

THE ROYAL WEDDING.

Marriage of the Duke of York and Princess Victoria May.

Bride and Groom Heartily Cheered—The Queen Given an Ovation in the Streets of London.

The marriage of the Duke of York (Prince George of Wales) and Princess Victoria May of Teck, an event to which all England had been looking forward with great interest, took place at half past twelve o'clock on Thursday in the Chapel Royal, St. James' palace. The wedding was a brilliant function, and was attended by a large gathering of the members of the British Royal family, continental sovereigns or their representatives, and many members of the highest nobility. The weather was beautiful, and if there is any truth in the old proverb, "Happy is the bride whom the sun shines on," the new Duchess of York will be exceedingly happy, for a more splendid day has seldom been seen in London. The occasion was made one of national rejoicing and a partial British holiday. Great crowds of people gathered many deep along the line of route from Buckingham palace up Constitution hill, through Piccadilly, St. James street, and Marlborough gate to the Garden entrance of St. James' palace, which is situated on the north side of the Mall. The decorations along the line of the Royal procession were profuse and beautiful. The roadway was kept open by the Household troops in their glittering uniforms, by detachments drawn from the military depots, by the Metropolitan volunteers and militia, by the Middlesex Yeomanry, and by the police. The scene was full of life and movement, and the ceremony eclipsed in pomp and splendour any recent State ceremonial in connection with the British Court.

THE ROYAL PARTY.

The Royal party left Buckingham palace in four processions, the first conveying the members of the household and distinguished guests. The next procession included the Duke of York and his supporters, the Prince of Wales and the Duke of Edinburgh. The bride came in the third procession, accompanied by her father, the Duke of Teck, and her brother, Prince Adolphus of Teck. The last procession was that of the Queen, who was accompanied by the Duchess of Teck, her younger sons, and the Grand Duke of Hesse. They drove in state to the ceremonial. Each procession was accompanied by a Life Guards escort, and in addition to this the Queen had an escort of Indian, native, and Australian horse. Her Majesty rode in the handsome glass coach used at the opening of Parliament and on other special occasions. The body of the carriage, which is of Irish manufacture, was built in Dublin, is painted a dark colour, and its richly gilt panels are adorned with the Royal Arms. The roof is surmounted by a crown, and bordered with a wreath of gilt roses, thistles, and shamrocks. The cheering as the Royal carriage drove forward was immense.

ARRIVING AT THE CHAPEL.

At 12.15 the Duke of York and his escort arrived at the Chapel Royal. Five minutes later deafening cheers announced the arrival of Princess May. A fanfare of trumpets was sounded as the Queen arrived, and the greatest enthusiasm was manifested by the multitude.

The members of the Royal family and guests, on alighting at St. James' palace, walked to the state apartments, and subsequently down the grand staircase, and under the colour court colonnade to the seats for them in the chapel. Her Majesty alighted in the Ambassadors' Court, under a specially erected canopy over the glass doors of the passage leading to the chapel. Thence she walked to the haut pas at the north end of the edifice. The spot was beautifully adorned with palms and flowers from the royal conservatory, and carpeted with crimson. Upon the same platform seats were provided for the Prince and Princess of Wales, the bride and the bridegroom, and the other members of the Royal family and Royal guests from abroad. The members of the diplomatic body and the other invited guests occupied special seats in the body of the chapel and in the royal and east galleries. Drawing-room dresses were worn by the ladies, the gentlemen appearing in full levee dress.

THE BRIDE.

The bride wore the veil which was worn by her mother on the occasion of her own marriage. Her wedding gown was of silver brocade, in perfect harmony with the bridesmaids' toilets of white satin and silver lace. The bridesmaids' gowns were made with low bodices, and neither hats, wreaths, nor veils were worn; only a simple rose in the hair. The bridesmaids were the Princesses Victoria, and Maud of Wales, Princesses Victoria, Alexandra, and Beatrice of Edinburgh, Princesses Margaret and Victoria Patricia of Connaught, Princess Victoria of Schleswig-Holstein, and Princess Eugenie.

THE CEREMONY.

The Archbishop of Canterbury, assisted by the other clergy, performed the ceremony, the bride being given away by her father. The magnificent gilt sacramental plate, the central alms dish of which is said to have been manufactured in the reign of Charles I., and is valued at \$50,000, was displayed upon the altar, which was decked with the choicest flowers. The service began with the marriage chorale, "Father of Life," specially composed by Dr. Cresser for the occasion and sung by "The Gentlemen and Children of the Chapel Royal," as the members of the choir are styled. In the middle of the service Sir Joseph Barnaby's "O, Perfect Love," a chorale sung at the marriage of the Duke and Duchess of Fife in Buckingham palace chapel, was given. The service concluded with the hymn, "Now Thank We All Our God." Mendelssohn's "Wedding March" was played as the Royal party left the chapel, the united processions of the bride and bridegroom leading to the Throne-room, where the registry of the marriage was attested by her Majesty and the other members of the Royal family and Royal guests.

BACK TO BUCKINGHAM PALACE.

On the way back to Buckingham palace from the Royal Chapel the procession was led by the carriage of the Queen. Her Majesty, who was accompanied by the Duchess of Teck, was wrapped up in a white Indian shawl. She gave instructions that the carriage should proceed slowly in order that she might view the decorations.

This gave the crowds along the route an opportunity to again see her Majesty, and she was enthusiastically cheered.

Following the Queen came the carriage of the bride and bridegroom. The newly-wedded pair were animatedly talking, only occasionally stopping their conversation to salute the crowd in response to the cheers with which they were welcomed. Immense crowds were assembled in the Mall, Bird Cage Walk, the upper part of St. James' park, and in the vicinity of Buckingham palace. Even in Grosvenor place, back of the Palace gardens, from which nothing of the procession could be seen, people stood packed and jammed. Buckingham Palace road was also crowded as far as could be seen.

AN OVATION.

Shortly after the Royal party entered the palace, the Queen, the Duke of York and his bride, and the Duke and Duchess of Teck appeared upon the balcony. As they stepped out the crowd before them went wild with enthusiasm. Such cheering and such long continued expressions of popular approval have seldom, if ever, been equalled in London. So prolonged was the ovation that a chair was brought to the balcony and the Queen seated herself. She appeared to be suffering a little from the heat, and as she sat in the chair she slowly fanned herself. Her face plainly showed the pleasure she felt at the enthusiasm of the crowd. The faces of the Duke and Duchess of York beamed with happiness, and they repeatedly bowed and smiled as the salvos of applause and the cheers of the multitude were repeated again and again. The Duchess of York looked charmingly beautiful. She carried in one hand a bouquet of Provence roses, orchids, and orange blossoms.

THE BRIDAL GIFTS.

To enumerate the bridal gifts and the names of their donors would require several columns of newspaper space. Presents were received from all parts of the British dominions. The Duke of York's present to his bride consisted of an open pelted rose in pearls and diamonds, and a five-row pearl necklace. The pearls are not exceptionally large, but they are perfectly pure in color and are splendidly matched. The Duke and Duchess of Teck gave their daughter a suite of jewels, comprising tiara, necklet, and brooch of turquoises and diamonds. Much has been said regarding the opposition of the Princess of Wales to the marriage, it being stated that she did not approve of her son marrying the girl who had been engaged to his brother, even though that brother was dead. The present given by the Princess of Wales should put to rest these rumors, for it is doubtful if a more valuable gift was ever given by anyone on a similar occasion. The Princess' gift consisted mostly of jewellery and precious stones, the whole being valued at \$250,000.

MODEST HOUSEKEEPING.

The young Royal couple will begin their married life on a very much less ambitious scale than many a bride and bridegroom who literally have their way to make in the world. The little cottage in which they will live at Sandringham all next autumn and perhaps next winter only contains two very small sitting-rooms besides a tiny business office for the Duke of York, and there is only space for a couple of guests at a time. It is very simple, but prettily furnished, with light and seemingly inexpensive furniture, and nearly all the Princess May's girlish treasures, her stock of knickknacks and personal odds and ends with which she adorned her rooms at the White Lodge, will be sent down there to make the little nest homelike. It is altogether an ideal little house for a newly married couple, royal or otherwise, for the surroundings are delightfully picturesque, and just without the windows of the drawing and dining-rooms is a beautiful lake, over which has been thrown a romantic-looking bridge. The Duke and Duchess will not take up their London residence at St. James' until early next year.

As Hard to Kill as a Cat.

Benjamin Dow, who was terribly injured in the recent nitroglycerin explosion at the High Explosive company's works, Lima, Ohio, is able to be out. His case is a remarkably interesting one. This last explosion was the third one at the same factory that he had gone through and escaped alive, although his working companions were killed, and in the one of last November his working mate, Andy Shutes, was blown to atoms, only shreds of his remains being found. Dow was blown thirty feet, trees were uprooted, their branches falling on him, and when rescued he was unconscious, remaining so for many days, finally recovering and returning to work, only to remain a short time when the deadly stuff went off, killing poor Robinson who was working by his side. Dow was again found in a semi-unconscious condition, with his skull and jaw fractured, an eye blown out and shreds of flesh torn from all over his body. The doctors removed him to Mrs. Meyers' private hospital and dressed his wounds, but expected him to die at any moment. When told that he could not live he replied, "Well, we will see." Again his wonderful nerve has pulled him through.

Canada to the Front.

In aquatic sport Canada this season has been pre-eminent in America. Of course in professional rowing it has always had that position, and Gaudaur's victory at Austin was only another proof of the country's supremacy. In the regattas that took place on the Fourth of July across the line, Canadians were again to the front. At Rochester, the Toronto yachts sailed away from their competitors in every class, and at the Buffalo rowing regatta, the Canadians, Curran and Gray, won everything they went after. The greatest victory was at Boston, when in the professional single race three miles Eddie Duran, of Toronto, won his first professional race, defeating Hosmer, Ten Eyck, Rogers and Conley.

The People of Iceland.

In Iceland, a nation of 73,000 people, men and women are in every respect political equals, governed by representatives elected by men and woman. The mothers teach the future citizens, and in all of Iceland there is not an illiterate after the age of seven; there are no poisons, no police, no plutocrats, no miserable poor, but a plain, temperate, chaste, educated, and intelligent people.

OUR WORLD'S FAIR LETTER.

Latest Gossip From the Great Exhibition—The Crowds are Coming at Last.

At last the World's Fair appears to have struck its gait, and the people are pouring in from all points of the compass, averaging 100,000 a day and over for some time past.

SUNDAY OPENING

has not been a success so far. A large proportion of the exhibitors close in their space and there seems no very general disposition to pay full price for half show. The chief argument for opening the gates of the World's Fair on Sunday was that the workmen, who could not get a holiday at any other time, might have a chance on the first day of the week, but they have notably failed to avail themselves of the privilege. Last Sunday only some 63,000 entered the gates, not much over half the day previous. It is proposed to reduce the Sunday fare to 25 cents, and it certainly looks as if something of the kind was necessary. Several of the religious bodies which had exhibits in the Liberal Arts' Building spoke of removing them on account of the Sunday opening, but have thought better of it.

Now is the time to come to the Fair. Everything is in full blast, hotels are not yet crowded, accommodations are cheap and easily obtained and the weather is not so hot as it will be later. No one need be afraid of being swindled. There are thousands of good rooms at a dollar a day, or less, in hotels within easy walking distance of the fair grounds, and while prices of meals are a little high inside the gates, they are as cheap as in any other American city outside. Hotel and housekeepers no doubt had made up their mind early in the season that they would reap a gold harvest, but the supply of rooms so far exceeds the demand, that they have had to come down to commonsense prices. I would advise everyone coming to the fair to make it their very first business to secure a room and know where he will sleep the first night at any rate; if the quarters are not comfortable he can move afterwards, but in any case he should endeavor to be in street walking distance; the crowding on street cars which those a mile or more away have to submit to twice a day is a nerve-destroying process.

CANADIAN SUCCESSSES.

The Dominion generally, and the Province of Ontario in particular, has come well to the front in every department. In cheese Canada has practically had the field to herself. There were in all 667 entries from the various cheese producing states and Canada—none coming from across the water. Canada sent 162 exhibits of which 69 were from Ontario. Of the 667 entries, 135 scored high enough to entitle them to a medal or diploma. Only nine awards fell to the U.S., the rest—126—going to Canada. Thirty-one Canadian cheeses scored higher than any American, one solitary lot from New York breaking in at 32nd place. It is not so long ago—not more than thirty years ago, if so long—that the industry of making cheese in factories was introduced into Ontario by Hon. Thomas Ballantyne, of Stratford, and the late Harvey Farrington, of Norwich, and it is no small credit to us that we should lead the world in quality, and export last year more cheese to Britain than our neighbors.

The prestige of the Columbian awards must tell favorably on the prices for Canadian cheese in the British markets this year and thus put more money in the pockets of every factoryman.

In butter the exhibits were mostly from Quebec, and were not very numerous, but out of 40 awards Canada carried away 13, which was not good so badly.

THE BIG CHEESE

made at Perth, Ont., by J. A. Weddick, of the Dominion Experimental Dairy staff, was tested by the judges and other experts, and the flavor and texture were found exceedingly good, very much better than was expected, when the circumstances of its manufacture are considered and the extremely unfavorable conditions under which it has been kept since installed in place opposite the Ontario Cereal Court.

The Agricultural building with its immense glass roof, is exceedingly hot at times, and a worse place to keep cheese in could hardly be imagined. That the big cheese and the hundred or so of smaller ones should not have gone completely off flavor is surprising and goes to show superior excellence of manufacture.

DAIRY TEST.

In this connection I might say that in the battle of the breeds, as it is called, the dairy test in which twenty-five each of Jersey, Guernsey and Shorthorn cows are engaged, the fine Ontario short horns are more than holding their own, two of them having given over 50 lbs. of milk a day more than once, which is the largest quantity given by any cow. The results of these tests, which will last all the season, will be most interesting to farmers, and I will endeavor to give you a summary of them as they proceed. Suffice it at present to say that the Jersey herd has led nearly all the way though in every particular, quantity of milk, percentage of butter fat and others solid and quantity of cheese and butter. The Shorthorns have run ahead on one or two days as to quantity of milk, and it is expected that their staying qualities will stand them in good stead.

The decisions in the other departments have not yet been made public, but it is an open secret that Ontario will seldom be found in second place. Commissioner Awey and his splendid staff of assistants in every section have worked hard to collect the exhibits in the first place and to arrange them tastefully in the space allotted to them, and as a consequence the registers which are kept in each court are full of the favorable comments of visitors from all parts of the world. To see how their own country compares with others should be a strong inducement to Ontario folks to come to the fair. With all that has been written and printed, few people have the slightest idea of the wonders that await them in the White City. A visit here is an education in itself, and the expenditure of a few dollars practically gives one the advantage of a trip around the world.

PINE VEGETABLES.

It was decided early in the preparatory stages of the World's Fair work, that the Ontario Commission should look after natural products for the most part, leaving manufactured articles to be collected and averaged by the Dominion Commission. This was a wise arrangement, for it gave our Province a chance to do for itself in its strongest features. How well it has acquitted itself in minerals, cereals, fruit,

plants, etc., has already been described, but little has been said of the vegetables. It was somewhat late, owing to various causes, before the vegetable exhibit was installed, but it was worth waiting, for so attractive a feature is it, with the added honor of being the only complete one on the ground. Some of the states and foreign countries have a few vegetables or wax models of them, but in no other court but the Canadian are seen all the root products that play so important a part in farm economy. The experimental farm at Brandon displays to good advantage the products of the deep soil of the prairies. Quebec and the Maritime Provinces are also well represented. Ontario occupies nearly half of the space, and her mammoth mangolds, carrots, turnips, parsnips, &c., not to speak of 182 plates of potatoes in 86 varieties are a continued source of wonderment and hard-headed farmers from the Western States express the opinion every day that a country where such stuff can be grown is not so bad a place after all. If any benefit is to be derived from international exhibitions apart from the educational feature, it is the advertising each country gets; and certainly the Province of Ontario never had so splendid a chance before to make its resources known to the world, nor made so good use of it.

W. YOUNG

Locomotive Whistles.

When locomotives were first built, and began to trundle their small loads up and down the newly and rudely constructed railways of England, the country roads were for the most part crossed at grade, and the engine-driver had no way of giving warning of his approach except by blowing a tin horn. This horn, as may be imagined, was far from being a sufficient warning. If a cow strayed upon the track, "so much the worse for the cow," as old John Stephenson said. But by and by it became inconvenient for others than the cows.

One day in the year of 1833 a farmer of Thornton was crossing the railway track on one of the country roads with a great load of eggs and butter. Just as he came out upon the track a train approached. The engine-man blew his tin horn lustily, but the farmer did not hear it. He drove squarely up on the track and the engine plunged into his waggon.

Fortunately the farmer was not seriously injured; but his horse and especially his eggs and butter, were. Eighty dozen eggs and fifty pounds of butter were smashed into an indistinguishable, unpleasant mass, and mingled with the kindling wood to which the waggon was reduced. The horse breathed it last in a few moments.

The railway company had to pay the farmer the value of his fifty pounds of butter and his nine hundred and sixty eggs, his horse and his wagon. It was regarded as a very serious matter; and straightway a director of the Company, Mr. Ashlen Bagster by name, went to Atton Grange, where George Stephenson lived.

"What shall do we about this?" he exclaimed. "We can't have such dreadful things as this happening on our railway, you know."

Stephenson was inclined to take the matter with true north country philosophy, but the director was aroused.

"Now, upon my word," said Ashlen Bagster, "why can't you make your steam make a noise somehow that will warn these people?" He thought of no method to accomplish this, but at that time people had in a general way a high opinion of the capabilities of steam.

"That's an idea, mon," said Stephenson. "Bless your soul, I'll try it!"

He went to a maker of musical instruments, and got him to contrive an apparatus which, when blown by steam, would make a horrible screech. This was attached to the boiler of an engine, and the first locomotive whistle was in full operation.

The railway directors, greatly delighted, ordered similar contrivances attached to all their locomotives, and from that day to this the voice of the locomotive whistle has never been silent. Like the morning drum-beat of Britain, the whistle "following the sun and keeping company with the hours, it circles the earth with one continuous and unbroken strain."

So that it may be said truly that the locomotive whistle had its origin in the smashing of eighty dozen eggs.

The frizzled glass threads from which cotton is woven are said to surpass in fineness not only the finest cotton, but even the threads of the silkworm's cocoon, their softness and elasticity being even greater than that of manufactured silk "lint."

At all public demonstrations in London, expected to attract large numbers of spectators, a system of hand signalling will be adopted by the police, so that by a code passed from official to official, men held in reserve at any given point can be instantly centred at a scene of disturbance.

Desecho, an island adjoining Porto Rico, is infested with rats. There are millions of them there, and it is unsafe for a man to set foot on the island. They have destroyed all the goats, which were formerly bred there, and are now eating the shrubbery.

There is a point near the famous Stony cave, in the Catskill Mountains, where ice may be found on any day in the year. This locality is locally known as the Notch, and is walled in on all sides by steep mountains, some of which are more than 3,000 feet high.

The ear-rings worn by Italian women indicate the part of Italy the wearers come from; the longer the ear-rings the farther south the women come from. In the extreme south most of the ear-rings hang close to the shoulders; in the north they are quite short.

Four cities in Europe stand wholly or in part in islands. Venice is the best known on account of its historical past; next comes St. Petersburg, the capital of Russia, and the two last are the cities of Ghent and Amsterdam, situated respectively in Belgium and Holland.

The complexity of animal structure is marvelous. A caterpillar contains more than 2,000 muscles. In a human body are some 2,000,000 perspiration glands, communicating with the surface by ducts, having a total length of some ten miles; whilst that of the arteries, veins, and capillaries must be very great; the blood contains millions of millions of corpuscles, each a structure in itself; the rods in the retina, which are supposed to be the ultimate recipients of light, are estimated at 30,000,000, and Meinerth has calculated that the grey matter of the brain is built of at least 500,000,000 cells.

BORING THE OCEAN BED.

Wonderful Work on the Prince Edward Island Tunnel.

Taking Samples of the Geologic Strata of the Sea's Bottom—History of the Great Project.

The dream of Jules Verne in his "Twenty Thousand Leagues Under the Sea" may be very far from realization, but science is daily revealing wonders of which even Verne did not dream. It is a remarkable evidence of the progress of inventive skill that we are to-day enabled to lower into the sea to a depth of nearly a hundred fathoms strong yet delicate machinery by which to cut out and bring to the surface samples of the material of which the different underlying strata are composed.

Though for many years past, it has been possible, by means of the ingenious apparatus for deep sounding, invented by Sir William Thompson, now Lord Kelvin, to ascertain the configuration of the bed of the sea, the use of this appliance was limited to the determination of the elevations only, and with propositions for the building of extensive and costly submarine tunnels came also the necessity for special machinery by which to ascertain not alone the depth of the water but the exact geological structure of the materials through which it was proposed to tunnel.

By the use of the plenum-pneumatic process, the principle of which is precisely that of a diving bell, it has been found practicable to sink bridge foundations to a depth of somewhat over a hundred feet below the mean surface of the water. Even the diver in the most modern diving dress scarcely cares to work in a greater depth of water than 80 feet. At a depth, however, of from 200 to 600 feet the problem of determining the exact nature of the earth's strata becomes vastly more difficult of solution. Numerous appliances for this purpose have been successively tried and abandoned and it was not until last year that the apparatus now in use was devised.

The credit of the invention belongs to Mr. Alfred W. Palmer, a civil engineer of New York city, who was commissioned by the Canadian Government and Sir Douglas Fox, the eminent English engineer, to make the test borings for the Northumberland Straits Tunnel, designed to connect Prince Edward Island with the neighboring province of New Brunswick, a distance of eight and one half miles, having reported to the Government in 1890 the probable feasibility of the proposed tunnel. It was here that the apparatus described was first practically tested, and the results gave entire satisfaction under unusually adverse conditions, the water being perpetually boisterous, and a current running generally at the rate of four miles per hour. The depth of the several borings required proved a less serious obstacle than the total absence of stability in the boring machinery, and it was finally determined to use a 4-inch wrought iron tube, braced by rods in such a manner as to be perfectly rigid, and retained in an upright position by means of four wire ropes set out at right angles to heavy anchors.

The lower end of the tube was allowed to penetrate the sea bottom for a few feet, but the amount of penetration was fixed by the attachment of a large iron plate bolted to the tube. Near the upper extremity of the tube was fixed a staging which carried the drill engine and the mechanics operating it. The drill was driven at the rate of a thousand revolutions per minute.

Steam for driving and water for lubricating the drill were carried in flexible tubes from a near-by scow upon which was placed a ten horse-power boiler and other necessary machinery. The drill was withdrawn after each three feet of penetration, and the core-barrel or small cylindrical case containing the material was brought to the surface for examination and preservation.

Inside the 4-inch tube described was placed the 2-inch tube which was driven hard into the bed of the sea, this forming a perfectly rigid, water tight, perpendicular cylinder through which the diamond drill was operated.

The fact that the interior tube was water tight enabled the engineers to calculate correctly the "hydrostatic head"; that is, the pressure which would be required to repel the flow of water from the rock in the actual construction of the tunnel. The heaviest storms encountered were not sufficient to disturb the rigidity of the apparatus, the drill having always maintained its vertical position, although the scow carrying the boiler and pump was considerably tossed about. The engineers were therefore enabled to complete their examinations without interruption.

In view of the numerous large submarine tunnels now projected, it is difficult to underestimate the value of the operations at Northumberland Straits as a precedent for deep sea boring. The device will be of the greatest advantage in examinations for the proposed tunnels between Scotland and Ireland and between England and France, each of which will when completed have a length of about thirty miles. Its comparative cheapness and practicability also render its use extremely desirable in the less extensive tunnels.

The importance of a regular channel of communication with Prince Edward Island is becoming greater year by year. At present communication is frequently suspended during the season of navigation owing to the violence of prevailing storms, and in the Winter the island is all but inaccessible. Irregular communication is maintained by means of ice boats, which carry the mails and which are also used for the transportation of the few passengers who are venturesome enough to patronize them. A peculiarity of the service is that while the men are expected to pay a regular charge of five dollars each and in addition to work their passage either way by assisting as far as may be necessary in the navigation of the cumbersome and unwieldy boat, the women are charged according to their respective weights, paying ten cents per pound, which is the rate at which the mails are transported. It will be seen that under these circumstances the possession of any extra allowance or avoidpous becomes a positive objection, and it may be readily believed that the good natured of the fair sex do not patronize the boats very extensively. It is thought that the establishment of railroad communication with the main land will do much to increase the traffic of the present 250 miles of railroad upon the island, which is now operated at a loss.