

No. 672,274.

Patented Apr. 16, 1901.

G. T. HUFF.
TELLURIAN.

(Application filed Mar. 29, 1900.)

(No Model.)

Fig. 1.

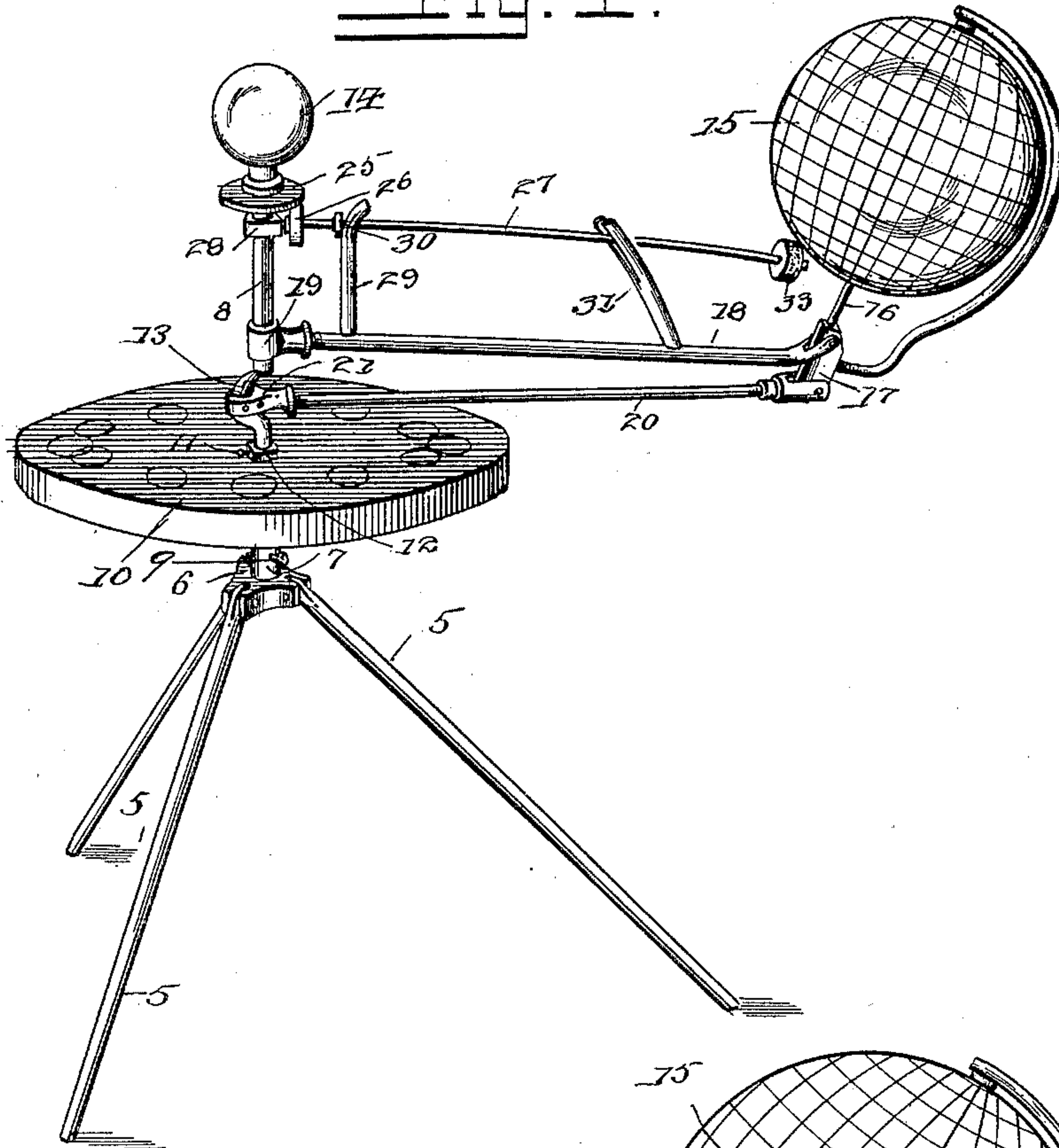
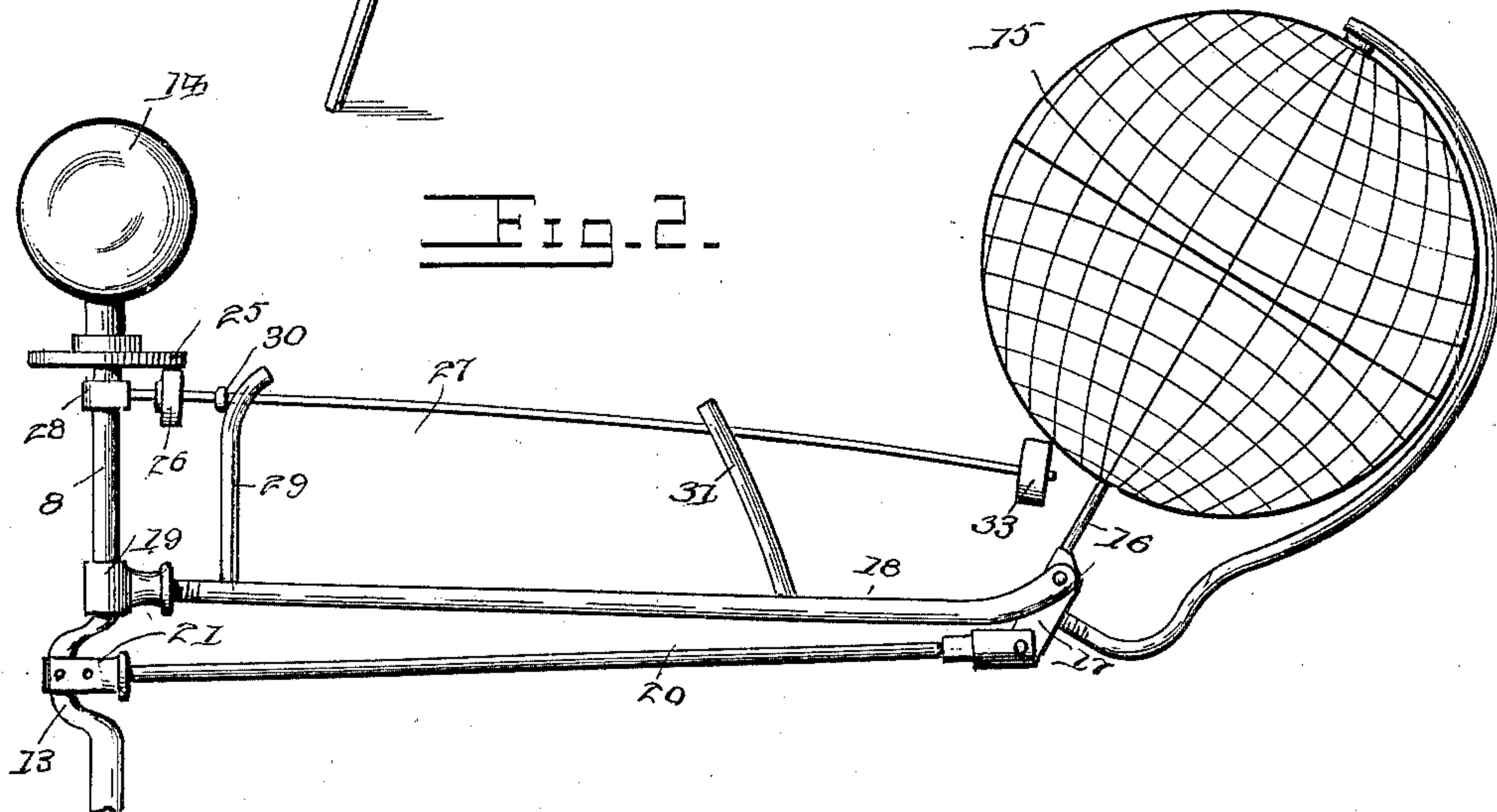


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE THOMAS HUFF, OF MILLGREEN, MARYLAND.

TELLURIAN.

SPECIFICATION forming part of Letters Patent No. 672,274, dated April 16, 1901.

Application filed March 29, 1900. Serial No. 10,658. (No model.)

To all whom it may concern:

Be it known that I, GEORGE THOMAS HUFF, a citizen of the United States, residing at Millgreen, in the county of Harford and State of Maryland, have invented a new and useful Tellurian, of which the following is a specification.

This invention relates to tellurians; and it has for its object to provide a construction in which a globe representing the earth will be caused to travel around a sphere representing the sun and will at the same time be rotated to correspond to the rotations of the earth; also, to provide a simple means whereby as the globe travels about the sphere the seasons will be indicated by the relation of the earth's or the globe's surface with respect to the sphere which indicates the sun, although the proper inclination of the axis of the globe to the plane of the ecliptic will not be had excepting at two diametrically opposite points of its orbit.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing the complete tellurian. Fig. 2 is an elevation of the operating mechanism for the globe on a large scale.

Referring now to the drawings, the tellurian is supported upon legs 5, the upper ends of which are mounted in a head 6, which latter is provided with a tubular socket 7, as illustrated. In the socket 7 is disposed the lower end of a shaft 8, this shaft being held from rotation by a set-screw 9. Upon the shaft 8, above the socket 7, is slidably mounted a table 10, which is adapted to be held at different points of its sliding movement by a set-screw 11, passed through a hub 12 upon the disk and engaged with the shaft. This table may serve to support different instruments at different heights as may be desired. Above the disk 10 the shaft 8 is bent outwardly to form a crank 13, as illustrated, and at the upper end of the shaft is fixed a sphere 14, which represents the sun.

The globe 15, which represents the earth, is carried by a shaft 16, which is rotatably mounted in a block 17, pivoted between the ends of a bifurcated rod 18, the opposite end of which is provided with a collar 19, rotatably

mounted upon the shaft 8 above the crank. The block 17 extends below the rod 18, and pivoted to this extending portion of the block is a connecting-rod 20, the opposite end of which is provided with a head 21, rotatably mounted upon the crank 13 of the shaft 8. Thus if the globe be rotated about the shaft 8 the eccentric pivots of the rods 18 and 20 will cause the block 17 to rock upon its connection with the rod 18 to vary the inclination of the axis of the globe. This rocking of the globe is such that when the globe is at one side of the sphere the point on the surface of the globe that indicates the most northern point in the line of intersection of the plane of the ecliptic with the surface of the globe will be nearest to the sphere, while when the globe is in the diametrically opposite position of its orbit the southernmost point of this line will be nearest to the sphere, and as the globe is rotated from one of these positions to the other and back again the succeeding points of greatest proximity will follow and will trace the entire line that indicates the intersection of the plane of the ecliptic with the surface of the globe. The manner in which the seasons are produced will thus be shown by indicating the travel of the sun from one side to the other of the equator, although the proper inclination of the axis of the globe that represents the earth will of course not be shown. In addition to this variation of inclination of the globe it is also of course necessary that the globe be caused to rotate upon its axis as it moves around the sphere 14, representing the sun. For this purpose a friction-disk 25 is fixed upon the shaft 8 below the sphere 14, and with this disk is engaged a second friction disk or wheel 26, fixed upon a shaft 27. This shaft 27 is rotatably mounted at one end in a bearing 28 upon the shaft 8 below the disk 25 and has a second bearing in an upright 29 upon the shaft 18, this upright 29 being located adjacent to the shaft 8. The shaft 27 is prevented from longitudinal displacement from its bearings in one direction by a collar 30, which rests against the upright 29, the displacement of the shaft in an opposite direction being prevented by reason of the closed end of the bearing upon the shaft 8. The shaft 27 extends through a bifurcated upright 31 upon the rod 18 and at

its outer extremity is provided with a friction-wheel 33, which rests against the globe 15. The shaft 27 is of spring material, and thus the wheel 33 is held in contact with the globe in all positions of the globe, the vertical movement of the outer end of the shaft being permitted by the bifurcation of the upright 31, while lateral displacement of the shaft is prevented.

During the operation of the apparatus there is of course a tendency to place the rod 20 under such strains as would tend to bind the apparatus and retard or prevent rotation. This is overcome by forming the joint between the rod 20 and the part 27 sufficiently loose.

In practice various modifications of the general structure may be made and any suitable materials may be employed for the various parts without departing from the spirit of the invention.

What is claimed is—

1. A tellurian comprising a crank-shaft, an arm rotatably mounted upon the shaft, a block pivoted to the arm, a rod connecting the crank and the block, a globe rotatably mounted upon the block, an upright upon the arm, an elastic shaft rotatably mounted in the bearing, a gear-wheel carried by the elastic shaft, a gear-wheel carried by the first-named shaft and engaging with the first gear-wheel, connections between the elastic shaft

and the globe for imparting motion from one to the other, and a bifurcated guide inclosing the elastic shaft to prevent lateral movement thereof.

2. A tellurian comprising a fixed shaft having a friction-wheel thereon, a rotatable globe mounted upon the shaft for bodily rotation about the shaft, means connected with the shaft and the globe for varying the inclination of the axis of the globe, and an elastic shaft having a friction-wheel engaging the friction-wheel upon the fixed shaft and having a second friction-wheel engaging the sphere.

3. A tellurian comprising a fixed shaft having a friction-wheel thereon, a rotatable globe mounted upon the shaft for bodily rotation about the shaft, means connected with the globe and shaft for varying the inclination of the axis of the globe, an elastic shaft having friction-wheels thereon, one of which is in contact with the globe and the other in contact with the friction-wheel upon the shaft, and a guide for the elastic shaft for permitting vertical movement thereof and for preventing lateral movement.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE THOMAS HUFF.

Witnesses:

ALONZO HUFF,
N. N. RUTLEDGE.