

(No Model.)

2 Sheets—Sheet 1.

G. B. NICHOLS.
WALL TELLURIAN.

No. 550,523.

Patented Nov. 26, 1895.

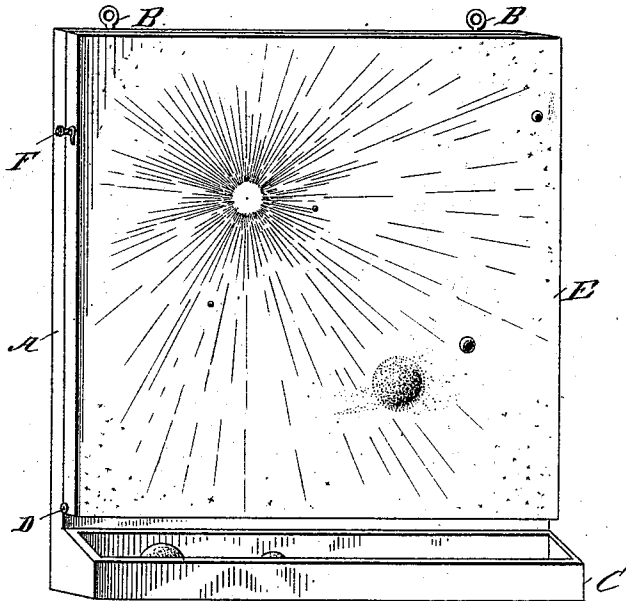


Fig. 1.

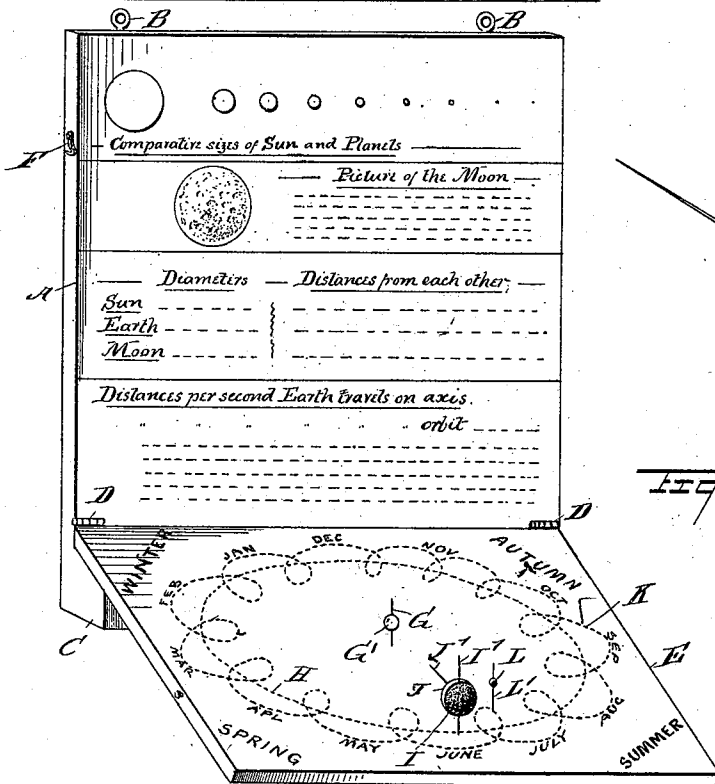


Fig. 2.

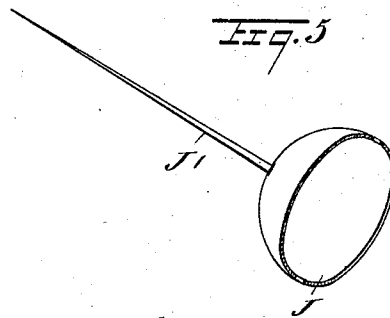


Fig. 3.

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Fig. 3.

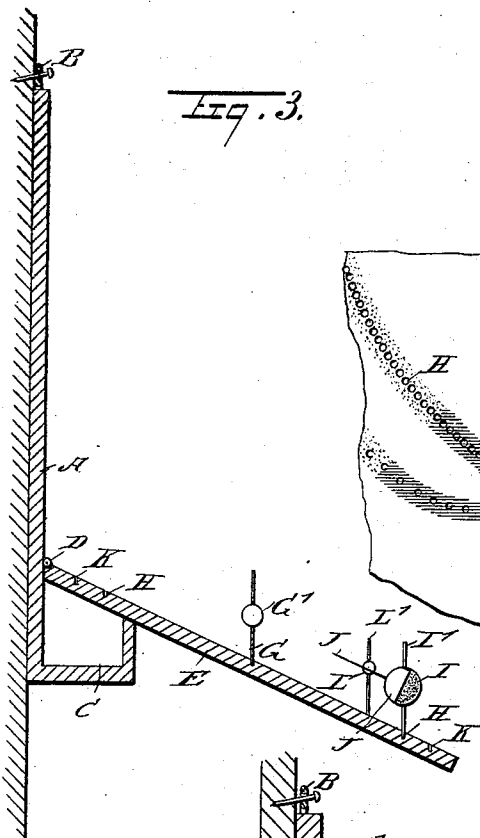


Fig. 4.

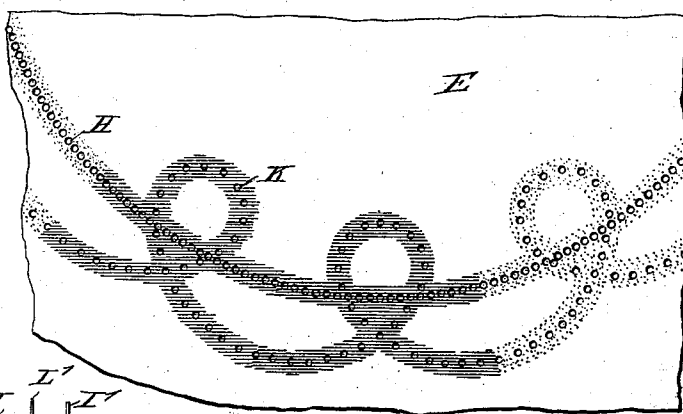


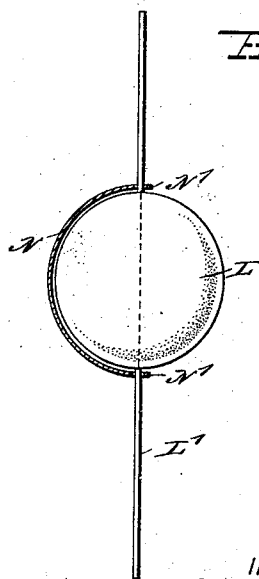
Fig. 7.

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Fig. 6.



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UNITED STATES PATENT OFFICE.

GRANT B. NICHOLS, OF WAPAKONETA, OHIO.

WALL-TELLURIAN.

SPECIFICATION forming part of Letters Patent No. 550,523, dated November 26, 1895.

Application filed January 10, 1895. Serial No. 534,465. (No model.)

To all whom it may concern:

Be it known that I, GRANT B. NICHOLS, of Wapakoneta, in the county of Auglaize and State of Ohio, have invented a new and Improved Wall-Tellurian, of which the following is a full, clear, and exact description.

The invention relates to tellurians such as shown and described in the Letters Patent of the United States No. 522,082, granted to me June 26, 1894.

The object of the invention is to provide a new and improved tellurian more especially designed for use in schools, arranged for being supported on a wall, and adapted to be folded to take up comparatively little space, and at the same time form an ornament for the class-room.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of the improvement, showing the tellurian-table closed. Fig. 2 is a similar view of the improvement in an open position. Fig. 3 is a transverse section of the same. Fig. 4 is an enlarged plan view of part of the tellurian-table, showing part of the earth's path and the moon's path. Fig. 5 is an enlarged perspective view of the hood for the earth. Fig. 6 is an enlarged side elevation of the ball representing the moon and the hood therefor, the latter being shown in section; and Fig. 7 is a cross-section of a modified form of the improvement.

The wall-tellurian is provided with a back board A, carrying at its upper end eyes B for supporting the back board on nails, hooks, or like devices driven in the wall, as indicated in Fig. 3. On the lower end of the back board A is secured or formed a box C, adapted to hold various articles hereinafter more fully described, the top of the box being arranged on an incline to form a support for the tellurian-table E, connected at one edge by hinges D with the front face of the back board A above the back of the box. Thus, when the

tellurian-table E is swung downward into the position shown in Figs. 2 and 3, then part of the table rests on the top of the box C, so that the table stands in an inclined position.

The front face of the back board A is provided with matter relating to astronomical subjects. For instance, the board A is provided with representations of the sun and planets to illustrate their comparative size, as indicated in the upper part of Fig. 2, and a representation of the moon with description relating thereto can be found on the board, as well as diameters of the sun, earth, and moon, their distances from each other, and distances per second of the earth's travel on its axis or orbit, &c. On the under side of the table E, which forms the face of the tellurian when closed, as shown in Fig. 1, is arranged a representation of the universe, showing the sun, the various planets, their moons, stars, &c., in relative positions.

On the top of the table E is arranged centrally a vertically-disposed aperture adapted to receive a rod G, carrying a ball G', representing the sun. In the top of the table E is also formed a series of apertures H arranged in an ellipse, the center of which is the aperture containing the rod G, the said ellipse representing the path of the earth around the sun. The apertures H are three hundred and sixty-five in number and represent the days of the year, the said apertures being preferably numbered according to the days in the month, the name of which is affixed on the surface of the table at the corresponding place. (See Fig. 2.)

A vertically-disposed rod I' is adapted to be seated in one of the apertures H, the said rod carrying a globe I, representing the earth and having the said rod I' for its axis. A hood J, made of a transparent material and semispherical in shape, is preferably placed on the ball I, so as to cover one-half thereof, the said hood being provided at its middle with a radially-extending pin J', adapted to point toward the center of the ball G', representing the sun. By this arrangement the direct rays of the sun falling on the earth are readily illustrated by the hood J. A second series of apertures K is formed in the top of the table E, the said apertures represent-

ing the path of the moon, relative to the said elliptical path of the earth, represented by the series of apertures H. A vertically-disposed rod L' is adapted to be inserted in one of the said apertures K, and the said rod carries a ball L, representing the moon and having for its axis the rod L'.

As illustrated in Fig. 4, the series of apertures H and K have parts marked with different colors in such a manner that corresponding colors are applied to corresponding parts of both series of apertures, so as to facilitate the proper placing or locating of the earth and moon on any day of the year. Three colors will be required, as there are thirteen revolutions of the moon in every year—that is, one revolution of the moon every twenty-eight days. A hood N, preferably made of a lustrous metal and semispherical in shape, as indicated in Fig. 6, is provided on opposite sides with eyes N', adapted to be engaged by the rod L', so that the hood N can be turned around the ball L' to shade any part thereof and to represent at any time the illumination or reflected sun-rays or moonlight as seen from the earth.

The corners of the table E are preferably marked by either words or pictures to represent the seasons of the year, and other suitable descriptive matter may be arranged on the table, and the said balls, representing the sun, earth, and moon, may have shown thereon such matter as may be considered instructive regarding the celestial currents, &c.

When the device is not in use as a tellurian, then the rods G', I', and L' are removed from the table E and placed in the box C together with the hood J. The table E is closed on the front face of the back board A and locked thereon by a suitable catch F. (See Fig. 1.)

As illustrated in Fig. 7, the back board A' is made in the shape of a frame, into the recess A² of which folds the table E', supported in an inclined position by suitable chains O, connecting the sides of the table E' with the sides of the back board A'. The table E' is provided on its top surface with the series of apertures H and K, previously described in reference to the table E, and in said apertures are adapted to be set the rods I' and L' before mentioned. In the center of the table E' is an opening for the rod G, carrying the ball G', representing the sun.

It will be seen that by the arrangement described the earth, represented by the ball I, can at any time be inserted on the proper date in the respective aperture, and likewise the moon, represented by the ball L, can be put in proper position at a given date, so as to show the relative position of the earth to the sun and that of the moon to the earth, and likewise to the sun. It will further be seen that the rays of the sun will be readily indicated on both balls I and L by using the hoods J and N, respectively. It is under-

stood, however, that for the earth the hood shows by its transparency and position the exact parts or countries which have light and which have direct or indirect rays at all times in the day and at all times in the year or seasons. This hood is not lustrous and made to represent light, but simply to show where the sun-rays strike upon the earth, the limit of light and the limit and extent of darkness at all hours and at all seasons. It will further be seen that by having the table E in an inclined position and the axis of the sun, earth, and moon vertical and parallel to each other, and at the same time having the paths of the earth and moon colored, as described, the seasons will show in a natural, easy, and plain manner to the observers, so as to be readily comprehended by the scholars.

The apertures H are all of the same inclination to the face of the table, while the apertures K, representing the path of the moon, are of a different inclination, so that the moon's orbit about the earth is not so much inclined as the earth's orbit about the sun, whereby the moon is always represented in the proper position relative to the earth and sun.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. An apparatus of the character described, comprising an inclined table provided with a series of apertures arranged in an ellipse and representing the path of the earth, an aperture in the center of the ellipse, and a second series of apertures representing the path of the moon with respect to the path of the earth, a rod secured in the central aperture and provided with a ball representing the sun, a rod provided with a ball representing the earth, said rod being secured in one of the apertures forming the ellipse, a semi-spherical transparent hood on the ball representing the earth and provided with a radially extending pin pointing to the sun, and a rod secured in one of the apertures representing the path of the moon and carrying a ball representing the moon, and a semi-spherical hood of lustrous metal and fitted to turn upon the rod carrying the ball representing the moon, substantially as described.

2. An apparatus of the character described, comprising a back board having matter relating to astronomical subjects produced thereon, and adapted to be supported upon a wall, a box on the lower portion of the back board and having an inclined upper edge, a table hinged to the back board above the box and adapted to rest upon the box and be supported thereby in an inclined position, said table having upon its upper surface a series of apertures arranged in an ellipse, and representing the path of the earth, an aperture in the center of the ellipse, and a second series of apertures representing the path of the moon

with respect to the path of the earth, rods carrying balls representing the earth, sun and moon and adapted to be placed in the said apertures, and hoods for the balls representing
5 the earth and moon, the hood for the moon being pivoted on the supporting rod and the hood for the earth being provided with a ra-

dially extending pin pointing toward the ball representing the sun, substantially as described.

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Witnesses:

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