

fellow-Canadian resident amongst us. If we mistake not, the novel and ingenious method of mounting the terrestrial globe, recently invented and patented by Mr. Turnbull, of Toronto, is so great an improvement upon the old one, that in a few years it will altogether supersede it. We have had an opportunity of carefully examining one of Mr. Turnbull's new globes, and as we believe that its introduction into our public schools would tend to simplify and advance the study of astronomical geography, we think we shall be merely performing a public duty by giving a brief description of it, and calling the attention of teachers and others to its merits.

On an inspection of the new globe one of the first things which arrests attention is the circle, representing the ecliptic, which surrounds it midway horizontally, that is, in a plane parallel with the floor of the room. This circle is divided into twelve constellations, of thirty degrees each, representing the signs of the zodiac. It is also marked with the yearly calendar, the days coinciding with the place in the ecliptic occupied by the sun at the time. Another appliance is a brass semicircle extending from one pole of the earth to the other, representing the sun's meridian, being freely movable round the entire circle of the ecliptic just described. The sun itself is represented by a small circle attached to the rim of this meridian, the sun's centre being defined by a chord or wire bisecting this small circle into two hemispheres. Another and very conspicuous appliance is a double ring permanently fixed round the globe at right angles to the ecliptic, and representing the dividing limit between sunlight and darkness. The space between the two parallel rings is eighteen degrees wide, and represents the zone of twilight adjoining the hemisphere of sunlight. Another appliance is a brass semicircle revolving round the sun's centre. This extends ninety degrees on each side of the sun's centre, and consequently extends half way round the earth; it is divided or graduated into degrees for the purpose of measuring the sun's zenith distance. The last appliance to which

attention need be called is a graduated hour-circle placed around the south pole. This is divided into hours of time, and also into 360 degrees. The globe itself is, of course, mounted so that the axis is inclined to the plane of the ecliptic at the normal angle of $23^{\circ} 30'$.

The inventor claims that his new method of mounting the globe enables the student to solve a number of problems in astronomical geography, which are quite insolvable by any other globe at present in use. Among these problems may be mentioned the following :—The sun's declination and its place in the ecliptic on any day in the year; the place where it is vertical at any given moment; all places where it is vertical on any given day, and the two days in the year on which it is vertical over any place within the tropics; the sun's altitude at noon, and its times of rising and setting, at any place on any day; the time when the sun begins to shine constantly, the period during which it so shines, and the days on which it never rises, at any place in either of the frigid zones; the time when twilight begins and ends on any day at any place; and all places at which an eclipse of the moon is visible. The problems for the solution of which the globe, as ordinarily mounted, is adapted, can also be readily worked out by the new globe.

We confidently recommend "the Turnbull Globe" to the notice of teachers and students, and of all others interested in the study of astronomical geography. It should find a place in every well-furnished library and schoolroom.

The globe is for sale, at very reasonable prices, according to size, at the bookstore of Messrs. Willing & Williamson, King Street East, Toronto. A circular, giving full instructions as to the method of using it, is presented with each globe sold.

ANSWERS TO CORRESPONDENTS.

J. C. C.—You will find some specimens of Alliterative verse, as well as of doggerel Latin, such as you are seeking for, in Morgan's "Macaronic Poetry," New York, 1872.