

PLEASANT HOURS

A PAPER FOR OUR YOUNG FOLK

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VENDOME COLUMN, PARIS.

The Vendome Column in Paris is an imitation of Trajan's Column at Rome, 142 feet high and thirteen feet in diameter. It was erected by order of Napoleon I. in 1806-10 to commemorate his victories over the Russians and Austrians in 1805. It was thrown down by the communists in 1871, but a bed of manure was prepared to receive it, so that, though broken, it was not utterly shattered. It was skillfully re-erected in 1875. It is constructed of masonry covered with plates of bronze, forming a spiral band of 300 yards, on which are represented in high relief the military career of Napoleon. The figures are about three feet high. The metal was obtained by melting down 1,200 Russian and Austrian cannons. A figure of Napoleon crowns the column. In 1879 the present writer climbed the monument to the gallery shown at the top.

SWIFT-MOVING TRAVELLERS.

It was discovered long ago that light moves at the rate of about 192,000 miles in a second. Electricity moves with a velocity greatly in excess of this. It is calculated that its speed is 228,000 miles in a second, or 102,000 miles faster than that of light. Beside these velocities that of a railway train, or even that of a bullet from a rifle, seems very slow. The speed of the latter is about 1,460 feet in a second. Sound does not travel so fast as this, its rate being about 1,142 feet per second. There is an exception to this when we speak by telephone. Here electricity carries the sound waves, or that which corresponds to sound waves, and thus the sound of the voice travels with a great rapidity, though we do not know if the actual speed has been measured.

The velocity of light has been measured by the help of some of our distant neighbours—near neighbours, rather astronomically speaking. These neighbours are the moons of the planet Jupiter. These moons have their eclipses just like our moon does. They pass into the shadow of the great planet, just like our moon passes into the shadow of the earth, and then eclipses, total or partial, result. Now the periods for the eclipses of Jupiter's moons may be calculated with the same accuracy as the eclipses of our



VENDOME COLUMN, PARIS.

own moon, and the time when any eclipse should occur may be foretold many years in advance of its coming. But as the orbit or path of Jupiter around the sun lies outside of that of our earth, it follows that in its own revolution around the sun, the earth is sometimes nearer to Jupiter than at other times by a distance equal to twice its own distance from the sun. Now the distance of our earth from the sun being about 92,000,000 miles, twice that distance is about 185,000,000 miles. Now, it is found that when the earth is away from Jupiter this longer distance, or 185,000,000 miles, an eclipse of a moon of Jupiter will occur apparently about

sixteen minutes later than when the earth is at the nearer distance from that planet. This difference of apparent time arises from the fact that the light in travelling from Jupiter to our earth must travel in the one case 185,000,000 miles farther than in the other; and to make this distance the added sixteen minutes are required. Now, if we divide the number of minutes, or the number of seconds, in the sixteen minutes, 960 seconds, into the number of miles, we obtain the distance light travels in a second, that is about 192,000 miles.

We may add that this comparatively near neighbour of ours, the planet Jupiter, is remote from the sun an average distance of about 475,692,000 miles, and that is also his average distance from the earth. It takes light an average of about forty-one minutes to travel from Jupiter to our earth. But there are also stars beyond our planetary system—those we call the fixed stars, though all of them are in motion—from which it requires many years for light to reach us. The nearest star whose distance has been measured, requires three years, and another nine and a half years. The polar star is far more remote, and light making its long journey from that star to our world requires the long period of forty-six years. From others it is estimated that five hundred years, and even longer periods, are required for this swift-moving messenger to make the journey. How wonderful above all our thoughts or power of expression are the works of God. They are full of the depth and riches of his wisdom and power.

IT NEVER PAYS

It never pays to neglect your health.

It never pays to worry about the weather.

It never pays to borrow trouble.

It never pays to throw away the Bible.

It never pays to keep a man because it looks little.

It never pays to make fun of any religious teacher.

It never pays to be a grumbler or a fault-finder.

It never pays to go to any place where you cannot take your religion with you.

It never pays to be impolite.

It never pays to be conceited.

It never pays to put off becoming a Christian.

It never pays to economize by doing without a religious paper.