Monsignor Raphael Merry del Val, titular Archbishop of Nicaea, Papal Envoy to the Coronation, conducted a notable service and special prayer for the recovery of the King at Brompton Oratory, in the presence of the leading Catholics of the Empire.

The London newspapers confirm the statement that the King exercised his personal influence to secure peace. They predict that the King will be remembered in history as Edward the Peacemaker.

The Round Towers of Ireland.

THERE are no structures in Europe, or perhaps in the world (says an exchange), that have caused so much discussion as the Round Towers of Ireland; for, as there are no literary memorials of the exact time of their erection, nor by whom, conjecture has been nearly exhausted in the inquiries concerning them. Though history is silent as to the time of erection, founders, or use, yet the minute researches of antiquaries leave little room to doubt of their having been erected for belfries; which opinion is confirmed somewhat by their shape, for though they differ in many respects, yet all have four apertures near the top, answering to the cardinal points, probably to let out the sound.

The tower of Ardmore, in the county of Waterford, strengthens the opinion that they were belfries: for near the top, inside, are still three pieces of oak, evidently for hanging a bell. There are also two channels cut in the sill of the door, where the rope may be supposed to have come out, the ringer standing outside. This tower is well built of hewn stone, which leads to the conjecture that its erection is much later than some have imagined probable—in the ninth or tenth century.

The first foreign writer who was struck with the singular appearance of these towers was Giraldus Cambrensis, who landed in Ireland a few years after the English invasion in the twelfth century. Cambrensis called them 'Ecclesiastical towers, which, after the fashion of the country, are slender, high, and round.' Taking ecclesiastical in the widest sense—belonging to a place for religious worship—it does not determine the time of the erection nor the particular use for which they were intended.

The arguments of Molyneaux, or any other writer, that the ancient round towers of Ireland were the work of the Danes are fallacious. The Danes never erected such in their own country, nor in England, or Scotland, which they possessed longer than they did Ireland. In fact, so far from the Danes introducing stone architecture into Ireland, they found it flourishing in that country, and burned and ruined the finest buildings and destroyed every kind of civilisation wherever their ravages extended—thus doing in Ireland precisely as they did in France and England, as all historians testify.

The late Dr. George Petrie, the most distinguished Irish antiquarian who has investigated, is of opinion that the round towers were the work of Christian architects from the sixth to the tenth century, and that they were used: (1) as belfries (2) as strongholds or houses of shelter into which, in times of danger, the people might retreat; and (3) as watch towers and beacons. His work was published in 1845. In its preparation he had the aid of the best Celtic scholars of the day; and it is admitted that this work contains more solid information on the antiquities of Ireland than any other ever published.

Of the remains of some 120 round towers to be seen in Ireland at the present day, few of them can be said to be perfect One at Drumkeen, County Louth is 130 feet high; that at Fertagh, County Kilkenny, 112 feet high; Kilmacduagh, County Galway, Monasterboise, County Louth and Kildare, are each 100 feet; one at Kells, County Meath, measures 99 feet; Cloyne, County Cork, is 92 feet high; Devenish, County Fermanagh, 71 feet; Teghadow, County Kildare, 71 feet; Cashel, County Tipperary, 55ft; Kilcullen, County Kildare, 40 feet.

The round tower at Swords, County Dublin, is 95 feet high, with a circumference of 55 feet, the walls being 4ft 8in in thickness. It stands close by the site of an ancient monastery founded by St. Columba in 512, and with which the round tower was supposed to be coeval. It was in this monastery that the body of Brian Boru was brought after the battle of Clontarf.

The most perfect of the round towers is in Antrim. It stands 80ft high, and is built on a solid rock The door, 7 feet above the ground, is towards the north. It is 2 feet wide and 5 feet high. There are four openings toward the top, corresponding to the four cardinal points of the compass. It is built with lime cement. There are two others of these towers in Antrim County, one on Ram's Island, the largest island in Lough Neagh, one and a half miles from the shore, and one at Armoy.

Almost all the round towers are divided into imperfect stories of different heights, the floors supported by projecting stones put into the walls at building. Cashel tower is divided into five stories; Fertagh has five, Kilcullen three, and Kildare six. The door of Cashel faces the south-east, those of Kilkenny and Kildare south, and the others almost all east. The door in the tower of Kilmacduagh is the highest from the ground, 24feet; the lowest is that of Swords, 2 feet. The circumference varies from 55 feet (Swords) to 38 feet (Teghadow).

Two round towers, similar in all respects to the Irish type, are to be seen in the yet extant plan of the monastery of St. Gall, in Switzerland, of the first half of the ninth century, and in the Latin inscription attached to the plan they are said to be ad universa superspicienda. The church and towers as rebuilt at that date are no longer in existence, but the latter were probably introduced in honor of the founder of the monastery, who was the leader of a colony of Irish monks who, early in the sixth century, carried civilisation and religion into the fastnesses of the Alps.

Scientific Puzzles.

A CERTAIN man (says the *New York Press*), who has since made a reputation as a journalist and author in this city, never could make much progress as a youth in chemistry because he wanted to know 'why.' When he saw the professor mix oxygen and hydrogen and produce water he demanded to know why this result, and as no one could tell him he became discouraged. As a matter of fact, a large portion of our scientific knowledge is purely empirical. The knowledge derived from the observation of phenomena, from experience and experiments, enables us to accomplish wonderful things, but there our knowledge sticks. The world is full of 'undiscovered discoveries.'

It is now six years since Professor Roentgen passed his new light rays through wood, paper, and flesh, but to this day no one understands why these rays act as they do At first some scientists fell back in despair on the old theory of light, which was that a radiant substance gave off light as a flower does scent; but as that theory has been totally exploded the rays are as great a mystery as ever; in fact, the more we try to learn about them the more mysterious they become. Then there are the Y rays, by which their discoverer, Alexander Orloff, has steered a torpedo at a distance of two and a half miles with no connecting medium but the air and the water. The Y-rays are as great a mystery as the X-rays, and, as if those were not enough, along comes the Polish scientist, Cuire, with his Becquerel rays, which he obtained as the result of experiment and which puzzled nobody more than their discoverer.

A substance called radium, which Cuire discovered, can be made to act as a sort of mineral glow-worm. It will store up sunlight, and even if kept for five years in a pitch dark place, will give off light at the end of that time. As radium costs 10s an ounce to prepare, this sort of perpetual lamp is not likely to become popular, however.

Take a lump of loaf sugar and spin it rapidly on a turning lathe, tapping it gently the while with a small hammer. The result will be a constant display of light. Why? Nobody knows. Then there is that scientific wonder, the spectroscope, an instrument made of glass prisms. Iron, gold—each different element—produces a different dark line across the rainbow-like play of colors into which the prisms divide the white light, and we thus are able to know the composition of the sun, moon, and stars. We know by experiment that the different lines will be found in the spectrum and that they are caused by interference of rays. But why do these various substances produce these various rays? Again nobody knows.

We are so accustomed to the compass that we forget what a wonderful thing it is and how little we know of it. The greatest scientist to-day knows scarcely more about why the compass acts as it does than did the first man who used it 'in the early dusk and dawn of time.' We have discovered that a magnetised piece of steel, swung on a pivot, will, as a rule, point in a certain direction. Why it does so is not known for certain, and perhaps never will be, though any number of ingenious and learned theories have been advanced. In some parts of the world the compass points due north, and in others it points to the east or to the west of north. And in some parts it will not act at all. At a place called Kotchetowka, in Russia, Professor Leyst, of Moscow, found that the needle pointed downward, just as it does at the magnetic pole. And yet there is no iron within 600 feet of the surface of the earth of that place. The whole subject of magnetism and electricity is full of miracles and mysteries. It is not so long ago that the school textbooks used to start their little chapter on electricity with the calm statement 'electricity is a fluid,' and then proceed to tell about Dr. Franklin's experiments with the kite.

This had much more 'cocksureness' about it, and left the youthful mind in a much more satisfied condition than the vast amount of information as to what electricity will do and the explanations which do not explain which appear in the modern school books. Even ordinary everyday milk has its mysteries. It has been found that by putting milk into hollow steel cylinders and applying great hydraulic pressure it can be kept sweet for days. A pressure of seven tons to the square inch for an hour has been found to delay fermentation or 'souring' of the milk for seven days, while samples kept under pressure of fifteen tons to the square inch were sweet and fresh at the end of a fortnight. Here is something else to think over. How does mere pressure prevent fermentation?

Morals in Spain.

A CATHOLIC exchange writing on the morals of the Spaniards says:—Mr. Maxim, of gun fame, has told us that he has two factories, one in Spain, the other in England, and in the former locks are unnecessary; the doors of the factory and every compartment in it stood open; but 'had this laxity been practised in England the factory would have been gutted the first night it was unlocked.' When a lady asked Mr Maxim to subscribe to 'the Spanish mission' he offered instead to subscribe to any movement that would make the morals of England like those of Spain. There are fewer suicides on 'the dark map of Spain' than any other. We must go to less superstitious and priest-ridden' lands to find people so wretched or so base that numbers of them either do not find life worth living or fear to face the earthly consequences of their own acts.

Mr Scott, a Protestant, says:—'The Spaniard looks upon a drunkard with the most undisguised horror and contempt. There are few mortals more abstemious and less given to excesses of any kind than the people of the Peninsula.'