

## THE ORDER OF ST. MICHAEL AND ST. GEORGE.

The following description—from a recent number of the *European Mail*—of the constitution and decorations of the Order of St. Michael and St. George cannot fail to be interesting. The ranks of the Order are open exclusively to colonists or those who may distinguish themselves in, or in connection with any of the colonies. Several Canadians are Companions of the Order, and it will be remembered that in the summer of 1870 H. R. H. Prince Arthur was invested with the Grand Cross of the Order.

The Order consists of three classes, and is at present restricted, the first class to twenty five, the second to sixty, and the third to one hundred. Either class, however, can be supplemented by legislative enactment, if occasion should require; the reigning sovereign is the chief of the Order, and a prince of the royal blood, descended from George I., is to be nominated Grand Master of the Order. The Duke of Cambridge now holds this most important office. It is ordained that in all solemn ceremonies the Knights Grand Cross, and the second and third class in their degree, of this order shall have place and precedence next that of and immediately after the Knights Grand Commanders, &c., of the most exalted Order of the Star of India.

The following relates to the qualifications for the Order:—

It is ordained that the persons to be admitted into this most distinguished order shall be such natural born subjects of our Crown of the United Kingdom of Great Britain and Ireland as may have held or shall hereafter hold, high and confidential offices within any of our colonial possessions, or such other natural born subjects of our Crown of the United Kingdom of Great Britain and Ireland, as may have held or shall hereafter hold high and confidential offices, or may render extraordinary and important services to us as Sovereign of the United Kingdom of Great Britain and Ireland, in relation to any of our colonial possessions, or who may become eminently distinguished therein by their talents, virtues, loyalty or services, or who now are, or hereafter may be appointed officers of this most distinguished Order.

The following gives an idea of the character of the insignia of the Order:—

The Knights Grand Cross shall upon all great and solemn occasions and at all investitures of the Order appointed by the sovereign, wear mantles of Saxon blue satin, lined with scarlet silk, and tied with two cordons of blue and scarlet silk and gold, on the left side of which mantles shall be embroidered a representation of the Star of a Knight Grand Cross of the Order, which shall be composed of seven rays of silver, between each of which shall issue a small ray of gold, over all, the Cross of St. George, gules; and in the centre of the said star, within a circle azure, whereon is inscribed in letters of gold the motto "Auspiciis Mellioris Aevi," a representation of the archangel St. Michael holding in his dexter hand a flaming sword and encountering Satan. The Knights Grand Cross shall on these solemn occasions also wear round *chapeaux* which shall be of blue satin lined with scarlet, turned up in front, and embroidered thereon the Star of the Order herebefore described, which *chapeaux* shall be adorned and surmounted by three white ostrich feathers, and in the centre one large black ostrich feather. And we do further command that on all other occasions whatsoever, the Knights Grand Cross shall wear the Star of the said order embroidered upon the left side of their coats or outer garments; and that they shall also wear at all investitures and other solemn ceremonies of the Order, as well as on all days usually termed "Collar Days," a collar of gold, composed alternately of lions of England royally crowned, of Maltese crosses, and of the cyphers S. M. and S. G.; having in the centre of the said collar, our Imperial Crown over two winged lions, *passant gardant*, each holding in his forepaw a book and seven arrows; and at the opposite end there shall be two similar lions, all of which shall be of gold, excepting the crosses, which are to be enamelled white, the whole linked together by small gold chains. To the said collar shall hang the badge of the order, which shall be a gold cross of fourteen points, enamelled, argent, edged, gold, having on one side thereof in the centre within a circle, azure, whereon is inscribed the motto "Auspiciis Mellioris Aevi," in letters of gold, a representation of the archangel St. Michael, holding in his dexter hand a flaming sword and encountering Satan; and on the reverse within the said circle and motto, a representation of Saint George armed on horseback, with a spear, encountering a dragon, which badge shall be ensigned by our Royal and Imperial Crown, gold. On all other occasions the said Knights Grand Cross shall wear the said badge suspended to a richly watered Saxon blue ribband, of the width of four inches, with a scarlet stripe passing from the right shoulder to the left side. And for the greater honour and dignity of the Knights Grand Cross, it is hereby declared that it shall and may be lawful for them upon all occasions to bear and use supporters to their arms; and we do by these presents direct and command our Garter principal King of Arms for the time being to grant supporters to all Knights Grand Cross of the said Order. The said Knights Grand Cross shall also surround their armorial ensigns with the collar, circle, and motto of the Order, and suspend thereto a representation of their badge.

The Knights Commanders shall wear around their necks a ribband of the same colours as the ribband of the Knights Grand Cross, of the breadth of two inches, and pendant therefrom the badge of the Order, which shall be of the same form and appearance as the badge appointed for the Knights Grand Cross, but one size smaller. They shall also wear, on the left side of their coats or outer garments, a star composed of four rays, thereon a small cross of eight points in saltire, argent, surmounted by the cross of St. George, gules; and in the centre, argent within a circle, azure, whereon is inscribed the motto "Auspiciis Mellioris Aevi," in letters of gold, a representation of the archangel St. Michael, holding in his dexter hand a flaming sword encountering Satan. They shall surround their armorial ensigns with the circle and motto of the Order, and suspend thereto a representation of their badge.

The Companions shall wear the badge or small Cross of the Order, which shall be of the same form and appearance as the badge appointed for the Knights Commanders, but smaller, pendant to a ribband of the Order, of the breadth of one inch and a half, from the buttonhole of their coats or outer garments. They shall suspend a representation of their ribband and badge from the lower part of the escutcheon of their armorial ensigns.

## SCIENCE NOTES.

In these days of noxious effluvia, when deodorizers are almost as much in request as hair restorers, any new disinfectant will be gratefully received. It is therefore satisfactory to learn from the *Poona Observer* that a valuable discovery in this line has lately been made in India, where, if rumour is correct, it must be doubly welcome. After numerous experiments with roasted coffee the result proves that it is one of the most powerful means, not only of rendering animal and vegetable effluvia innocuous, but of actually destroying them. A room in which meat in an advanced state of decomposition had been kept for some time was instantly deprived of all smell on an open coffee-roaster being carried through it containing a pound of coffee newly roasted. In another room the effluvia occasioned by the cleaning out of a cesspool so that sulphuretted hydrogen and ammonia could be clearly detected, was completely removed within half a minute on the employment of three ounces of fresh coffee. The best mode of using it as a disinfectant is to dry the raw bean, pound it in a mortar, and then roast the powder on a moderately heated iron plate until it assumes a dark brown hue, when it is ready for use.

**KOSSUTH ON A NEW TREATMENT OF THE GOITRE.**—Louis Kossuth communicates to the *Neue Free Presse* of Vienna the remarkable curative properties possessed by a grotto near Pistoia, in the valley of Lucques and Pisa, the virtues of which consist in radically curing the goitre, the treatment being easily followed, and lasting from eight to fifteen days. According to M. Kossuth's account, the patient, covered with a bathing gown, descends into the grotto, which is well lighted. There he has only to sit and admire the stalactites, or converse with his friends. After ten minutes he sweats profusely, but not disagreeably. In an hour he is taken out, wrapped in a dannel covering, and, after reposing a little, is subjected to a cold shower bath. The curative principle of this grotto is, however, an enigma. In the warmest parts the air does not show more than 32 to 34 degrees (centigrade), and is less oppressive than the air outside, the water is still colder, but it is heated by the air, the chemical composition of which resembles that of atmospheric air, the only difference being a slight addition of azote. Kossuth attributes the remarkable qualities of the grotto to electro-magnetic agents, and in this opinion he is probably correct.

Some curious experiments have, according to the *Mirror*, been made by a doctor of Montpellier to ascertain the effects of wine, brandy, and absinthe on fowls. Any doubts which may have been entertained as to the disinclination of the birds to adopt intemperate habits were speedily dispelled, for they took to dram-drinking with evident delight, and many an old cock in the chicken-house proved himself quite capable of consuming his bottle a day. It was found necessary at last to limit the allowance of wine and spirits for each bird to six cubic centimetres of alcohol, or from twelve to fifteen of wine daily. The result was that they lost flesh rapidly, more especially those who drank absinthe. Two months of absinthe drinking was found sufficient to kill the strongest cock or hen. The fowls who indulged in brandy alone lasted, however, four months and a half; while the wine-bibbers survived for ten months. It was not only their health which was affected by alcohol; their personal appearance underwent an extraordinary change. An immense development of cocks crests took place. The crests, it is stated, increased to four times their original size, and assumed a hue of unnatural brightness—probably on the same principle that the noses of confirmed drunkards become preternaturally large and red. It is doubtful whether man is justified in trying experiments in drunkenness with the dumb creation merely with the view of ascertaining how far he may himself venture to get drunk with impunity; but having proceeded thus far, he may as well go a step farther, and by the introduction of the teapot into the henhouse find out whether there is any ground for the suspicion entertained in some quarters as to the innocent properties of tea. A few experiments also in "late hours" might be made with advantage at the same time. A party of carefully selected cocks and hens might be allowed to mingle in the festivities of the London season, returning to their roosts at the hour when they usually commence to cackle and crow. It would possibly be found that one week of "political reunions," concerts, balls, and crashes would be as disastrous in its effects as two months of absinthe drinking.—*Pall Mall Gazette*.

## MISCELLANEOUS.

**STORY OF A MISER.**—The *Italia*, Turin, says the following scene occurred a few days ago at a railway station: "On a bitter cold day a millionaire applied at the ticket-office for a third-class ticket. 'What!' exclaimed the official, who knew him, 'you, sir, take a third-class on such a day as this?' 'Why, I must,' was the cool reply, 'since there is no fourth-class.' 'I beg your pardon,' answered the official, handing him a ticket, 'but there is—here is one!' The man of wealth hastily paid for it, and rushed forward to take his place. On the door-keeper asking to see his ticket, the traveller produced it, but was rather taken aback on being told that the ticket would not do for him. 'And why not?' he exclaimed. 'Why, sir, because it is a dog-ticket!'

**ORIGIN OF A SAYING.**—A correspondent writes:—"I have vainly endeavoured to ascertain the origin of the saying: 'If the mountain will not come to Mahomet, Mahomet must go to the mountain.' Can you enlighten my ignorance?" It is said that when Mahomet first declared his system of religion to the Arabs, they demanded proofs of his miraculous power, such as Christians claimed for Jesus and Moses. Mahomet replied that it would be tempting God, and provoking His wrath, to grant their demand. Nevertheless, he commanded Mount Sofa to come to him. Of course it didn't. Whereupon he exclaimed: "God is merciful! Had it obeyed my words, it would have fallen on us to our destruction. I will therefore go to the mountain, and thank God that he has had mercy on a stiff-necked generation."—*Literary World*.

An impression prevails among many bathers that the buoyant quality of water is so great that one can safely dive into comparatively shallow water from a considerable height. To all such believers the following case—taken from one of our *English exchanges*—may prove a useful and seasonable warning: One Sunday afternoon, very recently, a man of forty years of age went to bathe at one of the public London baths,

and dived in head first at the end where the water is only three feet six inches in depth and on rising to the surface his head and shoulders were observed to remain under water. One of his companions drew the attention of another to the strange appearance, and asked if their friend "was acting;" but on examination it was found the man was actually drowning. He was instantly taken out and conveyed in a cab to the Royal Infirmary, where he immediately died. It was found that by striking his head against the bottom of the bath he had fractured one of the bones of the spine, sufficient to cause death.

The Paris *Figaro*, always well up in English news, tells us of a wonderful Patagonian young lady, Miss Lydia Cuningham, who was performing with a live boa constrictor in a circus company at Manchester. One day before commencing her task one of the audience stepped forward, and, going up to the leader of the circus, John Mahoney, asked him whether Miss Lydia was really a Patagonian. "Patagonian and Princess," replied John, imperturbably, "who has been good enough to leave her country to break stones on my stomach, and charm the serpents of my menagerie." The performance continued, but John noticed that Miss Lydia hit him harder than usual with the stones. When the time came to show off the serpent, Miss Lydia whistled, and the obedient reptile wound itself round her. Suddenly she blew a second and more peculiar whistle, and the boa immediately sprang upon John, who grew pale and staggered; and upon a third signal the bones of the unfortunate man were heard to crack under the serpent's embrace. The Patagonian then coolly asked to see the man who had doubted her nationality, and recognised him as her father, from whom she had been stolen in infancy. "I know you! wait for me at the 'Star and Garter'" cried she, "while," continues the *Figaro*, "the public died in horror from the boa devouring Mahoney."

**HOW LONG SHOULD A MAN STICK TO HIS ENGINE.**—A correspondent of the *Locomotive Engineers' Journal*, writing from Rutland, Vt., speaking of the duty and extent of the responsibility of an engine man in case of accident, says:

"Where an accident takes place, such as going down the dump or colliding with another train—a bridge may be gone, a culvert washed away—he may see the fatal leap. I ask you, thinking your experience is worth as much as mine, would there be anything heroic for me to stand on the foot board and plunge with my engine into certain and dreadful death? Is there anything brave about it? Have you no responsibilities here on earth, no matter if you have ten cars loaded with passengers that must follow the engine as the case may be? Now I consider an engineer's responsibility ceases, in such cases, when he has sounded his whistle properly and reversed his engine, opened his throttle, pulled open his sand box. He has done his whole duty to God and man as far as he can to stop the train, and if he has time and opportunity, if he is true to himself, he will try to get off and not go down to the bottom calling for brakes. Many engineers go down and collide and are killed, for the reason they do not have time after doing their duty. I never should feel as if a man was fit to run an engine if he had not courage to do his whole duty. But after he has stood to his post and done all that has been put into his hands to do, then I say he is a man that will try and save his own life."

In Colmar in Alsace, a man has just died as a double mill Bonnaire who owed his wealth to his hat. About the year 1820, a poor journeyman turner, by the name of Mubie, barefoot and his knapsack on his back, passed through the village in which Messrs. Weil and Boutron had a machine factory. He asked Mr. Weil for work, but not being possessed in his favour by reason of his dilapidated appearance, Mr. Weil sent him away. Sadly yielding to his fate, the journeyman went on his way. All at once the proprietor called him back: "Stop, man, what kind of a hat have you on?" "It is a wooden hat, sir." "A wooden hat? Let me look at the thing. Where did you buy it?" "I made it myself, sir." "And where did you make it?" "On the turning-lathe, sir." "On the turning-lathe? but your hat is oval, and in turning things grow round." "That is true," the journeyman said, "but nevertheless I made the hat as I told you; I changed the centre and turned as I thought it best. I have far to travel and need a hat to keep off the rain, and not having money to buy me one, I made me one myself." Mubie, by instinct, as it were, had discovered the eccentric method of turning which was to attain such importance in modern mechanics. As an expert, Mr. Weil at once saw the importance of this invention. He kept the man with the wooden hat, and soon discovered not only that he was an intelligent workman, but that he had an inventive genius, only needing an opportunity and some little education for its development. Soon Mubie became a partner, and afterwards, changing his name to Mullin, proprietor, made a large fortune by his skill and business tact.

**MANOMETRIC OR HIGH PRESSURES.**—A recent number of the *Annales Industrielles* gives a description of a new kind of gauge for high pressures. It is based upon the principle of the complete transmission of pressure in liquids, and is composed of a small cylindrical rod, working vertically through an hydraulic packing, and receiving at the end the pressure it is intended to measure. The base of this piston bears against a thin circular plate of india-rubber, held at its circumference by two bolts, and which forms the upper side of a round and flat vessel filled with mercury. The stroke of the piston is very small, in order that there may be no loss by friction against the packing leather, and no sensible variation from the displacement of the level of the mercury in the vessel. If we suppose, in a point in this vessel, a vertical tube, open at both ends, the mercury displaced by the slight movement of the membrane will rise more or less in the tube.

Such a gauge can be graduated with comparing it with a standard gauge; all that is necessary to know being the proportion between the area of the piston and of the membrane. The high pressure gauge was designed by M. Desgoffe; but it must be remembered that a somewhat similar arrangement was proposed by M. Galy-Cazalat, and applied to the construction of gauges for locomotives and for hydraulic presses. It consisted of a vessel of mercury, of which the base was formed of a membrane of india-rubber, and on which was placed a glass tube. The pressure was exerted by a very small piston placed beneath the apparatus. These gauges worked well on locomotives, but the mercury was exposed to frequent shocks, which displaced it in the tube; a special arrangement was, however, schemed to obviate this inconvenience.