

G. T. HUFF.
TELLURIAN.
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1,065,944.

Patented July 1, 1913.

Fig. 1.

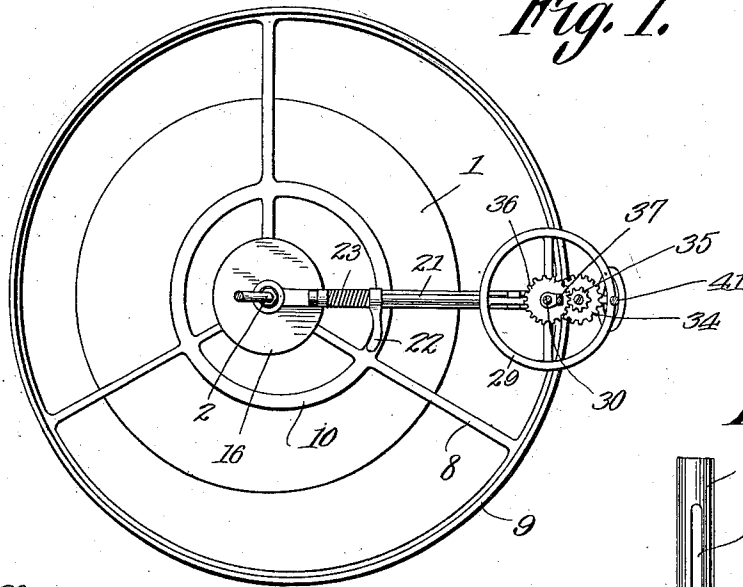


Fig. 4.

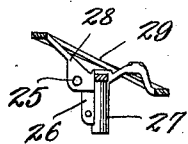
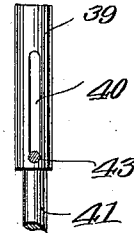


Fig. 3.

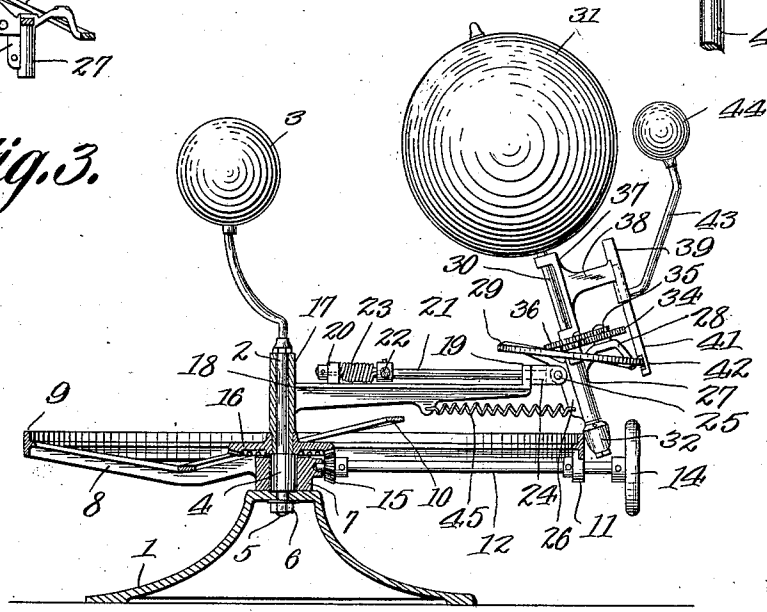


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

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TELLURIAN.

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Specification of Letters Patent.

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To all whom it may concern:

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

The device forming the subject matter of this application is a tellurian of that general type which is disclosed in my prior Patent Number 1,028,355, issued to me upon the 4th day of June, 1912.

One object of the present invention is to provide novel mechanism for actuating that element which represents the moon, and to provide means for controlling the movement of said element in its orbit.

It is within the scope of the present invention to improve generally, and to enhance the utility of, devices of that type to which the present invention appertains.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawing:—Figure 1 shows the invention in top plan; Fig. 2 is a vertical transverse section wherein sundry elements appear in elevation; Fig. 3 is a sectional detail of the bearing in which the earth shaft is journaled, together with the track which is supported by the bearing; and Fig. 4 is an elevation of the socket wherewith the moon-supporting structure is operatively connected.

In carrying out the invention there is provided a base 1 supporting a standard 2, the upper end of which carries a globe 3 representing the sun. The standard 2 is equipped adjacent its lower end with an enlarged foot 4 which bears upon the upper face of the base 1, the foot 4 terminating in a reduced end 5 extended through the base 1 and threaded to receive a nut 6 which engages the under face of the base 1, to hold the standard 2 upon the base. Supported by the base 1 is a hub 7, the same surround-

ing the foot 4 of the standard 2. The hub 7 is fixed and is provided with radial arms 8 supporting a primary track 9 and a secondary track 10, the track 10 lying within the track 9 and being inclined at an angle to the plane of the track 9. At one point in its periphery, the primary track 9 is equipped with a depending lug 11, in which is journaled an actuating shaft 12 which at its outer end may be provided with a wheel 14 or other equivalent element whereby the shaft 12 may be rotated manually. The inner end of the actuating shaft 12 is journaled in the hub 7 and supports a small beveled pinion 15 meshing with a larger beveled gear 16 connected with the lower end of a sleeve 17 which is journaled on the standard 2. Projecting from the sleeve 17 is an arm 18 provided at its extremity with an upturned end 19 and having adjacent its inner end a bearing 20. Mounted for rocking movement in the end 19 of the arm 18 and in the bearing 20 is a shaft 21, provided intermediate its ends with a crank arm 22, the extremity of which bears upon the inclined secondary track 10. A spring 23 is coiled around the shaft 21, one end of the spring 23 being mounted in the bearing 20, the other end of the spring engaging the crank arm 22, so as to depress the free end of the crank arm and to maintain the same in engagement with the secondary track 10. At its outer end, the shaft 21 is provided with a head 24.

The invention further includes a tubular bearing 27 having an ear 26 which is pivoted as indicated at 25 to the head 24, the construction being such that the bearing 27 is mounted to swing in a common plane with the shaft 21. The tubular bearing 27 is equipped with radial arms 28 supporting a track 29, which, as shown most clearly in Fig. 3, is acutely disposed with respect to the axis of the bearing 27. Journaled in the bearing 27 is a shaft 30, the upper end of which supports a globe 31 representing the earth. Secured to the lower end of the shaft 30 is a wheel 32, held in engagement with the primary track 9 by means of a retractile spring 45, one end of which is connected to the ear 26 of the bearing 27, the other end of which is connected with the arm 18. Secured to the earth shaft 30 above the

track 29 is a pinion 33 meshing with a pinion 34 connected with a smaller pinion 35. The pinions 34 and 35 are journaled for rotation upon one of the arms 28 which support the track 29. The pinion 35 meshes with a pinion 36 secured to the lower end of a yoke 37. The yoke 37 is journaled upon the shaft 30, to revolve around the shaft. The yoke 37 is equipped with an extension 38, the outer end of which supports a socket 39 disposed approximately parallel to the shaft 30. The socket 39 is provided with an upright slot 40 which is shown in Fig. 4. A plunger 41 is mounted for right line sliding movement in the socket 39, the lower end of the plunger 41 being provided with a notch 42 in which the periphery of the track 29 is received. A bracket 43 is connected with the plunger 41 and is mounted to move in the slot 40 of the socket 39. Mounted upon the upper end of the bracket 43 is a globe 44 which represents the moon.

The yoke 37, the part 38 and the socket 39 may be described briefly as an arm. The notch 42 in the lower end of the plunger 41 and the periphery of the track 29 constitute interengaging elements adapted to secure a right line sliding movement of the plunger 41 when the arm, comprising the elements 37, 38 and 39, is revolved around the earth shaft 30.

In practical operation, rotary movement is imparted to the actuating shaft 12 through the medium of the wheel 14. The intermeshing beveled pinions 15 and 16 will impart a swinging movement to the arm 18, so that the earth globe 31 will move around the sun globe 3 in an orbit, the standard 2 being eccentrically disposed with respect to the primary track 9. When the arm 18 is swung about the standard 2, the wheel 32 will follow the periphery of the track 9, the inclination of the shaft 30 which shaft represents the axis of the earth, being changed accordingly. The spring 45 serves to hold the wheel 32 engaged with the track 9. The crank arm 22 which is connected with the shaft 21 bears upon the track 10 and serves to control the inclination of the shaft 30. This operation is described fully in my prior patent, above referred to, and need not be entered into at this place. The wheel 32, bearing against the track 10 serves to rotate the shaft 30 and to rotate the earth globe 31 upon its axis, the diurnal movement of the earth being thereby represented. When the shaft 30 is rotated, rotatory movement will be imparted to the yoke 37 through a gear train comprising the pinions 33, 34, 35, and 36, the pinion 33 being secured to the shaft 30 and the pinion 36 being secured to the yoke 37. When the yoke 37 is swung as above described, around the shaft 30, the lower end of the plunger

41 will be operatively connected with the track 29 through the medium of the notch 42. As a consequence, the plunger 41, the bracket 43 and the moon globe 44 will be given a vertical component at the same time that the moon globe 44 is being revolved around the earth globe 31. As a result, the orbit of the moon globe 44 will lie in a plane which is properly inclined with respect to the shaft 30, the latter representing the axis of rotation of the earth. The bracket 43, engaging in the slot 40, will serve to prevent a rotation of the plunger 41 in the socket 39, the notch 42 being thus at all times held in engagement with the track 29.

Having thus described the invention, what is claimed is:—

1. In a tellurian, an earth shaft; an arm mounted on the earth shaft to revolve around the earth shaft; a plunger mounted in the arm for right line sliding movement and constituting a moon support; a fixed track; disposed at an acute angle to the earth shaft and interengaging elements upon the track and upon the plunger to impart right line sliding movement to the plunger when the arm is revolved around the earth shaft.

2. In a tellurian, an earth shaft; an arm mounted upon the earth shaft to revolve around the earth shaft; a plunger mounted in the arm for right line sliding movement; a fixed track; interengaging elements upon the track and upon the plunger for imparting right line sliding movement to the plunger when the arm is revolved around the earth shaft; a moon bracket connected with the plunger, the moon bracket being interengaged with the arm, to prevent a rotation of the plunger in the arm, thereby to maintain said elements in engagement.

3. In a tellurian, a bearing; means for supporting the bearing for orbital movement; an earth shaft journaled in the bearing; a track upheld by the bearing; an arm mounted to revolve around the earth shaft, the arm including a socket having a slot; a plunger mounted in the socket for right line movement; interengaging elements upon the plunger and the track for imparting right line movement to the plunger when the arm is revolved around the earth shaft; and a moon-supporting bracket connected with the plunger and mounted to slide in the slot.

4. In a tellurian, a bearing; means for supporting the bearing for orbital movement; an earth shaft journaled in the bearing; a track upheld by the bearing; an arm mounted upon the earth shaft to revolve therearound; a socket carried by the arm and having a slot; a plunger mounted in the socket for right line movement and having a notch engaging the track; a moon bracket connected with the plunger and

mounted to slide in the slot; a pair of connected pinions supported by the track; a pinion fixed to the earth shaft and meshing into one of the connected pinions; and a
5 pinion fixed to the arm and meshing into the other of the connected pinions.

In testimony that I claim the foregoing

as my own, I have hereto affixed my signature in the presence of two witnesses.

GEORGE T. HUFF.

Witnesses:

RUPERT I. STUBBS,
WM. M. HUGHES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
