THE WEEK'S NEWS

CANADA.

The Spring Hill relief fund now amounts to $31,000.

Knox church in St. Mary's was destroyed by fire last week.

The Township of Binbrook carried the local option by-law by a majority of one.

Montreal has so far subscribed $18,000 for the relief of the Springhill mine sufferers.

Premier Mercier and Provincial Treasurer Shehyn of Quebec Province sailed from New York for Europe last week.

The leather firm of Daniel McLean and the wholesale and retail provision firm of Park & Son, Toronto, are in difficulties.

The St. Lawrence is rising so rapidly with the floods that Cornwall is threatened with a serious inundation.

It is believed in Montreal political circles that Mr. D. Girouard, Q. C., will likely be taken into the Dominion Cabinet.

His lordship Mgr. Jean Langevin, who lately resigned the position of Bishop of Rimouski, has been named by the pope Archbishop of Leontopolis.

The Toronto City Council, at its meeting on Monday night, appointed Dr. Norman Allen Medical Health Officer for the city at a salary of $2,400.

In his prayer in the Sydenham street church, Kingston, on Sunday evening, Rev. R. Whiting said :—"Lord bless the City Council, for they need it."

Rev. J. B. Morin left Montreal for the North-West on Tuesday with about forty families to found a French-Canadian parish nine miles from Edmonton.

A Winnipeg despatch says it has been found that immigration literature sent from Manitoba into Dakota never reaches its destination, and Dakota post officials are suspected of suppressing it.

The report of the Inland Revenue Department of 1890 shows a considerable increase in the consumption of liquors by the people of Canada in that year.

Prof. Robertson, dairy commissioner, will start shortly for the Maritime Provinces to assist in the formation of provincial dairy associations and schools in the provinces by the sea.

The Western Dairymen's Association have decided to establish a dairy school at Tavistock, Ont., for experimental and educational purposes.

A storm, which is pronounced the severest in 17 years, burst upon the east coast of Puget sound early Monday morning and did a great deal of damage Four gigantic tidal waves, caused, it is thought, by the recent earthquakes, swept along the coast.

The coroner's jury's verdict is to the effect that the mine disaster at Springhill, N. S., was the result of accident, and blame is attached to no one. A number of precautions to secure the safety of miners are recommended.

The St. John's, Nfld, *Herald*, says the fishermen of Newfoundland have the key to the situation. By refusing to sell bait to the American fishermen they will render their fishing enterprise a failure, and in proportion to there failure will be the gain of the fishermen of Newfoundland.

John Lesperance, one of the best-known figures in Canadian literary circles, died last week in Montreal. He was born in St. Louis, Mo., in 1836, and after taking part in the civil war in the States he came to this country in 1886, and was a constant contributor to the Canadian and American newspapers and magazines, besides writing three novels.

The annual hegira to the Northwest has begun rather earlier this spring than usual. On Tuesday last four special colonist trains left Toronto for Manitoba. There were 57 cars of stock and 186 passengers. In addition to these 347 passengers left on the regular train.

GREAT BRITAIN.

The Queen's poor health is causing anxiety.

William O'Brien has been adjudged a bankrupt on the petition of Lord Salisbury for £1,700 costs in the late action for libel.

Peter McDonald, member of the House of Commons for North Sligo, died suddenly at Kingstown. He was a supporter of Parnell.

The Chancellor of the English Exchequer has promised under certain conditions Imperial aid to building a railway in Newfoundland.

The police authorities have summoned Lord Lonsdale for furious driving during his recent 20 mile novel driving race against time.

The *Irish Times* remarks that Parnell's last effort to win freedom by constitutional means begins where all these movements begin and end, in a fund.

The leading London papers join in a chorus of congratulations on the agreement of England and France to submit the Newfoundland question to arbitration.

It is stated that Mr. Vincent Scully, who was defeated in North Kilkenny by Sir John Pope Hennessy, will contest North Sligo which is vacated by the death of Mr. Peter McDonald.

The first conversation by telephone between London and France took place on Tuesday.

As Mr. Gladstone was leaving London on Tuesday for Hastings he was given an ovation by the large crowd that had assembled to see him depart.

Ald. Valentine B. Dillon, jr., of Dublin representing the Rotunda ward, will be the Parnellite candidate for the seat for North Sligo, made vacant by the death of Peter McDonald.

The London *Times* says that Mr. Parnell's confession that he opposed labour candidates for Parliament at the bidding of his English allies leaves it an open question whether he is the bigger sham or the bigger fraud.

The London *Standard* thinks the Behring Sea controversy has now narrowed down to a point that Secretary Blaine can scarcely refuse Lord Salisbury's offer of submitting the dispute of arbitration.

A London despatch says the English Liberal platform for the next election will have home rule as one of the principal parks, but with some modifications.

On March 1 the debts of Baring Brothers to the public had been reduced to $17,500,000, and there was apparently a surplus sufficient to protect the guarantors.

At a large meeting at Mitchellstown on Sunday, many priests being present, the opinion was generally expressed that Parnell would be politically dead six months from now.

During the year 1890 61,435 persons emigrated from Ireland, a falling off of 9,365 from the average. Of these emigrants 52,685 went to the United States, against an average for the four preceding years of 61,785.

The London *Times* says that while the shattered fragments of the Irish party are engaged in mutual annihilation, Mr. Balfour is busy in the prosaic routine of bringing daily bread to thousands of starving Irishmen.

Great destruction of life and property has been caused by the fierce storm in Britain. It is known that 80 lives were lost by shipwreck, and the list is likely to be increased. Many have died on land from the cold. Farmers have lost heavily in live stock and other property.

UNITED STATES.

There are 10,000 cases of la grippe in Minneapolis.

Syracuse suffered a loss of $2,000,000 by fire on Saturday. Insurance over half that amount.

Senator Hale, of Maine, says the tariff will be one of the leading issues in the next general election.

James A. Simmons, of New York, has been found guilty of embezzling $622,000 worth of bonds of the Sixth National Bank.

A despatch from Wichita, Kan., says that serious trouble is beginning in North-West Oklahoma between the whites and negroes.

The stagnation in the coal, coke and iron businesses in the States is leading to much suffering among the people thrown out of work.

The New York *Tribune's* Washington correspondent announces that President Harrison will be nominated for a second term.

It is learned in Washington that British Guinea declines proffered trade arrangements with Canada, preferring to negotiate with the United States.

A big fire started on Tuesday in the clothing manufactory of Albert Benjamin & Co., corner of Bleecker and Greene streets, New York. The loss is over $2,000,000.

A 5-months-old daughter of Bernard Shrone, of Chicago, was suffocated on Sunday by a pet cat that was sleeping in the cradle with the baby.

Within a week Mrs. Jerry Coplin, of Decatur township, Pa., has given birth to four children, and Mrs. Snyder, of New Washington, to triplets.

On Saturday morning the Tennessee Central Insane Asylum, near Nashville, was destroyed by fire and many of the inmates were burned to death.

Some Colorado towns are entirely isolated by the snow blockade and some of them will not be reached until April 1. Much suffering is likely to result.

The miners of the coal regions of Zanesville, Ohio, are in such distress that they are raiding the provision stores, boldly excusing their lawless proceedings by announcing that they must steal or starve.

Nearly $10,000 was found in the lining of an old coat in St. Paul, Minn., which belonged to the late Judge H. M. Cooley, who for ten years before his death was supposed to have been penniless.

The Anti-Chinese bill, which has passed the California Legislature, provides for the issue of certificates of residence to the Chinese now in the State and the exclusion of all others.

A scheme is on foot in the States to build eight fast Atlantic mail and passenger steamers to run between Montauk Point, New York, and Milford Haven, the distance to be accomplished in less than five days.

A United States grand jury has found indictments against the Sioux Indian, Plenty Horse, for the murder of Lieut. Casey during the late uprising, and one against Leaves-His-Woman for the murder of Patrick Miller, a ranchman.

Rev. John S. Smallwood, the young negro orator of Boston, has signed a contract to lecture in Europe on "The Race Problem in America" and on "The Negro in American Politics." The price for six months is $6,980, expenses paid.

IN GENERAL.

Influenza is raging in Rome.

President Carnot has signed the agreement by which England and France submit the Newfoundland dispute to arbitration.

Players at Monte Carlo one day last week took $200,000 out of the bank, the largest amount ever paid out in one day.

The German Reichstag has rejected the petition to admit women to the learned professions.

Subscriptions to the amount of $32,000,000 have been obtained for the Argentine Government's loan.

The Princess Marianne Bonaparte, a grand niece of Napoleon I., died on Tuesday at Ajaccio, Corsica.

The death of Prince Jerome Napoleon, who has been ill for a long time, occurred on Tuesday in Rome.

The report is confirmed that the Portuguese authorities captured an English steamer in South Africa and have taken her to Delagoa bay.

Advices from China state that 300 Chinese pirates and robbers were beheaded in Kwantung province during the last few days of the old Chinese year.

Signor Rudini, the Italian Premier, demands from the United States Federal Government prompt satisfaction for the massacre of Italian subjects which took place in New Orleans recently.

Floods following heavy snowstorms have destroyed one half of the winter crops in many places in south-west Russia. The Vistula has overflowed and inundated a great part of Warsaw. The inhabitants are in dire distress.

Dr. Ludwig Windthorst, the Parliamentary leader of the Catholic party in Prussia, died the other morning at the age of 79. Shortly before his death, while in a delirium, he imagined he was in the Reichstag, and delivered an impassioned address in favour of the abolition of the law expelling the Jesuits from Germany.

It is stated the Spanish Government contemplates admitting into the Spanish Antilles United States industrial and agricultural products at lower rates than those of any other nation, in exchange for admittance into the United States free of duty of sugar and molasses from the Antilles.

The advice "Go to Australia" is said to be no longer good in England. There is an overplus of people there now. The streets of Melbourne, Sydney and other Australian cities are reported to be swarming with unemployed young men, all of whom are anxious for work. "These young men are mainly English, lured to Australia by the charm that envelops new countries."

Jerry Builders and Russian Fortresses.

Some extraordinary revelations have just been made at St. Petersburg as to the manner in which certain frontier fortresses recently constructed, and, as it was supposed, strengthened, have actually been built. It appears that even in this perilous field of enterprises the jerry-builder has been reaping a rich harvest. At two separate fortresses his frauds have been detected. A commission of revision on inspecting the walls of the celebrated Novo Georgievsh, formerly known as Modlin, and situated between Warsaw and the German frontier, found that the newly-constructed walls were not much more substantial than those of a piece of theatrical scenery. A thin outer layer of half bricks concealed a hopelessly rotten fabric composed of the veriest rubbish, gravel, dust, sand, and chalk, the whole being utterly incapable of withstanding a cannonade by guns of the smallest calibre. These facts having been reported to the Minister of War, the chief constructor of the fortress was arrested and tried by court-martial, but escaped with so light a penalty as dismissal from the service, it having been proved that he suffered from a painful affection of the eyes. The chief constructor of the fortress at Doubno, the other stronghold, was not so fortunate. The fortress was inspected by the Grand Duc Nicholas shortly before his illness, and he found the walls built so contrary to the rules of military engineering that they were incapable of affording any real defence against modern engines of war. In accordance with the report which he made to the Emperor on the subject, an order was issued that the whole of the walls in question should be razed to their foundations and rebuilt. The chief constructor solved the problem of his own punishment by blowing out his brains, and all his subordinates who were in any degree responsible were sent to Siberia. Every endeavor has, of course, been made to keep these occurrences from the knowledge of the public, but the facts of the case have reached me through a thoroughly trustworthy channel.

Forewarning of Death.

An extraordinary fatality has just befallen an English family in New York ; and it is the more striking because it was accompanied by one of those dramatic premonitions which set all our philosophy at defiance because so utterly inexplicable. On Saturday Mrs. Kenon Bruce and her two daughters, Judith and May, arrived by the City of Berlin from Somersetshire, England, *en route* to Nebraska. Mr. Kenon Bruce had, some months ago, gone to Nebraska to commence farming there, and with him was a young Englishman named Albert Merritt, who was engaged to be married to his friend's daughter Judith. They had done well in their farming operations, and a fortnight ago Mrs. Bruce received a letter requesting her to go out with her daughters to Nebraska at once. The old home was given up, and, with the brightest anticipations, mother and daughters set out on their long journey. Embarking on the City of Berlin, all went well until just after they had left Queenstown, when Mrs. Bruce was taken suddenly ill, and became wild and delirious. She declared that she saw her husband lying in the middle of a field dead. During the whole of the voyage after that the poor woman was inconsolable. She felt sure that she would see her husband no more alive. On arriving at New York Mrs. Bruce received a telegram from Mr. Merritt stating that his friend Mr. Bruce had been thrown from his horse and had his neck broken on the very day that his wife saw him lying dead. The telegram bade them go on to Nebraska. They missed the train on Monday, and were proceeding on Tuesday ; but, when about to enter the train, a second telegram was placed in Mrs. Bruce's hand announcing that Mr. Merritt died of heart-disease last night. The despatch was signed by a companion of the two men on the farm. It may be imagined with what sorrowful hearts the three women proceeded on their way to the home which husband and lover, now dead had prepared for them.

The Human Figure.

From the crown to the nape of the neck is one-twelfth the stature of the perfectly formed man.

The hand from the wrist to the end of the middle finger is one-tenth of the total height of a man of perfect proportions.

A man of good proportions is as tall as the distance between the tips of his fingers when both arms are extended at full length.

The face from the highest point of the forehead, where the hair begins, to the end of the chin, is one-tenth of the whole stature of a man of perfect mold.

If the face from the roots of the hair to the chin be divided into three equal parts the first division determines the place where the eyebrows should meet, the second the opening of the nostrils, if the man be perfect in form.

The proportions of the human figure are six times the length of the right foot. Whether the form is slender or plump the rule holds good on an average. Any deviation from the rule is a departure from the beauty of pronortion. It is claimed that the Greeks made all their statues according to this rule.

Destruction of the Japanese Houses of Parliament.

Details are to hand of the fire at Tokio which resulted in the complete demolition of the newly-completed Houses of Parliament. They were built of wood, and cost 800,000 yen. The origin of the fire was at first attributed to the soshi, a political class who seek by violence to carry out their views, and are usually turbulent young men hired by politicians hostile to foreigners. A close examination, however, revealed the fact that the fire originated in the electric wires, although the actual cause of the defect has not been ascertained. The disaster so startled the Emperor that he immediately gave orders to have all the electric lamps removed from his palace, but subsequently countermanded these orders and engaged a private staff of electricians, giving them instructions to lay down an electric motor for the sole use of the Palace.

WHAT A DYNAMO IS.

Explanation of the Action of Alternating Currents in Electric Lighting.

The first dynamo-electric machine ever constructed was that made by Faraday. This great physicist, the prince of experimenters, as he has been called, discovered that when a disc or flat plate of copper was made to rotate between the poles of a powerful magnet currents were produced in the plate from the centre outward. By making a wire touch the revolving plate with one of its ends and bringing the other one in contact with the rim he found that a current of electricity passed along the wire and could be made to indicate its existence by deflecting the needle of a galvanometer, decomposing a chemical solution, or by any of the well-known effects produced by electricity in motion.

Faraday saw the importance of this discovery and the great uses in the way of practical application to which it might be put, but he did not himself stay to develop it ; he left that to others, and with it the wealth which might thus be acquired, and himself went on to investigate other obscure and little known phenomena connected with physics and electricity, regarding this as his proper work and exhibiting in hi conduct the true scientific spirit. When many years afterward he went to see the first application of this discovery of his to the production of the illumination of the North Foreland lighthouse he said, after looking at the large magneto-electric machines there : "I gave it to you an infant; you have made it a giant."

Dynamo and magneto electric machines consist essentially of a coil of wire—"the armature," as it is called—rotating between the poles of a large magnet, the poles being bent round so as to approach each other and have the armature between them. This magnet may be either a permanent magent of hard steel or an electro-magnet consisting of wire coiled round a soft iron core, a current of electricity being made to circle round the wire coil, and thus magnetizing the iron core while it lasts. It is the latter arrangement which is almost universally used now, though the magneto machines with permanent magnets were the earliest form.

A magnet produces an influence in the neighborhood around it, and this surrounding neighborhood is known as the "field of force" of the magnet—i. e., the sphere in which its influence can be felt. A magnetic needle or bit of iron-filling placed in this field sets itself to point along the "lines of force" of the field—that is, the lines along which the magnetie force acts, and which form curves round the magnet, running out, as it were, from pole to pole, and curving round to the other. Any one may see the form of these lines of force for himself by placing a barmagnet underneath a sheet of paper and then sprinkling iron-fillings on the paper.

On tapping this the fillings will set themselves along the lines of force in beautiful regular curves. Here the small fragments of iron are themselves made magnets while under the influence of the powerful magnet in whose "field" they are, and therefore place themselves lengthways along the lines of force—that is, along the line of action of the resultant magnetic force at the place where each one is.

When a coil of wire or armature is made to revolve rapidly in the strong field of force which occupies the space between the poles of a powerful electro-magnet currents are produced in the coil. These currents alter their direction through the coil every time the latter changes its position with reference to the poles of the magnet. The side of the coil which was opposite the north pole is after half a revolution opposite the south pole, and the influence of the south pole tends to produce an opposite current to that of the north pole. Here we have an "alternate current" dynamo machine.

As the coil or armature rotates with great speed—some hundred of revolutions per minute—these currents, in alternating directions, succeed each other very rapidly, and if an electric arc-lamp is placed on the circuit it will be lit up. In this case it is not necessary that the current be sent round the circuit in one direction only, but although the terminals of the lamp are constantly changing their polarity—that is, the north pole where the current enters the next instant becomes the south pole where the current leaves—yet, as this occurs many times in one second, the effect produced is the same as if the current was in one uniform direction.

The lamp has no time to get cool ; it does not go out before the oppositely directed current passes through it and produces the same effect as the previous one. No flickering is observable. The impression produced by the glowing carbon on the human eye is retained by the retina for a far longer period than the duration of one surge of electricity through the lamp, and is not gone before the effect produced by the succeeding opposite wave makes its impression on our nerves. The Jablochkoff lamps used lately on the Thames embankment are meant for this system of electric lighting with alternating currents.

In a "continuous current" dynamo, which is necessary for some purposes, such as electroplating, where the effect desired could not be produced if the direction of the current was continually altering, the electric current is made to pass always one way round the external circuit. This result is got by using the ingenious device of a commutator, which automatically deflects the current so as always to send it in an unvarying direction through the plating bath or the electric lamp, as the case may be.

This commutator consists simply of a spilt tube, which is attached to the revolving armature, and may be seen in any dynamo working on the continuous system. This tube revolves with the revolving armature, and it is divided by an insulating substance into two parts ; each half is alternately on the left and right of the space between the poles of the magnet, and the "brushes" which collect the current from the armature —i, e., the bundles of copper wire spread out like a brush which form each end of the outer circuit—are fixed in position, and the revolving commutator attached to the armature brings alternately one of its half-tubes into contact with a brush. Thus the half of the commutator which receives the current changes at the same time that the direction of the current through the coils of the armature is reversed ; in this way the current sent out to the brush which receives the electric current from the armature is always in the same direction.

Time flies ; but he always seems to be resting to the man who has to wait four hours in a country town for a train.

TIT-BITS.

Most Suitable.

Maud—"Oh, I'm invited to the Wayup's ball, but I don't know what in the world to wear. What would you wear if you had my complexion ?"

Milicent—"A thick veil."

A Different Diagnosis.

"Something dreadful is going to happen John. I feel it in my bones."

"Nonsense. That isn't anything dreadful. It's only rheumatism."

In Clover.

She—"So you are engaged to one of the Musgrave twins ? How can you distinguish one from the other ?"

He—"I don't try to."

A Diplomate.

He—"You are the embodiment of all that's beautiful and—"

She—"What on earth are you talking about ?"

He—"Nothing on earth ; I was speaking of a heavenly creature." (Cards.)

His First Speech.

He was an old member of the lodge, but he had risen to address the chair. Finally, however, he felt that his time had come.

"Worshipful Master," he said, standing as firmly on his feet as his trembling knees would let him, "I move that we attend the body of our deceased brother in a funeral."

Just Before the Battle.

Johnny—"Will it hurt much, doctor ?"

Dentist—"You don't want me to tell you a story, do you, Johnny ? The good book says we mustn't do that."

Johnny—"Well, the good book says you must do to others as you'd have 'em do to you and if I was a big man agoing to pull a tooth for a little boy that wanted me to say it wouldn't hurt much, I think I'd say it, doctor. That's what I think."

A Model Housewife.

Traveler—"I tell you, sir, the most admirable housekeeper that ever lived was my mother-in-law."

"And she is no longer living ?"

"Alas, no ! Eaten by the cannibals in Africa."

"You don't mean it ?"

"It was even so. When the cannibals had thrust her into the cauldron and she was beginning to cook, she cried out faintly with her last words : 'Don't forget the salt and pepper !'"

Bit Off Baby's Toe.

Four weeks ago Mrs. Frank Bauer became the mother of a baby girl. For that baby her four-year-old son took the most intense dislike, a feeling that grew stronger every day. Yesterday the mother left her children together in a room. She was gone only a few minutes, but when she returned the baby was crying piteously.

Continued crying led to an examination of the little thing's body, when the mother was horrified to discover that the great toe of the right foot had been bitten off near the first joint.

Necessity Makes us Good.

Friend—"To be frank with you, I can't see how Mrs. Hardcash happened to consent to your marriage with her daughter." Mr. Slimpurse—"She said I was the only young man who showed any consideration for a mother's feelings. You see, when the other fellows took her daughter out riding they seldom got her back until after dark, but when I took her I always brought her home promptly in an hour." Friend—"Humph ! How was that ?" Mr. Slimpurse—"The other fellows had their own rigs. I hired mine."

Excellent Husbands All.

"I have a good husband," said the first lady. "I have an income of $4,000 and I give him half. He loves me very much."

"I have a better husband than that," said the second lady. "He earns $4,000 and gives me half. He loves me very much."

"I have still a better husband," said the third lady. "He earns $4,000 and gives me half. Then he is so careless that I get $500 of the remainder out of his pockets without his being aware of it. He loves me very much."

An Ardent Love Letter.

The boy who wrote it was ten years old and the girl presumably of the same age. Here is the charming missive :

"DEAR EMMA—I love you and I wish you would write to me. I love you and I wish I could kiss you. Emma, did you tell that boy that lives beside your house that you was going to slap my nose ? Emma, I could not help but cry when that boy told me. Emma, I thought you thought more of me. I have given you about twenty-five cents worth of candy and you don't treat me well, besides I give you some gum."

There is no doubt about the condition of that boy. He is in love. He may be only ten years old, but if he lives to be one hundred he will never be any more in love than he was when he penciled that letter.

A Matter of Figures.

"No, sir," said the barkeeper, "you don't get any more here this time. You've had enough whisky for one evening."

"All right, sir," replied the customer, somewhat thickly. "My trade doesn't amount to much, I s'pose. It's about a couple o' dollars a week mebbe, but I've got friends. Bet yer life none o' them'll ever come here again. Say !" he continued, pointing his finger impressively at the man behind the bar, "do you know what this thing's going to cost you ? It'll knock you out of just $6 a week. That's over $300 a year, and that's the interest on $6,000. It costs you $6,000, b'gosh !"

"That's all right, my friend," responded the barkeeper, "if you and your friends drop out it will bring me about $12 in better trade. Say !"—and he pointed his finger straight at the man in front of the bar—"do you know what $12 a week is ? It's over $600 a year. That's the interest on $12,000 and I'd give you $10,000 to have you stay away frow here, b'gosh ! You light out !"