

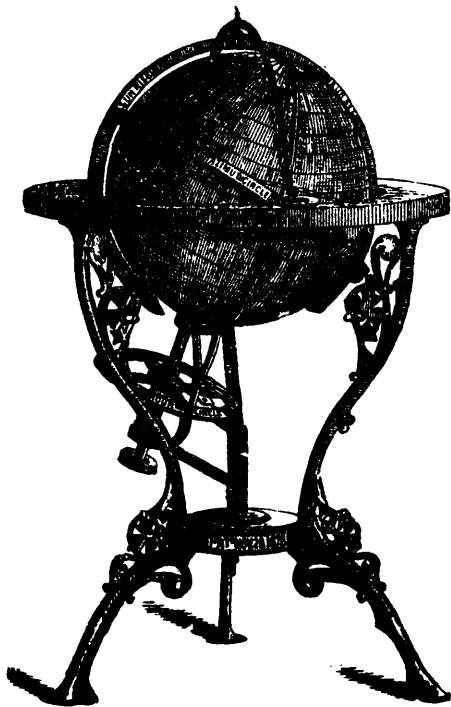
lower prices than the French obtain. The trouble is, however, that the French goods, in standing alone in the firing boxes, receive no blemish, while the American ware, which is stacked up on pegs, in the boxes, bears the mark of the pegs.

Mr. Fisk, of the American Crochery Company, estimates that the growth of the Trenton trade has reduced the importation of foreign ware from 35 to 40 per cent during the past three years. It is said that in one year a great stride has been taken. A market has grown up for fancy goods. People were educated a great deal by the Centennial Exhibition, and, more than all, Americans had ceased to copy from the English, and are relying upon their own originality. Other potters are less cheerful. The principal ornamentation was a wreath containing every garden flower of especial beauty. The potter estimated the cost of the plaques at \$125. He took them to Tiffany and to some one else in New York and asked what they were worth. At one place he was offered \$50; at another \$35. He says that if they had been imported he would have been offered at least \$250 for them. He gave them to a bride, and found her a more appreciative connoisseur than the New Yorkers.

TWOMBULL AND FOSTER'S 'ASTRONOMICALLY MOUNTED TERRESTRIAL GLOBE.

The following design is intended among its other geographical properties, to teach by modern astronomy the correct mechanical relations which the earth has in the system, and for that purpose there are at least eight original appendages, viz.:

1st. A terrestrial globe, with a zone or ring around it 18° broad, representing, the earth's twilight. The edge of this ring which is marked sunrise and sunset, forms the great terminator, astronomically, of sunlight and darkness on the earth's surface, and is always situate 90° from the sun's centre. It moves with the sun's plane around the inclined globe once a year, and is known in astronomy as the "*Solar Horizon*," or Circle of illumination.



2nd. A Terrestrial globe, with a great circle around it representing the ecliptic, or sun's path in the heavens. The ecliptic circle consists of two parts, an outer circle of wood and an inner circle of brass. The outer circle is fixed to the tripod and represents the twelve constellations of the zodiac, divided into 30° each. It is also divided into the days of the calendar, every degree being opposite to the day of the month where the sun's centre is situate at the time. The inner brass circle revolves

round the globe upon friction rollers and carries the sun's centre or place, with the other details to be mentioned.

3rd. A Terrestrial globe with a brass semi-circle, graduated to degrees and fixed from pole to pole, to read the parallels of latitude on the earth. The semi-circle is carried round close to the globe by the sun's centre, hence it represents the true solar meridian for giving the longitude east or west, and the right apparent time of the day. This semi-circle has also another useful motion as it is carried round the globe by the sun, from the obliquity of the earth's axis to the ecliptic (23° 28½') it will be observed that it causes the degrees of the meridian to traverse north or south (as the case may be) over the sun's centre in the ecliptic plane, thereby receding off on the earth his daily delineations north or south of the equator.

4th. A Terrestrial globe, with a graduated semi-circle placed between the ecliptic plane and the globe, with a motion round the sun's centre. In practical geography the two quadrants will give approximately the distance in degrees of any place from sunrise or sunset upon any parallel of latitude in the illuminated disc of the earth.

5th. A Terrestrial globe, with a large hour circle placed round the south polar axis of the earth, divided into 360°, and also into hours of civil time. Twelve o'clock or noon on this circle is always in the plane of the solar meridian as it follows the sun's centre, hence it becomes the principal zero for finding the longitude on the earth and the hour of the day.

6th. A Terrestrial globe having a vernier or hour hand placed upon the axis above the hour circle, for reading hours of time or degrees of arc. It can be shifted to suit any meridian and fixed by a screw to the axis of the globe.

7th. A Terrestrial globe, where the sun's place is indicated by the wire through the centre of the circular brass ring which moves over the surface of the ecliptic plane; this appendage gives the sun's position in the zodiac for the day of the month required in the calendar.

8th. A Terrestrial globe with a round pointed vase on the top edge of the twilight zone, indicating the axis of the ecliptic around which it revolves.

In concluding this circular the patentees may add that, with those who have written and lectured upon the subject, very great defects have been seen about the old plan of mounting the Terrestrial globe; for example,—Sir David Brewster, a prominent physicist of the last half century, at the end of his lecture on the uses of this educational appliance, observes: "To exhibit in a pleasant and correct way the physical conditions of the earth in the solar system, relative to light and heat, you require to unshroud the globe from its old mounting, viz.—take it out of the brazen meridian and the wooden horizon, and place it upon a pedestal in sunshine in such a way that its axis shall be pointed to the poles of the heavens, then the sunlight on the little globe will show where it is day and the shade will show where it is night, giving the true physical aspect of the earth in space." Now, in so far as the exhibition of this phase is useful in an educational point of view, this desideratum is correctly accomplished by this new astronomical plan of construction, as the true positions upon the earth's surface are given where the boundary line of the two great hemispheres of sunlight and darkness is situate for every day in the year, thereby giving the true scientific causes of the variation and distribution of light and heat to the northern and southern hemispheres of the globe.

In fine it may be mentioned that it is chiefly in the uses made of the above astronomical principles where the superior claims of this invention are lodged, as it is solely by the use of the "*Solar Horizon*," combined with the sun's motion. In the ecliptic hour the appliance can be made to exhibit truthfully, in miniature, terrestrial phenomena, with all the annual vicissitudes of the seasons which we enjoy.

TO HARDEN THE SKIN.—Through constant use, the fingers in practicing the violin, piano and guitar, or kindred instruments, frequently become very tender and sore. The skin may be hardened by applying a strong solution of alum in water, or the tincture of white oak bark. A still better lotion would be a solution of tannic acid. Any drug store can furnish the acid, which should be dissolved in water.

INSOLUBLE CEMENT FOR BOTTLES.—Softened glue in cold water and melt it in the water bath to form a very thick paste. To this add good glycerine in quantity equal to the dry glue taken, and continue the heating to expel as much of the water as possible. This may be cast on a marble slab to cool, and melted for use as required. This is not soluble in alcoholic liquids.