

## THE SUN.

Written for the Catholic Register.

The constitution of the sun is one of the problems of astronomy as yet unsolved in its entirety, notwithstanding the great work of a long roll of illustrious observers. The vast amount of information obtained by means of photographic and spectroscopic observations have yet to be thoroughly analyzed, theory upon theory to be carefully considered and compared with known facts; and we may some day have a theory free from all objections as to the sun's present condition, the maintenance of its heat and the probable duration of its existence as a life-giving world, for we cannot suppose it to be an exception to the regular order of birth, growth and decay.

It has been generally accepted that the sun is in a condition of tremendous activity; cyclones sweeping over its surface with velocities far transcending anything we know upon this globe, causing great cavities in the atmosphere, into which our earth might easily be dropped; great outbursts of a volcanic character, sending masses of glowing gas to enormous heights above the surface; while all round the sun's limb are great prominences of flame, to be seen with proper apparatus at any time when the sun is unclouded, and bearing good witness to the truth of the theory that the sun is intensely active.

An immense number of observations were made by the late Father Perry, F.R.S., who was specially devoted to the study of solar physics, but whose untimely death in harness in the cause of science will necessitate the thorough analysis of his researches by another hand.

We learn that the memorial to Father Perry, in the form of a 15 inch telescope, has recently been completed and erected at Stonyhurst. It is pleasing to note that astronomers all over the world contributed to this memorial.

Among Father Perry's observations we find records of great prominences, presumably shot out from the sun, to a height of 132,000 miles. P. Secchi, also one of the greatest authorities and most assiduous of observers in solar work, has left a mass of testimony in relation to these great apparent outbursts on the sun.

Notwithstanding, however, the very great probability that the eruptive action of the sun sends great masses of glowing gas to immense distances above the surface, a theory has been recently advanced ascribing the observed appearances to another cause entirely. At the Congress of Astronomy, Chicago, 1893, a paper was read by A. Brestler, jr., Royal Society of Amsterdam, the object of which was to prove that, instead of being in a state of great activity, the sun is really relatively tranquil. The arguments advanced were most interesting, if only to show what totally different constructions may be put upon data furnished by observation, and the extreme care with which astronomers consider these data before demanding for a theory the dignity of a law.

The author quoted Secchi, who, in describing one of the great pyrotechnic displays on the sun, says he was impressed with the idea that the prominences were simply changing their appearance, not shot out again and again from the depths of the solar atmosphere. The changing forms of our own clouds are instanced as an example of resemblances to eruptive jets. Then the spectroscope shows that the metallic vapours are in the depths of the solar envelope, while the lighter gases prevail in the upper regions of the atmosphere.

The sun's atmosphere, then, according to this theory is stratified and tranquil, and the sudden changes are due solely to chemical action, not to violent eruptions. The interest attach-

ed to the discussion of these theories is all the greater, that they point to a connection of some kind between the great solar engine and our humble magnetic needle. The variations of the magnetic are bound up with the phenomena of the sun in some mysterious manner, and every step in advance in the knowledge of the sun's constitution and "habits" helps us in our never-ceasing efforts to fathom the mysteries of electricity and magnetism.

There have also been numerous attempts at tracing a connection between solar phenomena and the rainfall in different localities. The failure to establish such connection shows how deceiving coincidences may be; for predictions in regard to weather have frequently been made with successful results, but just as frequently have been quite astray. If the connection were real the exceptions could scarcely, if ever occur. The theory more recently discussed (it was considered at the Meteorological Congress at Chicago) is that the rotation of the sun upon its own axis affects the weather, but the difficulty of establishing the time of rotation is alone very great. The sun, being not a solid body, all parts of it do not rotate in the same time; different parts of the mass move independently, though with an approach to uniformity, in about 26 days. This renders the problem still more difficult, and indeed it seems as if the several factors in the weather problem were not to be too easily laid hold of.

Again, at the present time there are observers all over the northern part of this hemisphere engaged in making systematic observations of the Aurora, and it has been stated that between this beautiful phenomenon and solar phenomena there is a distinct connection. But this has been astrenuously denied, and a purely terrestrial origin claimed for it. Yet the most brilliant Aurora have been seen at times when coincidentally there were great changes taking place on the surface of the sun, and magnetic storms observed in every corner of the globe wherever a magnetic needle was found.

Little wonder, then, that astronomers seek to learn all they can of the sun. They know that without it we could not exist; but whence its power, is as yet in the realm of theory.

## General Von Moltke and Catholicism.

In a book just issued by Theodore Reinhardt, it is recorded that General Von Moltke once said: "The fact of the matter is, we ought all to return to the fold of the Catholic Church, whose great superiority consists in the fact that it has a head, a supreme, undisputed authority, with a mission to decide for the whole world, and to stifle in its germs every doubt and every movement of rebellion. It is in the Catholic Church alone that one finds the certainty that only dogma can give."

It is stated that the Catholics of New England form 21 per cent, of the population.

UNTOLD MISERY—WHAT A WELL-KNOWN COMMERCIAL TRAVELER SUFFERED AND HOW HE WAS CURED.—GENTLEMEN,—About five years ago I began to be troubled with Dyspepsia, and for three years suffered untold misery, from this terrible complaint. I was at that time travelling for Messrs. Walter Woods & Co., Hamilton, and was treated by some of the best physicians in the country, but all to no purpose. I continued to grow worse, one day I was induced to try a bottle of Northrop & Lyman's VEGETABLE DISCOVERY and to my great surprise and joy, I soon began to improve. I continued using this medicine and when the third bottle was finished, I found I was entirely cured; and as a year has elapsed since then, I feel confident that the cure is complete and permanent. To all afflicted with this distressing complaint I heartily recommend Northrop & Lyman's VEGETABLE DISCOVERY believing that the persistent use of it will cure any case of Dyspepsia.

Signed, T. S. McINTYRE

## The Jesuit.

The Jesuit of fiction is a man of cunning, subtle mind, keen and penetrating, over on the alert to entrap the unwary, ready to take advantage of his fellow-men and subject them to his wily influence and unholy sway. Wholly unscrupulous he stops at nothing that may serve his purpose or promote his schemes for self aggrandizement and sordid gain. Essentially selfish, his aims are necessarily low and mercenary, and all his energies are devoted to the accomplishment of personal ends. With him the end justifies the means, and all means are laudable in his sight which can be used to advance his interests. He seeks only to attain an object regardless of means and methods. He is the creature of circumstances, always watching for the least favorable turn in religion or politics, in order that he may seize the opportunity to carry out his sinister designs. Religion, with him, is only of secondary importance, to be used as a mask to hide his villainy and conceal the infamy of his plans. He courts the favor of the rich and powerful that he may work their discomfiture and ruin. He wins the confidence of the people whom he cajoles into believing that he is their friend and the friend of liberty and popular government, whilst he is their secret and armed enemy and forges the chains to bind and enslave them. In a word, the Jesuit of fiction is a most ignoble character, with whom is associated all that is mean and selfish, vile and degrading, without a single redeeming trait or quality to commend him to the respect and esteem of men. Such is an imperfect outline of his character as described by certain writers whose vile purpose it serves to thus misrepresent and slander the Jesuit.

The Jesuit of fact, as he really exists, is known to be quite a different person. He is a man of meek and humble bearing, who adapts himself to the ways of all, whether great or small, learned or ignorant, his sole aim being to save souls. He is indifferent to the world and its affairs, save in so far as they have reference to and be employed in conducting men to God. As heaven is the end and aim of his acts he avails himself of all human agencies and instrumentalities that aid him in his efforts and facilitate the fruition of his labors. Human knowledge and science he considers useful means, but subordinate to divine truth and super-natural agencies in the attainment of results. Though he does not hesitate to employ the former when they can serve his purpose of inspiring respect and reverence for the latter, yet he mainly relies for success upon humble prayer and the intervention of the divine power, without which all his labors count for nothing. To him science and learning are simply means to an end, intended when rightly employed to conduct the soul to God and lift up the mind and heart to the contemplation of His ennobling qualities and attributes, enlightening the one and purifying the other. Whilst esteeming all things in their order and measure, he sets special value upon nothing except in its bearing upon eternity. It is from this standpoint that he views the world and all that is in it. Wherefore he is ever ready to sacrifice himself for his fellow-beings, counting as of little consequence time, labor, fatigue—nay, life itself—if he only succeeds in winning souls to God.

These are among the distinctive marks of the Jesuit of fact, as he is known from contact and intercourse in his daily ministrations of charity the world over. By these he is recognized as a true disciple and imitator of his divine Master, whose blessed life he reproduces in the zeal and love displayed for souls and the sympathy evinced for suffering in its manifold forms. The Jesuit of fact is therefore a man of high purposes and noble aims, one who has

a lofty conception of duty and tries to realize in his life the maxims which he inculcates to others, whose inspiring principle is found in the grand motto of the warrior saint and founder of the Society of Jesus, Ignatius Loyola: "All for the greatest honor and glory of God."—J. M., in *Church News*.

## Poverty and Early Marriages.

Some curious facts have been brought to light in connection with vital and social statistics. One is that the poorer people are the earlier they marry. The contracting parties perhaps reason, if they reason at all, that they cannot be any worse off than they already are, and that marriage will at least be a change. It is another curious fact that in the poorest classes, where marriages occur at the earliest age there are the most unmarried men. Perhaps the hardship of life in the slums is so great that the women and girls die in greater proportion than the men. One reason for the early marriages is the crowding together of the sexes in the swarming quarters of the poor. The most children are also born among the slum population. They die, however, almost as fast as they are born, so that this class of the population does not increase so rapidly as the well to do class. Higher in the social scale men and women reason more on the subject of marriages. They know that unless they are in possession of a certain income they cannot live in the class in which they have been brought up. They are ambitious to do this, or even to climb higher; therefore marriage is delayed until they have such income. In the case of women, who have not opportunity to earn money as men have, this income may never come at all; therefore in the comparatively well-to-do classes unmarried women are largely in excess. In the upper ranks, too, the birth rate is much lower than among the slum people, but the children that are born do not die at anywhere near so rapid a rate, so that the population of the better classes increases.

## The Truthful Man.

The truthful man makes us think of God. Such a character has the very first element of religion—namely truth. A man of his word might profess that he had no religion; and yet we should doubt him then for the first and only time; for we cannot explain his fidelity except that he is linked in with the Holy One, "with whom it is impossible to lie." When you have spoken, we go away and sleep or eat content; for it will be done. When you have spoken, your wife dismisses her care; for you will come on the hour unless the earth swallows you. When you have spoken, your children cease to question; for father has promised. No matter how high the waves, how dark the storm somehow, when you have spoken, the tempest has ceased, for certainty dawns. God bless you, rare man, whose word is enough! It is no wonder that you are slow to speak, since speech with you means all things. And is it not remarkable that, waiting for you to speak, we know no impatience such as consumes us waiting on other men? We know that your word is worth waiting for. We have a sense of honor, dealing with you, and dare not present an unworthy case. We patiently wait for your word, knowing that you are right and the right will appear to you. Do we not know that spring will follow winter, if we wait?

Would to Heaven this feeble land of truth might stimulate some youth, in fair morning, to aspire to such things.

Benziger's Catholic Home Annual, 1894.

We have just received a supply of this very popular annual. It contains the usual good things in the shape of stories, poems, historical and biographical sketches, and plenty of pretty, interesting pictures. Price by mail 25c., in stamps or scrip. Address, CATHOLIC REGISTER Publishing Co., Ltd., Toronto, Ont.