

Science Notes.

THE ANTISEPTIC TREATMENT.—The proceedings of the British Association were opened by a most fascinating and eloquent address by Sir Joseph Lister, who explained the story of his own work for science and humanity in language of great simplicity and charm (says a London correspondent). For the first time he gave the history of the antiseptic treatment and the cause which led to its discovery. Pasteur had found that fermentation and petrification were caused by microbes, and Lister at once saw the bearing of this discovery on surgery. The problem was, how to find some substance which, without seriously injuring the human tissues, could kill the microbes already contained in them, and prevent the future access of others. Carbolic acid was a chemical curiosity in those days, but Mr. Lister had heard of its deodorising effects upon sewage. He obtained some from a friend and proceeded to use it in compound fractures. He applied it undiluted to the wound, and he had the joy of seeing these formidable injuries follow the same safe and tranquil course as simple fractures, only where the skin remains unbroken." From this point the progress of the new treatment went on triumphantly. Sir Joseph Lister went very fully into bacteriology, and made some reference to the recent report of the Vaccination Commission. He spoke very highly in favour of vaccination, and said that although it does not give perfect immunity it greatly modifies the character of the disorder and diminishes its danger, and by vaccination after a certain number of years Jenner's work is rendered complete. He was strongly in favour of compulsion, and pointed out that there was no difficulty in carrying it out in Germany. He thought it was the duty of the Government to encourage the use of calf lymph, so as to exclude the possibility of the communication of any human disease to the child, and to institute such efficient inspection of vaccination institutes as to ensure careful anti-septic arrangements, and so prevent contamination by extraneous microbes.

Edison at Home.—Edison, the American inventor, has been married twice. To his two wives he owes considerable success as the greatest living inventor and the greatest inventor that ever lived. They looked after his health and his physical welfare, enabling him to retain that vigour without which he could not stand the strain of day after day in his laboratory, without a wink of sleep. Twenty-two years ago Edison's friends urged him to marry, hoping that domestic life would compel him to eat at least one meal a day and sleep with some regularity. Edison said he had no time to make love, but if some decent girl wanted to marry him he had no objections. One day while watching a young woman, to whom he had never before spoken, working one of his instruments, he asked her somewhat anxiously if she would be his wife. She said yes, and in three days they were married, though he came near forgetting the hour for the ceremony, being busy on a complex machine.

THE COMING METAL.

After an exhaustive series of tests, the Minister of War in France has decided that aluminium is the best material for army utensils. All the camp equipments in the French army will be replaced by those made of aluminium. The cost will be enormous, and the change would use up all the aluminium in sight if it were made at once. For this reason the new material will be used in the equipments of only two army corps at first. Gradually one corps after another will be supplied until the whole army will be equipped. Aluminium equipments were used in the Madagascar campaign and stood the test splendidly. Besides being very light they showed no signs of wear and are easily cleaned.—*Scientific American.*

A BOON TO HOUSEHOLDERS.

The *Popular Science Review* tells us of an invention that should be a boon to householders. It is a "bogus" cat that scares away rats and mice. The cat is made of a light metal, and painted with luminous paint so as to be an exact counterpart of its animated feline sister. It then shines in the dark, and is placed in any infested nook or corner, where it very soon effectually scares away the pests. After being in use for a week or two the place is cleared of either rats or mice.

THE HOLY SEE AND ANGLICAN ORDERS.

AUTHORISED TEXT OF THE BULL.

The following is the authorised translation of the Papal Bull on Anglican Orders (*Apostolica Cura*). It is entitled, "Letter Apostolic of his Holiness Leo XIII., by Divine Providence Pope, concerning Anglican Orders," and is published in London by Burns and Oates, Limited.—

LEO, BISHOP, SERVANT OF THE SERVANTS OF GOD,
IN PERPETUAL REMEMBRANCE.

We have dedicated to the welfare of the noble English nation small portion of the apostolic care and charity by which, helped by His grace, We endeavour to fulfil the office and follow in the footsteps of "the great Shepherd of the sheep." Our Lord Jesus Christ The letter, which last year We sent to "the English seeking the kingdom of Christ in the unity of the Faith," is a special witness of Our good will towards England. In it We recalled the memory of the ancient union of her people with Mother Church, and We strove to hasten the day of a happy reconciliation by stirring up men's hearts to offer diligent prayer to God. And, again, more recently, when it seemed good to Us to treat more fully the unity of the Church in a general letter, England had not the last place in Our mind, in the hope that Our teaching might both strengthen Catholics and bring the saving light to those divided from Us.

It is pleasing to acknowledge the generous way in which Our zeal and plainness of speech, inspired by no mere human motives,

have met the approval of the English people; and this testifies not less to their courtesy than to the solicitude of many for their eternal salvation.

1.—REASONS FOR REOPENING THE QUESTION.

With the same mind and intention We have now determined to turn Our consideration to a matter of no less importance, which is closely connected with the same subject and with Our desires. For an opinion already prevalent, confirmed more than once by the action and constant practice of the Church, maintained that when in England, shortly after it was rent from the centre of Christian unity, a new rite for conferring Holy Orders was publicly introduced under Edward VI., the true Sacrament of Orders, as instituted by Christ, lapsed, and with it the hierarchical succession. For some time, however, and in these last years especially, a controversy has sprung up as to whether the Sacred Orders conferred according to the Edwardine Ordinal possessed the nature and effect of a sacrament; those in favour of the absolute validity, or of a doubtful validity, being not only certain Anglican writers, but some few Catholics, chiefly non-English. The consideration of the excellency of the Christian priesthood moved Anglican writers in this matter, desirous as they were that their own people should not lack the twofold power over the body of Christ. Catholic writers were impelled by a wish to smooth the way for the return of Anglicans to holy unity. Both, indeed, thought that in view of studies brought up to the level of recent research, and of new documents rescued from oblivion, it was not inopportune to re-examine the question by Our authority. And We, not disregarding such desires and opinions, and, above all, obeying the dictates of apostolic charity, have considered that nothing should be left untried that might in any way tend to preserve souls from injury or procure their advantage.

2.—PRESCRIBED METHOD OF EXAMINATION.

It has, therefore, pleased Us to graciously permit the cause to be re-examined so that through the extreme care taken in the new examination all doubt, or even shadow of doubt, should be removed for the future. To this end We commissioned a certain number of men noted for their learning and ability, whose opinions in this matter were known to be divergent, to state the grounds of their judgments in writing. We then, having summoned them to Our person, directed them to interchange writings and further to investigate and discuss all that was necessary for a full knowledge of the matter. We were careful also that they should be able to re-examine all documents bearing on this question which were known to exist in the Vatican archives, to search for new ones, and even to have at their disposal all acts relating to this subject which are preserved by the Holy Office—or as it is called the *Supreme Council*—and to consider whatever had up to the time been adduced by learned men on both sides. We ordered them, when prepared in this way, to meet together in special sessions. These to the number of twelve were held under the presidency of one of the cardinals of the Holy Roman Church, appointed by Ourselves, and all were invited to free discussion. Finally, We directed that the acts of these meetings, together with all other documents, should be submitted to Our venerable brethren, the cardinals of the same council, so that when all had studied the whole subject, and discussed it in Our presence each might give his opinion.

3.—PREVIOUS DECISIONS, JULIUS III. AND PAUL IV.

This order for discussing the matter having been determined upon, it was necessary, with a view to forming a true estimate of the real state of the question, to enter upon it, after careful inquiry as to how the matter stood in relation to the prescription and settled custom of the Apostolic See, the origin and force of which custom it was undoubtedly of great importance to determine. For this reason, in the first place, the principal documents in which Our predecessors, at the request of Queen Mary, exercised their special care for the reconciliation of the English Church, were considered. Thus Julius III. sent Cardinal Reginald Pole an Englishman, and illustrious in many ways, to be his legate *a latere* for the purpose, "as his angel of peace and love," and gave him extraordinary and unusual mandates, or faculties and directions for his guidance. These Paul IV. confirmed and explained. And here, to interpret rightly the force of these documents, it is necessary to lay it down as a fundamental principle that they were certainly not intended to deal with an abstract state of things, but with a specific and concrete issue. For since the faculties given by these Pontiffs to the Apostolic Legate had reference to England only, and to the state of religion therein, and since the rules of action were laid down by them at the request of the said Legate, they could not have been mere directions for determining the necessary conditions for the validity of ordinations in general. They must pertain directly to providing for Holy Orders in the said kingdom, as the recognised condition of the circumstances and times demanded. This, besides being clear from the nature and form of the said documents is also obvious from the fact that it would have been altogether irrelevant to thus instruct the Legate, one whose learning had been conspicuous in the Council of Trent—as to the conditions necessary for the bestowal of the Sacrament of Orders.

To all rightly estimating these matters it will not be difficult to understand why, in the letters of Julius III., issued to the Apostolic Legate on March 8, 1554, there is a distinct mention, first of those who "rightfully and lawfully promoted" might be maintained in their Orders; and then of others who, "not promoted to sacred Orders, might be promoted if they were found to be worthy and fitting subjects." For it is clearly and definitely noted, as indeed was the case, that there were two classes of men; the first those who had really received Sacred Orders, either before the secession of Henry VIII., or, if after it and by ministers infected by error and schism, still according to the accustomed Catholic rite; the second, those who were initiated according to the Edwardine Ordinal, who on that account could be "promoted," since they had received an ordination which was null. And that the mind of the Pope was this and nothing else is clearly confirmed by the Letter of the said Legate (January 29, 1555) subdelegating his faculties to the Bishop