enjoyment to me.

"Now, sir, you have the little history of my life; and from it you will probably understand why I have declined the honour of your hand. I cannot help feeling that I am still a degraded woman in the eye of the world; and not for the wealth of that world would I involve an unspotted name, and especially that of a clergyman, in the odium which to a certain extent, must ever attach to mine."

She ceased; and, extending to me her trembling hand, a tear glistened in her bright dark eye.

"I appreciate your motive, dear madam," I said, "and honour you for them. But who would dare to breathe a calumny upon an innocent woman, and that woman the wife of a clergyman? The more your history became known, the more you would be honoured."

"No, sir, the more I should be pitied; and how frequently is the pity of the multitude allied to contempt? I would not have my history known. I do not desire the world's pity, neither would I provoke its scorn;—I shrink from both. I desire to live unknown, unnoticed, unpitied, but not despised. Your good opinion of me is a watered spot in the wilderness of my being, through which my mind loves to wander, and prepare itself for Heaven."

"But it appears to me that this love of seclusion is not a feeling altogether to be approved. You cheat yourself with an illusion; for while you imagine you are preparing your soul for its ultimate destination, are you not withdrawing yourself from those social duties, which, by the fiat of the moral law, are as imperative as our duties towards God? In fact they are the same thing, alike indespensible and indivisible: since, by performing our duties to the creature, in that very act of subserviency to the divine precept, we perform our duties to the Creator."

"But surely, the great Author of Mercy expects nothing from us beyond our means. The services he requires are relative, as will be seen by the parable of the talents. He who had only five, was rewarded equally with him who had ten, because he had been no less observant to his trust than the other; for though he returned less, as his means had been less, he was equally accepted."

"But you will remember," said I, "that the one talent, which was not appropriated, brought disgrace and shame upon the servant who laid it by, and he was rejected."

"Yet I trust," said she, mournfully, "that I am not altogether an unprofitable servant. The salvation of my own soul is a work of no common interest and difficulty; and if I labour to restore that back pure to the God who gave it, I feel I shall not have laboured in vain."

Our conversation was continued for some time; but I could not bring her to the belief that she was at all called upon to appear in the world. She had a firm and settled opinion upon that point, which nothing could shake. I confess I honoured the severe dignity of her mind, though the discovery of her character,—her inflexible virtue,—made my regret the deeper that I could never be joined to her by a more endearing link of union. We parted for the last time. I never saw her again, except at church, whither she constantly came. Indeed, I was conscious it would be more than weakness to seek the presence of a woman, towards whom I felt too strongly to meet her without emotion. She is still alive. Four years have since passed, but we have never once met.

THE BRITISH MUSEUM.

On Tuesday the doors of this national institution were again open to the Public after the late recess. Altogether the last season has been marked by a greater increase in the number of visitors to the general collection, and of readers, *par excellence* students in the library, than any preceding one. The number of the former from Christmas, 1834, to Christmas, 1835, amounted to 289,104, whilst in the half year ending the 31st of July last the number was 237,338. No doubt much of this increase was owing to the season of the year. The number of students now in the library is nearly 70,000. The Gallery of Antiques has been recently put in order. Admirably disposed in the centre is a splendid copy (antique) of the Venus de Medicis. This noble *chef d'œuvre* was presented by his present Majesty some time ago; it belongs strictly to the Phidias school, though the name of the sculpture by whom it was executed has been lost. Parallel with this statue is one of Adrian, which for classic beauty of execution is unrivalled. Nearly the whole of the relics in the Gallery of Egyptian antiquities have been labelled, from which it appears that by far the greater portion of them were captured in Egypt in 1801, and presented by the late King to the Museum. His Majesty George the fourth was the most munificent doner to the institution. Two Italian workmen are busily employed in the Elgin Gallery, taking casts from the valuable remains placed there. The casts are made in a tenacious composition resembling a mixture of wax and putty, but the most jealous care is taken by the Italians to prevent either the mode or the material employed in taking the casts being discovered, for each workman is surrounded by a canvass screen, effectually precluding the possibility of a glimpse. In a small apartment on the left of the principal gallery of sculptures there have been lately placed upwards of 200 specimens of the most beautiful Etruscan vases the last Government purchase: the delicacy and finish of these matchless specimens of fictile art baffles description. They vary in size from the small but elegant vessel of two inches, to the magnificent amphora of three feet in height. Two or three splendid mummies, purchased by the Government about six months since at the sale of the unequalled collection made by Mr. Sault, (His Majesty's late Consul at Cairo), have been placed in one of the small rooms on the same floor with the gallery. Judging from the external decorations of the cases, they contain the bodies of early princes of Egypt. The fingers of the carved figure, representing the inhabitant within, are covered with valuable gold and other rings; some of these are carmelion and bear curious characters, the signet of the deceased. Within the last twelve months the library has received many valuable additions. A whole range of book shelves in the first reading room has been set apart for the reception of the newspapers of the United Kingdom; these have been mounted in rich bindings, gilt and lettered on the back, and present to the eye a brilliant array of literature, which might be taken for the riches editions of Piranesi and other folio authors. It is not generally known that some of the most skilful bookbinders in London are constantly employed within the walls of the Museum, putting into substantial bindings the purchased and presentation copies of all literary works in boards. Some rare specimens of binding are found in the King's library, which serve as models to the mechanics employed. The choicest specimens of binding in the library just named are by Roger Payne, a worthless creature, who has received as much as two hundred guineas for binding a single folio work; and though constantly employed (when he chose to work), died a beggar, upwards of 100 years ago. The department of MSS. has also been considerably enriched during the past season, not only by the accession of the Arundel manuscripts, purchased from the Royal Society at Somerset House, but also by the acquisition of fifty five volumes of Oriental manuscripts, purchased from the same society for the comparatively small sum of £165. It may be added, that within the last few weeks a green basalt sarcophagus (which still remains unpacked) was presented by the Duke of Hamilton. Under the colonade, on the right of the entrance to the quadrangle, is placed a gigantic fossil boat dug some time ago from the grounds of Lord Egremont, at Petworth.—*London Times.*

Natural Philosophy & Mechanics.

ON TUNING PIANO-FORTES.

Sir,—Many, when they first commence learning to tune, are contented to begin simply with tuning, properly so called, instead of what is technically called roughing-up. This consists in taking the instrument rough from the stringer, and drawing it up until such time as it stands at concert pitch. It may be urged that a person who possesses a delicate ear will learn sooner on the first plan, in consequence of the ear not being vitiated by the discordant sounds that are the necessary attendants upon roughing up; but such a person would be quite at a loss when he had to tune an instrument half a note, or even two half notes (which is not uncommon) below concert pitch. From his comparatively bungling manner of proceeding, he would be three times as long over his work as one that has learned by roughing-up. In short, it is like learning to write elegantly before pothooks and hangers are acquired.

All this arises principally from not knowing the part in which the strain of the stringes causes the pitch to fall, and to make the necessary allowance for it by drawing up that part above pitch. If the bearings are comprised within the septave F—E, the pitch is found to fall from the included B, all the way up the treble. This is remedied by drawing that part up considerably above the pitch you are working upon, and, by the time you have finished the treble, it will have settled pretty well down to the perfect octave. Again, the first-named would probably make his pitch exact at starting, instead of allowing for the falling of it afterwards. Of course, I only speak of an instrument that is very flat.

In horizontal grand and square pianofortes, this strain is very considerable; in cabinets not so great. The reason of this is, that in the latter the strain is in a perfectly vertical direction, and, consequently, they stand longer in tune; but in the two former it is all diagonal—and, indeed, it has been jocularly said, that the square piano-forte is so called, because there is nothing square about it!

The task of roughing-up is materially facilitated by stretching the strings with a well-known instrument called a rubber, made of wool, and, in most instances, covered with leather; this is pressed downwards with considerable force upon the whole length of string. It also has the advantage, where a string is false, *i. e.* not perfectly round, of causing it to become more pure in its tone. Until of late years, piano-forte makers were sadly bothered for wire. The best that could be procured then was the Berlin, or German wire, as it was generally called. But bad was that best; it was only *iron* wire, and neither round, square, oval, nor any other shape. It was very scarce, and difficult to procure in time of war; when Napoleon shut the foreign ports against us, to wit, it was a favour to get it at all at 10s. 6d. or 12s. per lb., and there has been the unexampled price paid for it of 25s. per lb. at a public sale. It was also very wasteful: ring after ring having to be thrown aside in consequence of brittleness.

The proud boast was reserved for an Englishman of overcoming these difficulties, and furnishing *steel* wire as near to perfection as any thing in this sublunary world. There had been countless trials and experiments made to give to steel such a temper as would fit it for music-wire; but the patience of the English piano-forte makers had been nearly exhausted by their repeated disappointments, and it was some time before it came into general use. Now, not only is nothing else used in England, but at Paris, Vienna, Hamburgh, and even Berlin itself, the German wire has been completely beaten out of the market. This created a new era in piano-forte making; for I think I may safely assert, that piano-fortes have been considerably more improved within the last ten or twelve years than during the previous thirty or forty. Independent of this, it has grown up more into a distinct trade *per se*; formerly their shops were supplied with artisans from the joiners and cabinet-makers—now they are supplied with men regularly brought up to the business from their childhood.—*Mechanics Magazine.*

New Ships' Signal Lantern.—A most admirable invention has recently been brought into use, and is likely to meet with general adoption, intended to prevent those accidents which are the cause of so much loss of property, as well as the annual sacrifice of a number of valuable lives. It consists of a ship's lantern, of copper, strongly and efficiently constructed, and possessing the means of being regulated so as to show a light of different colour, according to the tack upon which the vessel bearing it may be sailing, or the position in which she lies. A set of instructions accompanies each lantern, by which the master is informed what light he is to show on each change of tack and position, and thus a mutual understanding is attained amongst navigators as to the meaning of the signals exhibited. The changes of colours are effected by the following simple contrivance:—The lantern contains an interior case, capable of being turned round, and having windows of glass of several colours. The lamp of the lantern has a strong reflector and powerful 'bull's eye,' or magnifier, to project the light, opposite which, in the outer case, is an apertnre. By turning round the interior case, each coloured glass window is brought in front of the bull's eye, and thus a light of the colour required is projected.—*Hull Packet.*

Account of the Manufacture and tempering of Sword Blades in the Province of Cutch. From information communicated to Captain Bagnold, R. M., by his brother, Lieut. Colonel Bagnold, late President of the Regency in Cutch.

These swords are celebrated throughout India for their peculiar strength and edge, and are thus made: An inch bar of fine Swedish or English steel is forged out into plates seven inches long, one inch broad, and one-sixth of an inch thick. Similar bars of fine, soft iron are prepared in the same manner. These are smeared with a paste of borax dissolved in water, and laid in piles of twelve—nine of steel to three of iron, or three to one, alternately: each pile is wrapped round with rag thickly plastered with mud made of a loamy earth; then heated, welded, and drawn out to a bar one inch and one-eighth broad, and one-third of an inch thick: this is bent zig-zag three or four times: is again welded and drawn out to half an inch thick; and, during the heat, borax is frequently dropped on the metal while in the fire. Two of these bars are next wielded into one, and, when about twelve or fourteen inches long, it is bent into the form of a loop or staple; in the middle of this a piece of fine-grained file is inserted, of the same width, and nearly as thick: all is then welded together, and the blade is formed.

Tempering.—An earthen pot, twelve inches wide and six deep, is notched on the edges (the notches being opposite each other) with a file, about a quarter of an inch deep, and is then filled nearly up to the notches with water, and oil is then poured on the surface. The blade, being heated equally to a light red, is removed from the fire, and the point, entered into the notch on one edge, is passed to the opposite one, keeping the edge from a quarter to half an inch in the oil: it is drawn backwards and forwards rather slowly till the hissing ceases, and the rest of the blade above the fluid has become black; a jug of water without oil is then poured along the blade from heel to point. In order to take out the warp produced by tempering the blade, when nearly cold, is passed over the fire three or four times; then being brought to the anvil, is set straight by striking it regularly, but moderately, with a hammer; by this means a Damascus-curved blade may be brought nearly straight. Blades made this way, in my brother's presence, when he was President of the Regency in Cutch, were proved, previous to grinding, by striking at stones, ramrods, musket-barrels, and even wheel-tires, without injury to the edge.—*Trans. Soc. of Arts.*

New Liquor-Guage.—A guage, upon a very simple and excellent principle, which has just been introduced in the new gin palaces has been invented by Mr. Page, the hydrometer manufacturer, to show the quantity of liquor, in inches, contained in a cask or vat at any time. The guage is a vertical glass tube of the same altitude as the cask or vat, and about the size of a large barometer tube, open at both ends. The lower end is securely let into a brass tube about six inches long, at right angles, with a valve, or stop-cock; this tube is fixed into the lower part of the side of the cask, as near the bottom as can be, similar to a cock. The glass tube is attached to a brass index about two inches wide, and of the same height as the glass tube, which is divided into inches; and the number of inches is engraved in figures, reading from the bottom to the top. It is evident, when the valve at the foot of the glass tube is open, the liquor in the vat or cask will rise to the same height in the tube as it is in the vat; and, by means of the brass index, that it will show the number of inches of liquor in depth there are in the vat or cask. It saves considerable labour and trouble to the Excise officers; as, by calculating the quantity there is in every inch in depth in the cask when the guage is first fixed, they can make their entries without the trouble of the guaging-rule.

New Lamp.—A lamp of a new construction, which describes a circle of light of about thirty feet in diameter of the apparent intensity of sunshine, showing the objects within its sphere as distinctly as those on the table of a camera obscura, has been erected at the head of the inclined plane in Saint Leonard's depot. Its object is to enable the enginemen to have a distinct view of the inclined ropes during the night, and this has been fully attained. The lamp consists of an argand burner placed in the focus of a large speculum of a peculiar form, by which the whole light is distributed just on the space where it is required: it is computed that the light on the above space is equal to that of twenty-five or thirty similar burners in common lamps. A lamp of this kind we have no doubt would be useful for other purposes: it appears to us that the largest assembly room might be brilliantly lighted by one placed at each end of the room, and one would be sufficient to light the stage of a theatre. The cost of this is said to be about £200, but we understand it saves an annual expense of about half that sum. The inventor is a Mr. Rankin, and he names it the Conodial lamp—probably because the light is thrown from it in the form of a cone.—*Caledonian Mercury.*

System of the Universe.—Minute as the changes are in motions of the planets from the constant operation of their reciprocal attraction, they might be supposed to accumulate in the course of ages sufficiently to derange the whole system of nature, to alter the relative position of the planets, to put an end to the vicissitudes of the seasons, and to bring about collisions which would involve our whole system in chaotic confusion. It is natural to inquire what proof exists that nature will be preserved from such a catastrophe? Nothing can be known from observation, since the existence of the human race has occupied comparatively but a point in duration, while these vicissitudes embrace myriads of ages. The proof is simple and convincing. All the variations of the solar system are expressed analytically by the sines and cosines of circular arcs, which increase with the time; and as a sine or cosine can never exceed the radius, but must oscillate between zero and unity, however much the time may increase, it follows that when the variations have by slow changes accumulated, in however long a time, to a maximum, they decrease by the same slow degrees, till they arrive at their smallest value, and again begin a new course, thus for ever oscillating about a mean value.—*Mrs. Somerville.*

COPY