

## CHRONOLOGICAL CYCLES.

DOMINICAL LETTER . . . . .	F	SOLAR CYCLE . . . . .	22
EPACT . . . . .	18	ROMAN INDICTION . . . . .	3
LUNAR CYCLE OF GOLDEN NUMBER	19	JULIAN PERIOD . . . . .	6574

DEFINITIONS.—The Dominical Letter is one of the letters A B C D E F G, used to designate Sunday throughout the year. It is said to have been introduced by the primitive Christians in place of the Nundinal Letters, (Lat. *Nundinæ*, because recurring every ninth day.) is used by the Romans for denoting their market days.

The Epact is the excess of the solar year above the lunar year of twelve synodical months. It begins and ends with the Lunar Cycle.

The Lunar Cycle or Golden Number, called also the Metonic Cycle, from its inventor, Meton of Athens, is a period of 19 years, after which the new and full moons return to the same days of the month.

The Solar Cycle is a period of 28 years, after which the days of the week return to the same days of the month, according to the Julian Calendar.

The Cycle of Indiction is a period of 15 years. It has no connection with the celestial motions, but was established by Constantine, A. D. 312, and was used by the Romans to indicate the time of a certain tax.

The Julian Period is formed by multiplying together the numbers 19, 28, 15. The beginning of this period is placed at noon of Jan. 1st, 4713 years B. C., so that it includes all historical dates, and to this epoch all such dates can be easily referred.

## ECLIPSES.

There will be four eclipses in the year 1861, three of the Sun and one of the Moon, and a transit of Mercury over the Sun's disc.

I. An annular eclipse of the Sun, Jan. 10, invisible in this country, but visible in Australia, where it is central and annular.

II. An annular eclipse of the Sun July 5, invisible in this country, but visible as a partial eclipse in the southern part of China and Hindostan, and in the northern part of Australia.

III. A partial eclipse of the Moon on the morning of Dec. 17, visible in this country.

IV. A total eclipse of the Sun Dec. 31, in the morning, visible as a partial one in the Eastern part of North America. The Sun rises eclipsed, and eclipse ends 10h. 17m. The line of central and total eclipse begins south of Cuba in the Caribbean Sea, bends south and nearly touches the northern coast of South America, turns north across the Atlantic Ocean, runs through the northern part of Africa, across the Mediterranean Sea, and ends in the northeastern part of Greece.