seen from the accompanying diagram; and what is meant by the equation of time, which is nothing more than the difference between mean time and solar time, may be seen by a glance, and is given by the length of a horizontal line running from the vertical line through the zero of the scale, to a point on the curve corresponding to the date for which the equation of time is desired. For all ordinary purposes, the diagram is sufficiently accurate; although, of course, it has not all the refinements which might be suggested, as, in fact, a single diagram could not be given for all years.

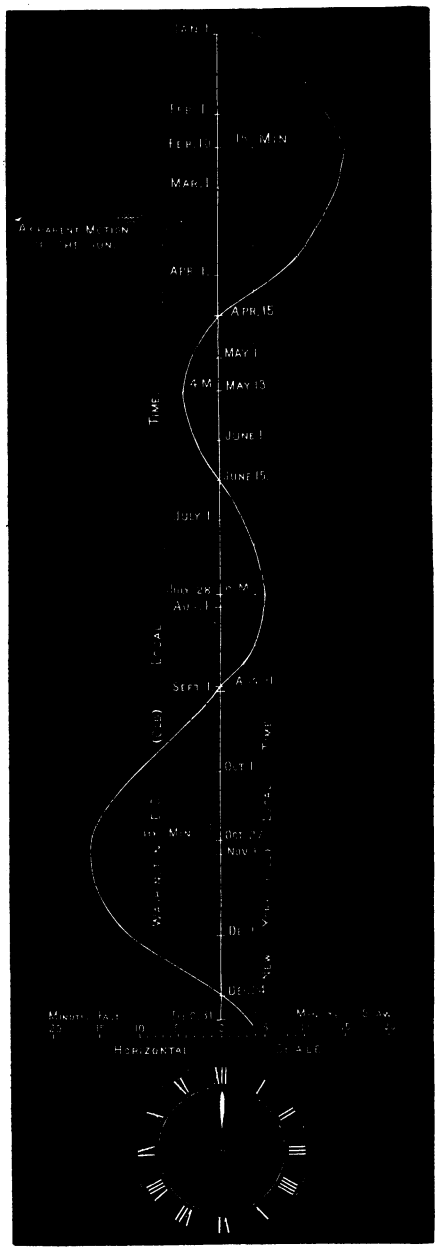



DIAGRAM SHOWING COMPARISON OF MEAN (OR CLOCK) TIME WITH SOLAR (OR APPARENT) TIME AT THE SEVERAL SEASONS OF THE YEAR. THE PERPENDICULAR CENTRAL LINE REPRESENTS MEAN TIME, AND THE CURVED LINE SOLAR TIME, AT MEAN NOON. (Borrowed, by permission, from the *Popular science monthly*.)

## *NEW MAPS OF THE HEAVENS.*

*"Nature and Nature's laws lay hid in night.*
*God said, 'Let Newton be!' and all was light."*
POPE.

THE accompanying maps represent the heavens from the north pole to 30° south of the equator, and include all stars to the 4¼ magnitude inclusive. In some instances those of the 4½ magnitude have been incorporated for the sake of configuration, and convenience of identification.

The maps also include portions of the milky way, the paths of the planets during the year, with their location in these paths at certain definite intervals. From these the position of any planet for any date can be obtained with sufficient accuracy for finding-purposes.

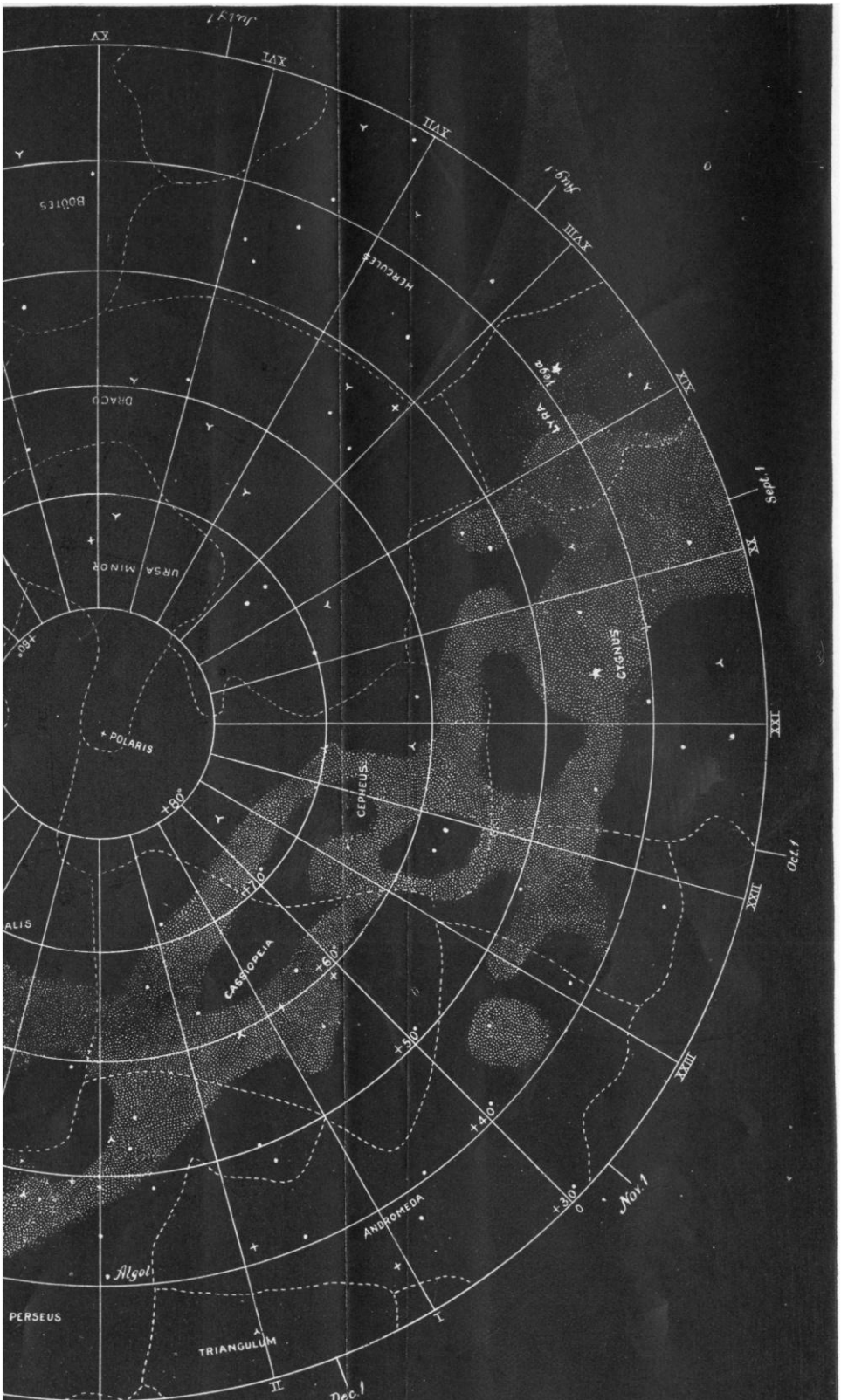
The numbers around the circumference of the circular map, and at the top and bottom of the rectangular maps, indicate hours of right ascension; and the other figures along the line of 0 and 12 hours, every ten degrees of declination. The curving line represents the ecliptic or apparent path of the sun in the heavens.

The months at the borders indicate the part of the heavens that would be on the meridian at nine o'clock in the evening at the various times expressed. Thus, on Jan. 1, the stars along the line of 3.7 hours would be crossing the meridian at nine o'clock in the evening, and on Feb. 1 those on the meridian of 5.8 hours, etc.

## *RATES OF DOMESTIC POSTAGE.*

*Letters* and all other written matter, whether sealed or unsealed, and all other matter sealed, nailed, sewed, tied, or fastened in any manner, so that it cannot be easily examined, per half-ounce, or fraction thereof, 2 cents; *postal-cards*, each 1 cent; *printed matter* (except newspapers and periodicals), in unsealed wrappers only, each two ounces, or fraction thereof, 1 cent (limit of weight four pounds, except for a single book, which may weigh more; prepayment compulsory); *newspapers and periodicals*, in unsealed wrappers, each four ounces, or fraction thereof, 1 cent; mailable *merchandise*, in packages easily opened for examination, per ounce, or fraction thereof, 1 cent (limit of weight four pounds; prepayment compulsory); registration-fee on letters or other articles, 10 cents.

MAP. I. THE NORTHERN HEAVENS WITH




ERN HEAVENS WITHIN 60° OF THE POLE.