

and means of a community that can be effected. While it is the duty of publishers, and of individuals, it does what is naturally most important—namely to inform the public of those who have been the authors of those wicked acts of falsehood and suffering hostility, and elevate the true condition of man, social, moral, and immortal beings. That legislature, or that people, which shall do the most to advance this cause of civilization, patriotism, and Christianity, may expect; what is far more desirable than the loudest and longest applause—that burst from an excited multitude, the blessing of God and the blessing of the poor.

The Albion.

The Agent of the Albion in this City, requests us to publish the following:

"In the review of Mr. Howe's Letters published in the last *Albion*, the Editor is made to say that he believes the Colonists to be fitted for any *humble* situation under the British Government;—the reader of the *Albion* will please correct a typographical error by substituting the word *honorable* for *humble*."

We have been requested to inform gentlemen who want a comfortable Boarding House, that Mrs. Phippen, successor to the late Mr. Olcott has three or four vacancies; there is not in Kingston, a more comfortable or a more respectable Boarding House.

ORIGINAL.

TO YOUNG PERSONS.

NO. VII.

ON THE STEAM ENGINE.

None but a writer for the press can properly understand the chilling influence which is produced by the exercise of satirical criticism on the mind of a writer for the press especially on scientific subjects requires to be free as air. If whilst writing he expects to be met on every question of speculative philosophy, by ill-natured or sarcastic remarks, he feels like a man walking over a bog, every moment in danger of being swamped; under such circumstances, he would be little inclined to admire and exultate on the beauties of the surrounding landscape, or to attempt to describe the origin of bogs, their depth, age, composition of moses, and the variety of scientific investigations with which they are associated.

If our readers who have so frequently and so kindly spoken to us in terms of approbation of our occasional articles to young persons, have had fewer of them than they wished, it is we assure them to be solely attributed to this cause; the writer of these articles has more than once asserted, that he makes no pretensions to great scientific research, all that he pretends to is "an acquaintance with first principles," with some of the rudiments of science; and the reader of these articles may be assured, that whatever is introduced into them, shall be carefully based upon well ascertained and established data, or if any thing by hypothesis is advanced, it shall be stated that it is so.

We hope that our young readers will have attended sufficiently to the former articles, to have made themselves familiar with the first principles upon which a steam engine depends—wherein it is to be observed, as under stand the parts of a steam engine, even with the aid of a drawing, which it is not easy to get in this country, for a public paper.

We will now suppose ourselves visiting one of our steam-boats, and as the Princess Royal is propelled by one engine, and her machinery is simple, those who have been on board her, will have observed many, if not all the different parts which we will endeavour to describe.

In looking down from the promenade deck, the first that strikes the eye is the large circular cast iron cylinder, with a top or cover, and a hole in the centre, through which the piston rod works up and down; the cylinder cover is strongly fixed to the cylinder by a number of large nuts and screws, which passes through the flanges or rims of both the cylinder and the cover.

The aperture in the cover through which the piston rod works up and down, is furnished with what is called a stuffing box, and contains a quantity of packing, usually hemp, which is screwed into the box, and presses so closely round the rod, that no steam can escape; notwithstanding it is constantly moving up and down, it is the friction of this stuffing which is kept well greased, that gives the rod so bright a polish. At the end of this rod is fastened the piston, which is made of metal and is from six to nine inches thick; its upper and lower edges are turned so as exactly to fit the cylinder, and the centre is grooved out so as to admit of having packing wound round it, which packing is called a gasket, and is a sort of loosely braided rope, which projects a little beyond the piston, so as to pass up and down the cylinder with difficulty, just like the worsted or thread which boy's wind around the end of the plunger as a squint; it is so tight that no steam can pass it, and yet, by being well greased, will work up and down without a great deal of friction.

Sometimes metallic pistons are used, and very good things they are; they are made of circles so well ground and fitted that no steam can escape, and by a spring in the centre, these segments are constantly forced outwards, so as to press against the cylinder: we have used one of these in a land engine ten years, without costing a farthing for repairs—and when it was examined, at the end of that period, it was in perfect order, and the inside of the cylinder as smooth as glass.

Attached to the upper end of this piston rod is the working beam, (usually called a walking beam)—and in order that the acent and descent of the piston may be precisely perpendicular, a contrivance called a parallel motion is connected with it. When a sawyer is at work, you must have observed that he extends his arms to their full length, and as the saw descends, he bends his body, and he reverses this action as the saw ascends; a parallel motion is adapted as a substitute for this motion of the body—because, as the cylinder is a fixture, and the beam is equally so, but for this contrivance, the piston, in descending, would press against the other, creating great friction and danger of breaking.

At the other end of the working beam is affixed a massy piece of iron, called a connecting rod, which, at its lower end, is fixed to the crank; the crank is like the handle to a grinding-stone, and the connecting rod is fixed to it exactly as a man's hand is fixed to the handle of a grinding stone, so as to enable it to turn round on a socket in the rod, as it does in the hand, at the time the stone goes round.

This crank is fixed to what is called the shaft and is that many piece of iron which passes across the boat, and to which the paddle wheels are affixed, so that as the piston is forced up and down in the cylinder it alternately raises and depresses the beam, at the other end the connecting rod performs the work of an arm which turns the crank which is fixed to the shaft, and gives the rotary motion to the paddle wheel.

We again return to the engine—we have already explained how the steam is generated in the boilers, and that it passes out of them by a pipe into the cylinder alternately, above and underneath the piston, this part of the operation is effected by valves of different kinds, but as the most simple will be the most easily described, we shall take that for our use; there are two valves, one of which communicates by a passage with the lower part of the cylinder below the piston, and the other with the upper part above the piston, these valves are opened by a contrivance called an eccentric, it is an oval wheel fixed to the shaft, which by its rotary motion, so regulates these valves, that they can be opened and shut at the precise instant it is necessary to do so; and this is perhaps the most delicate and difficult point to be ascertained in the construction of a steam engine, on its accuracy depends the working of the engine, the quantity of steam, and therefore of fuel consumed, in short it is a point probably less perfectly understood than any other connected with a steam engine, but it would be foreign to our present purpose to go further into this subject, and we will pass on to describe what is called the condenser, which is a vessel placed immediately under the cylinder and the larger it is the quicker the steam is condensed; as its name implies, it is intended to receive and condense the steam after it leaves the cylinder, and this is done by bringing into contact with it a certain quantity of cold water, and it is by this means the vacuum is produced.

Connected with the condenser is the air pump which is necessary, to dispose of the air which is generated by the process of condensation, and the capacity of which is about equal to that of the condenser.

There are two pumps, the one for discharging the hot water, called the hot water pump, and which is so constructed that it either passes it back again into the boiler, or if not wanted throws it overboard, and the cold water pump communicates with the water outside the vessel, and supplies the condenser and the boiler when it is required.

There are valves which communicate with the cylinder and the condenser as well as with the air pump, and which valves are actuated upon by the alternate movement of the piston in the cylinder, so as either to pass or to stop the air or water at the precise instant required.

There are two other parts which are all we shall describe—the one is the throttle valve—and the other the governor—though the latter is not always attached to low pressure steam engines: As its name imports the throttle valve is placed on the steam pipe near to where the steam enters the cylinder, and is merely a metal plate of exactly the diameter of the pipe moving on two pivots—to one of which is a handle, and by which the engine man can in a moment shut off the steam and stop the engine, and by the use of this valve he can regulate the quantity of steam supplied from the boiler, giving either less or more as the case requires—and is of course opened before the engine begins to move.

The governor is a beautiful invention intended to be a self acting machine to regulate the speed of the engine; it obtains its rotary motion by a strap connected with the shaft, and to it are suspended two iron balls, these balls hang by a link from the top, and when the spindle moves rapidly round, the two balls fly off from it by their centrifugal quality—this spindle is connected with the throttle valve, and if the governor goes fast, it partly shuts the throttle, and of course less steam is supplied, if it goes slow the balls fall towards the spindle and the throttle is again opened to its necessary dimensions.

For the Chronicle & Gazette.

Mr. EORTON.—If you think your readers, will amuse your readers, they are at your service.

JACK JINGLE.

A BSENCE.

Where does my loitering Lover stray I Tell me ye gods that round him wander! While here I leave the tedious day— And his abominable pander.

Say, on the calm and breezy shade Invite his weary limbs to slumber; And in some green and clift glade, Does he forget the hours to number?

Or mingling with the festive crowd, Say, does he join the train of Folly; And with her votaries wild and loud, Forget and leave me melancholy?

Oh no! the voice of truth replies, Accuse not thus, thy faithful Lover!

Thy wandering under distant skies;

Round thee his best affections hover.

For not where to wear the lofty lime, Or bodes the light and graceful willow, Does he forget the lapse of time;

The daw's enam'd turf his pillow.

Not yet with folly's thoughtless train, Who bid time move with swifter pinions; Wear he the gay and glittering chain!

A captive in her vast dominions.

But near the restless couch of pain,

Where the dim eyes in languor close;

He bids his laureate wing again,

And faded cheeks resume their roses.

Then cease these vain—these useless sighs!

Nor then accuse thy faithful lover,

Thy wandering under distant skies;

Round thee, his best affections hover.

MAIL CONTRACT.

TENDERS will be received by the undersigned, until SATURDAY 13th February next, for the conveyance of Her Majesty's Mails, between Kingston and Sydenham, in the Township of Loughborough, twice in each week, on a Contract of four years, from the 6th April next.

The particulars of the service to be performed, and the amount of security required, may be learned at either of the Post Offices at Kingston, Mill Creek, Wilson, Clark's Mills, or Newburgh.

JOHN DEWE,
Post Office Surveyor.

Kingston, 15th Jan. 1847.

5-3w

THE PERMANENT RELIEF OF TOOTHACHE.

To the Editor of the British American Journal.]

Sir.—In a country where so many martyrs to this species of suffering, you will, I think, be conferring a general benefit, by making known through the medium of your journal, the following simple and as I have found it, successful method of securing ares from the effects of cold and changeable weather, and helping them to remain free from pain all winter.—The mode which I ready make a solution in the daily and habitual use of a weak solution of creosote, saturating the tooth brush with it and using it first; after which cold water and whatever powder the individual may be in habit employing.

This practice, in my own experience, and in that of others at my suggestion, have found a very successful preventative to toothache arising from the presence of carious teeth. I am rather disposed to believe, too, (contrary to the opinion of some dentists,) that the use of creosote is not injurious to the teeth, but beneficial; although Reichenbach has recorded cases of caries cured by the use of the watery solution of creosote.—"Bulletin General de Therapeutics for May, 1845." M. Freeman is also of the same opinion as to its effects, and considers that it acts by combining with the calcarous salts of the bones and forming a new combination, which, by its solubility, tends to engorge the vascular tissue and stop the action of the nerves, thus preparing the way for the cure of caries.—"Cure of Caries," etc.

I wish the profession in Canada would take up the subject. Yours, &c.

J. M. McDermott,
Staff-Surgeon, Prescott.

5-3w

BIRTHS.

At Toronto, on the 12th instant, Mrs. C. W. COOPER, of a son.

In Waterdown, on the 14th inst., Mrs. H. A. GRAHAM, of a son.

MARRIED.

On Thursday, the 21st inst., at Willow College, by the Venable Archdeacon Squire, Mr. CHARLES J. CLARK, R. Eng. Dept., Bytown, to Mary, daughter of the late Abner Ives, Esq., Kingston.

At Hamilton, by the Rev. J. Brennan, on the 14th inst., Mr. GEORGE CROTHAULT, to Miss ELIZABETH STEPHENSON, all of Sablief.

Pittsburgh, Jan 13, 1847.

5

At Brockville, on the 23rd instant, by the Rev. William Smart, ROBERT FINDLAY, Esquire, agent Commercial Bank, Belleville, to Miss MARTHA ANN BURKE, youngest daughter of the late William Bell, Esquire.

At the Roman Catholic Church, Toronto, on the 14th instant, by the Rev. Mr. Keown, Mr. MICHAEL SHANAHAN, to Miss MARY CLANCY, both of 12th Lansdowne—the marriage having been previously solemnized in the United States.

DIED.

In this city, yesterday, Friday, 22d January, HELEN, second daughter of Mr. William Lester, aged 8 years and 5 months.

Friends and acquaintances are respectfully invited to attend the Funeral from her father's residence in Queen Street, to-morrow, at 4 o'clock, P.M.

At Napanee, on the 21st instant, after a short illness, ARCHIBALD MCNEIL, Esq., one of the oldest 12th Lansdowne—the marriage having been previously solemnized in the United States.

At the British Embassy, Paris, on the 2nd August last, by the late Baron Dononcourt, Dr. LAMBERT, to MARY, only daughter of Col. SPEECE, late of the 12th Lansdowne—the marriage having been previously solemnized in the United States.

At Brockville, on the 23rd instant, by the Rev. William Smart, ROBERT FINDLAY, Esquire, agent Commercial Bank, Belleville, to Miss MARTHA ANN BURKE, youngest daughter of the late William Bell, Esquire.

At the Roman Catholic Church, Toronto, on the 14th instant, by the Rev. Mr. Keown, Mr. MICHAEL SHANAHAN, to Miss MARY CLANCY, both of 12th Lansdowne—the marriage having been previously solemnized in the United States.

THE NEW YEAR GREETING.
THE PAST, THE PRESENT, AND THE FUTURE.

ANOTHER Chapter upon the greatest highway of time—that leading to the knowledge of existence has been passed and man measures years and gradually passes them, bending not its warning voice which momentarily, and briefly proclaims—"Take heed ye do not fail!" It is only as we alter the figures of the year we—natives have steadily yet steadily progresses, and I am in the infancy of a century gradually attaining first a shadow, then a form, then a life, still never ceasing in its growth and march. It is in the year of birth when the breath of the expiring year gives birth to the lost infant, the new one, that man pauses even for a second, and with a transient glass in hand, or more appropriate prayer, says "I open my heart to the future, and speak of that of the past." It is with natural emotions of undivided pleasure, mingled with regret, SYLVESTER addresses his parents, and those whom he is most dear to, in words of undivided confidence—he has come to be a stranger to his native land, and has contracted a friendship and an esteem which are cemented with too strong bonds to be ever severed. During the year 1846, he has pursued principles which he abhorred would govern him in all his transactions with the public, of selling Tickets in legally authorized Lotteries, on which the payment had been secured and guaranteed by the State, and in which he had no interest. The sale of such tickets was proportionally large, and many have met with success. With undiminished energy, and with SCHEMES unsurpassed in their boldness, he again appeals to his patrons, promising the same good fortune which he generally crowned his exertions, will still follow in his footsteps, and that eighteen hundred and forty-seven will disseminate many large PRIZES to his correspondents. He solicits that orders be furnished early, and be careful to address

S. J. SYLVESTER,
41 Wall Street.

\$30,000!

ALEXANDRIA LOTTERY, Class F, for 1847, to be drawn at Alexandria, (D. C.) on Saturday, 6th of Feb. 1847, 78 Numbers, 14 Drawn Balloons.

GRAND SCHEME.

\$30,000, 10,000, 1 of 5,000, 1 of 4,000, 1 of 3,000, 1 of 2,200, 20, 2 of 500, 4 of 1,500

4 of 1,400, 4 of 1,200, 250 pieces of 1,000

each! 30 pieces of 600 each! 40 of

400, 200, 200, 200 pieces of 100

each! 128 of 80, 128 of 75

128 of 60, 128 of 50,

100, 80, 60, 50,

Tickets 10 Dollars.

A Certificate of a Package of 26 Tickets will be sent for \$120. Shares in proportion.

\$30,000.

ALEXANDRIA LOTTERY, Class G, for 1847, to be drawn at Alexandria, (D. C.) on Saturday, 13th Feb., 1847, 75 Numbers, 14 Drawn Balloons.

GRAND SCHEME.

\$30,000, 10,000, 1 of 5,000, 1 of 4,000, 1 of 3,000

1 of 2,200, 20, 2 of 500, 4 of 1,500

4 of 1,400, 4 of 1,200, 250 pieces of 1,000

each! 30 pieces of 600 each! 40 of