

comes alongside—we coal up once more, and away we go. At 10 A. M. on the 13th day we salute the old Citadel and sing on deck "Auld Lang Syne," and "God Save the Queen," as though we had only just been out for the day's pleasure-trip. But let us look around our "crack" ship, and see if she has suffered by the gales; no, she has not lost a spar or a rope's end; her gangway bars are not strained the 1-16th of an inch, and she proved herself, under trying weather, to be "a good ship and true." May she well repay her owners, and never again be short of coal.

J. B. E.

THEATRE ROYAL.—Miss Ada Harland has been starring during the week, having taken her benefit last (Friday) night. She has been very well received. On Monday last Mr. Gleason, who has been for some time acting as treasurer, was the recipient of a very flattering present, in the shape of a handsome gold-headed cane. The presentation was made the occasion of some happy interchanges of sentiment between Mr. Gleason and his co-laborers. We understand that he leaves the city in a brief space with the intention of returning next season. New attractions are offered for next week.

THE SIR JOHN A. MACDONALD TESTIMONIAL.—At a meeting of the Executive Committee of this Testimonial, held during the present week, it was reported that over \$64,000 have been collected and placed on deposit, in two Building Societies, at 6 per cent.

This is an exceedingly handsome sum; but it does not represent all the subscriptions to the Testimonial. There yet remain throughout the country a large number of subscribed sums which have not been collected. The executive Committee, at its recent meeting, requested the Secretary, Mr. Angus Morrison, to communicate with the various secretaries of local committees, with a view to the early realization of all the amounts subscribed.

The resolve of the Executive Committee affords us what we trust will be the last opportunity to urge an immediate winding up of the Testimonial Fund. It has been taken hold of, and warmly assisted in all parts of the country, with as much eagerness as the most enthusiastic of Sir John Macdonald's friends ever contemplated. It only remains now to gather in what has been subscribed. We trust that our friends throughout the country will make one last effort to realize this end, as it is proposed to present the Testimonial to the Premier, who has so worthily earned it by a life of devotion to the public service, at an early day.—*Toronto Leader.*

GREAT WESTERN RAILWAY NARROW GAUGE ENGINE.

The Great Western Railway of Canada, stretching from Clifton to Windsor, forms a most important connecting link between the New York and Western (United States) railway systems. The change of gauge carried out within the past two years was effected under the sanction of an Act of the Legislature, and for the express purpose of rendering the line uniform with its American connections at either extremity. As the trains from New York to San Francisco, and much of the freight from West to East, and *vice versa*, pass over the Great Western, the change of gauge was a prudent step dictated by the wisest commercial policy. The Great Western possesses a magnificent road-bed, one of the very best in America; its traffic is immense for the length of the line—221 miles—and its appointments are all of first class order. The change, therefore, from a five feet six to a four feet eight gauge has made no sensible diminution in the comfort of passengers, or in the road's capacity for freight, while it has very much improved its facilities for through business. It is to be remarked, however, that the Great Western, in conforming to the ordinary American, instead of the English, gauge, proves nothing in favour of what is called the narrow gauge railway system, for the Festiniog Railway in Wales, of two feet eleven inches gauge, and some of the narrow gauge lines in the north of Europe, quoted as instances of the success of Sir Charles Fox's pet plan when backed, or rather driven, by the Fairlie Engine, bear no comparison to the American gauge which the Great Western has adopted. In this issue we give an illustration of the first engine placed upon the line after the change was made. It is from a photograph by Cooper, of London, Ont.

SCIENTIFIC.

Among the curiosities of recent discovery may be instanced that made by M. Bertsch, and turned to practical account by M. Kuhlmann, the celebrated chemist. M. Bertsch has found that Epsom salts, or sulphate of magnesia, dissolved in beer, together with a small quantity of dextrine, or artificial gum, applied to a pane of glass with a brush, will, on crystallizing, produce the identical designs formed on glass by frost in cold weather, with this improvement, that the liquid may receive any colour whatever at the option of the operator. M. Kuhlmann, however, conceived the idea of going a step further, and transferring those fairy-like creations to stuffs and paper. For this purpose he first got the crystallizations on sheets of iron, on which he afterwards laid one of lead. By means of a powerful hydraulic press the minutest details of the figures in question were duly imprinted on the soft metal, and a copy of them in relief was then obtained by galvanoplastics. But, in the impression of cotton stuffs, the pattern must be continuous, whereas in M. Kuhlmann's plates the lines at one end would fail to coincide with those at the other, causing disagreeable interruptions in the printed designs. To overcome this he ingeniously effected the crystallization on the cylindrical surface of a roller. A slight rotatory motion imparted to it prevents the liquid from accumulating at any particular point before it has evaporated.

[Except that gum arabic, instead of dextrine, was generally used twenty-five or more years ago, we believe that at that time, and how long before we cannot say, every apothecary's apprentice was "up" with the so-called discovery of M. Bertsch. Surely it is more than a generation since "frosting" with Epsom salts was familiar, even to non-scientific people. But M. Kuhlmann's discovery does appear to have something of novelty in it, even if destitute of much practical value. It may, however, give the ladies some new patterns in dress.—Ed. O. I. N.]

THE TRUTH AFTER THOMSON.

(As Versed by a Modern Athenian.)

More blest than ancient, modern Athens see
Beneath a *douche* of wisdom, playing free.
Imbibe philosophy, drawn cool and mild.
And quaff from wells of science undefiled.

But let me haste to range in order fair
Our gains—and first, the wisdom from the chair.

The sun's a slowly-cooling liquid mass.
Like that which reams within my toddy-glass.
But, unlike that, hot liquid doth contain
'Till take earth's draughts millions of years to drain.
Ah, happy earth, thou, unlike thirsty Scot,
Undrunk, canst quaff for ages, hot and hot!

Comets are groups of metaoric stones,
That rattle round our globe in crossing zones;
The light from their bright heads to earth arriving,
Due to collisions from unskillful driving;
Their tails, the outer portions of the train.
By sunlight and perspective's laws made plain.
As in the cloud round my churchwarden curled,
Less and less dense the outer wreaths are whirled.
Thus heavenly space, like earth, to science shines.
All scored with meteoric railway lines—
And as earth's rails with wreck too oft are strewn,
Smashes on heavenly tracks are not unknown.

Life only can give life. There is a chasm
No words can bridge . . . germ-cells nor protoplasm . . .
Betwixt dead matter, in its dreamless sleep,
And lowest forms where life's faint pulses creep.
So wisdom's last word with her first doth fit,
Both verdict give, *ex nihilo nihil fit*.
And stamp this truth, above schools and their strife,
"Life from life comes, and comes from nought but life."

"But how did life on this our globe begin?"
O who truth's Grail in that dark quest shall win?
Perchance among the meteor hosts that play
At cross-cross round our earth, two on their way
Encountered, as might two excursion trains.
And, as these scatter travellers' bones and brains,
Down to our blank and lifeless planet hurled
The moss-grown fragments of some earlier world,
Which in their bosom might have borne the sperme
Of other skies to be earth's primal germs;
So that its earliest life our planet gains
From the lost luggage of smashed meteor trains.
Far-fetched such an hypothesis may seem,
But science (*teste* Thomson) holds no dream.
Though sure a Scotch professor's bound to doubt
What so leaves *Genesis* and *Moses* out.

But say, whence in those meteors life began,
From whose collision came the germs of man?
Still hangs the veil across the searcher's track.
We have but thrust the mystery one stage back.
Below the earth the elephant we've found.
Below him of the tortoise touched the ground:
But what the tortoise bears? Dig as we will,
Beneath us lies a deep unsounded still:
Sink we with Darwin, with Argyll aspire,
Betwixt angelic or ascidian sire,
Though ne'er so high we soar, or deep we go,
The infinite's above us, and below;
Beyond the creeds and fancies of the hour,
Looms, fixed and awful, a creative power.
And, science traversed, wise men hold him fool
That owns not, o'er all, God's mysterious rule.

Such the great sum of truth from Thomson's chair,
For more than modern Athens seed to bear.—*Punch.*

A SWISS ROMANCE.—A letter from Vaud states that a young lieutenant, wounded in the late war between France and Germany, was sent to a quiet village in that canton, early in the month of October last, to recruit his strength. There he made the acquaintance of a young lady, whose parents resided in the same village, and the couple became engaged. Owing to the mildness of the climate, and the interesting circumstances in which he found himself placed, the hero soon regained his health, and before very long an order arrived from headquarters desiring him to report himself within a week at Berlin, where the depot of his regiment was then stationed. The grief of the lovers, when the time came to part, may be imagined, but with many vows of constancy, the lieutenant at last tore himself away, and in due time arrived at Berlin. At first his letters were filled with protestations of the enduring nature of his love, but gradually, as time wore on, they became less frequent and much colder in tone. Six weeks had elapsed since he had last written, when, instead of a letter full of reproaches, the lieutenant received a telegram from his "dear Marie," in the following words:—"Dear Fritz,—I have just received a letter, informing me that my uncle, who was a millionaire at Frankbur in the East Indies, is dead, and that I am his sole heiress." The lieutenant lost no time. He set out for the village. The young lady was overwhelmed with joy on seeing her lover once more, but reproached him for his long silence. "Don't let us talk of it, dear Marie," he replied. "There is now no obstacle to our union. The unexpected good fortune which Providence has sent us has removed the objections of my parents to our marriage—for a fortune so great, so colossal—." At these words Marie looked at him with a puzzled smile and somewhat pained expression, and, taking his hand, said, "Fritz, do not make fun of me." The lover drew out of his pocket the telegram he had received, asking her whether she had not written the words, "My uncle has just died a millionaire at Frankbur." Utterly astounded, Marie dropped his hand, and when she recovered the use of her tongue, said sadly, her eyes filled with tears, "Dear Fritz, there is a mistake in the telegram. What I wrote was, 'My uncle has just died a *millionaire* in the East Indies,' and the amount he has left me is just 196fr. 45c." The lieutenant returned to Berlin a sadder and a wiser man.

GOLD AND GEOLOGY.—That theory may sometimes prove only a blind guide, and that a joker may sometimes have the laugh turned against himself, is the double "moral" of the following good story, told by a writer in *Lippincott's Magazine*: In the earliest days of gold mining we established certain auriferous geological laws. It was legitimate that gold should be found only in certain locations, on the river bank, in the bed, in gulches or flats, on riffles and bars. But gold was no respecter of these laws. There is near Columbia, Tuolumne county, a very large flat, over a mile in diameter, and perhaps four in circumference. It has been immensely rich. It is surrounded on all sides by hills. One day, some nineteen or twenty years ago, a negro walked over the flat. He had just arrived in the country; he had come to dig for gold. He approached a party of miners at work, and asked them where he had better dig. These were geological miners. They held that gold should be found only in flats and low places. They were also white miners. White miners, some nineteen years ago, felt themselves at full liberty to expend their rough humour over a solitary inquiring negro: so they told him that good diggings might be found up on yonder hill, pointing to

one of the highest in the neighbourhood, as yet untouched by pick or shovel. It was a good joke thus to send Ethiopia up the barren hill that hot summer's day, the mercury standing at one hundred in the shade. Ethiopia confidently went, dug, perspired, and opened one of the richest claims in Tuolumne. Caucasia heard of it. The grin faded from her features. She dropped her picks and shovels, ran from the plain, ran up that hill, and in twenty-four hours it was entirely staked out in claims. Ethiopia had some trouble in preserving the integrity of his own legitimate mining boundaries. Caucasia ever after that was careful how she joked with inquiring negroes as to the locality of "diggings." She also lost confidence in her geology.

NEW KIND OF PAPER HANGINGS.—A Liverpool paper thus describes a new kind of paper hangings, recently introduced there from Switzerland. The effect must be very fine. "The general character of the design may be styled Florentine; the ground-work is white satin; the walls are divided into compartments by styles of a rich gold colour, representing, with great accuracy, carved wood of intricate design; the panels are niches with drawings of deer, lions, swans, &c., each forming a complete picture in gorgeous borders of gilded ornaments and flowers, partaking somewhat of the Louis Quatorze style; the alternate panels comprise a species of filigree work, varied with drawings of flowers and gems, in which gilding is most tastefully and sparingly introduced, the whole being of the most exquisite design and execution. An exceedingly rich border runs round the top of the room, and one of corresponding design round the bottom part. From the judicious employment of French grays and other cool colours, the effect is not in the least gaudy, but at once rich and chaste. The introduction of this paper may be regarded as a new era in decoration, and will do much to relieve us from the sameness and insipidity which pervade even our best houses."

The *Chignecto Post* reports that the Albert Coal Mines in New Brunswick, are again on fire.

The Duchesse du Plessis d'Aremcey, noted during the First Empire, and prominent in the reign of Louis Philippe, has just died at Vitry-le-Francais, in her 100th year.

MARRIED.

On the 26th inst., at the Cathedral, Montreal, by the Rev. Canon Leblanc, THEODORE DOUCET, Esq., to MARY JESSIE ANNIE, eldest daughter of the late GEORGE DESBARATS, Esq.

CHESS.

Solutions to problems sent in by Correspondents will be duly acknowledged.

An interesting game, played some years ago, between the renowned Russian masters Petroff and Jaenisch; the former giving the odds of "Pawn and two moves."

REMOVE BLACK'S K. B. P.

White, Jaenisch. Black, Petroff.

1. P. to K. 4th
2. P. to Q. 4th
3. P. to K. 5th
4. K. B. to Q. 3rd
5. P. to K. R. 4th
6. B. takes Kt. P. ch.
7. Q. takes Kt.
8. P. to K. Kt. 4th (b)
9. Q. Kt. to B. 3rd
10. Q. to Q. 2nd (c)
11. Q. takes B.
12. Q. takes K. Kt. P. ch.
13. Q. B. to K. B. 4th
14. Castles, ch.
15. Q. to Q. 3rd
16. Q. to Q. 7th ch.
17. Q. to K. 6th ch.
18. P. takes P.
19. K. to Kt. sq.
20. K. to R. sq.
21. Kt. to K. 2nd
22. Kt. to Q. B. 3rd (e)
23. Q. to Q. Kt. 3rd (f)
24. K. to Q. Kt. sq.
25. Kt. takes Kt. P.
26. Q. to Q. R. 3rd ch.
27. Kt. to Q. 4th dis. ch. and wins.

(a) If this pawn had been taken before the advance of K. Kt. P. Black would have remained, after the exchanges, with a weak doubled pawn on his King's side, which would have seriously cramped his game.

(b) Any attempt to save the Q. B. P. would have allowed his opponent to develop his forces with a superior position; the opening is very lively and brilliant for these odds.

(c) White cannot prudently take either of the offered pawns.

(d) Black's King is very much exposed; otherwise, this formidable coup would have left him with the advantage.

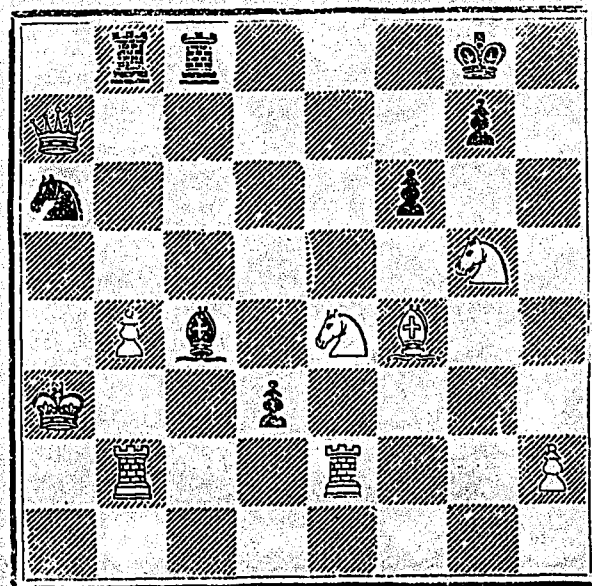
(e) R. to R. 3rd here, as suggested by Walker, leaves his adversary without resource.

(f) An oversight again; 23. R. to Q. Kt. sq. would have been unanswerable; for if Black play—23. P. to Q. R. 3rd, White mates with—24. Q. to Q. Kt. 6th.

PROBLEM No. 34.

By J. W.

BLACK.



WHITE.

White to play and mate in three moves.