

No. 647,204.

Patented Apr. 10, 1900.

J. W. SMITH.

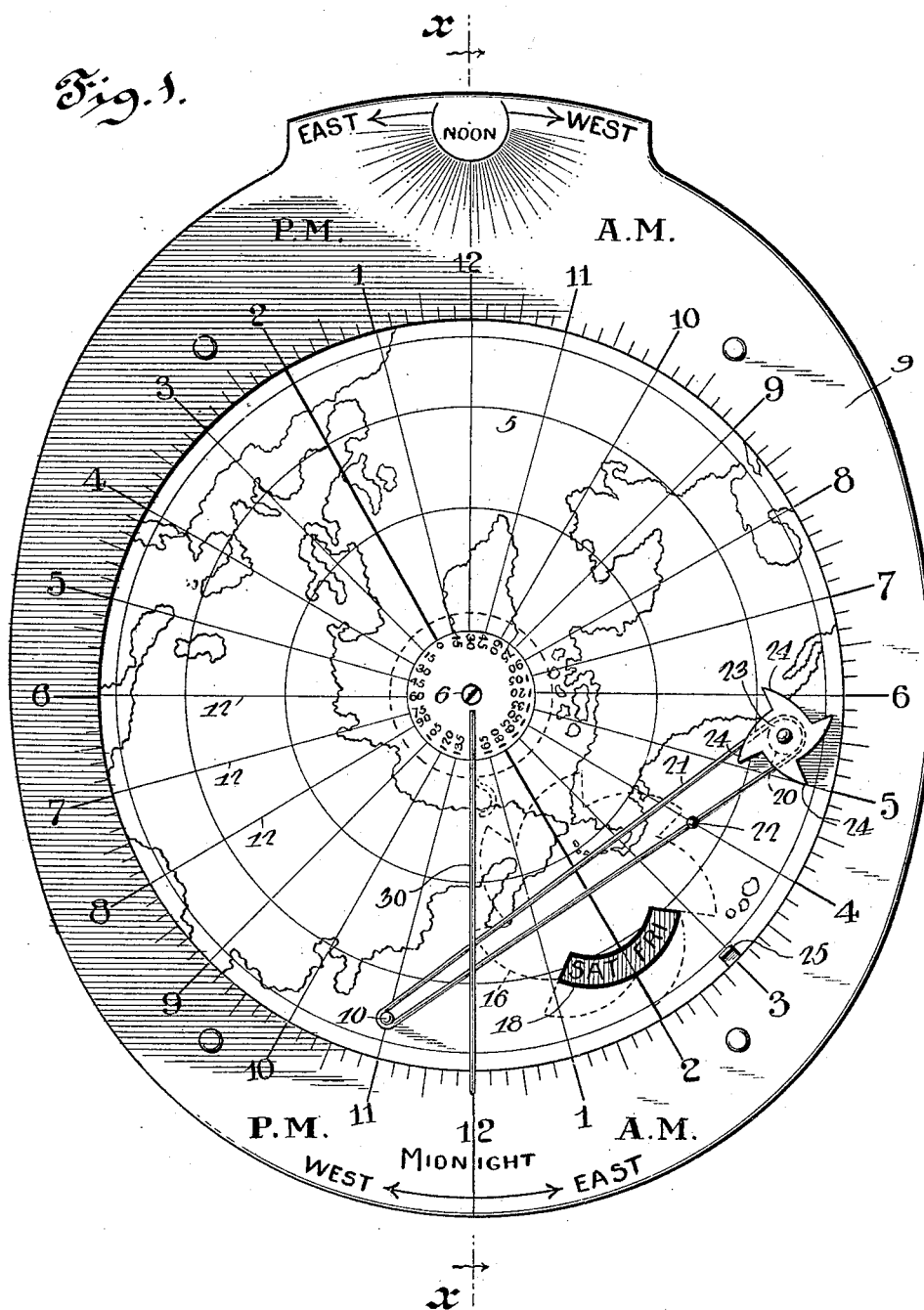
TELLURIAN.

(Application filed Sept. 26, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



Witnesses

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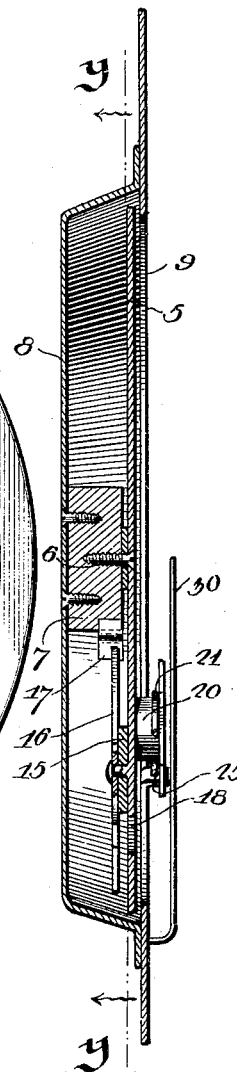
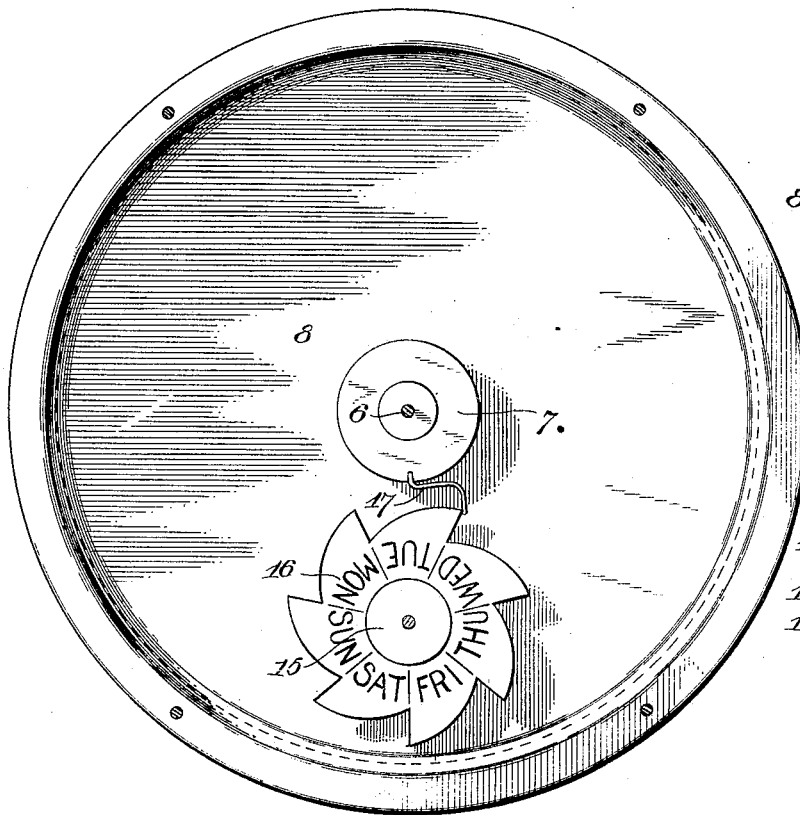
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(No Model.)

2 Sheets—Sheet 2.

Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN W. SMITH, OF GOLDSMITH, INDIANA.

TELLURIAN.

SPECIFICATION forming part of Letters Patent No. 647,204, dated April 10, 1900.

Application filed September 26, 1899. Serial No. 731,765. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SMITH, a citizen of the United States, residing at Goldsmith, in the county of Tipton and State of Indiana, have invented a new and useful Tellurian, of which the following is a specification.

This invention relates to tellurians in which the same day is indicated simultaneously for all parts of the world by means of a disk provided with a map and surrounded by a stationary ring having indicated thereon the twenty-four divisions for hours of one day; and the invention consists, in addition to the above, of mechanism including a disk provided with the names of the days of the week and adapted to rotate step by step in the same direction with the rotation of the first-named disk. The construction comprises also mechanism for illustrating the manner in which a traveler moving in a westerly direction loses one day when he crosses the international date-line.

In the drawings forming a portion of the specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a plan view of the complete apparatus. Fig. 2 is a section on the line *y y* of Fig. 3 and showing the mechanism for operating the disk carrying the day-names. Fig. 3 is a section on line *x x* of Fig. 1.

Referring now to the drawings, this device consists of a disk 5, provided with a map showing the northern half of the earth and which is pivotally mounted at its center upon a pin 6, in the form of a screw passed through the disk and into a block 7, arranged centrally of a dish-shaped casing 8. This casing 8 has an outwardly-directed flange 9 at its edge, upon which is disposed a second plate, having a central aperture concentric with the disk 5 and slightly less in diameter, said disk lying behind the plate 9 and below the open side of the casing. A handle 10 is provided for rotating the disk 5. Radiating from the center of the disk 5 is a series of straight lines 12, twenty-four in number and representing every fifteenth meridian, these lines being equidistant from each other.

Upon the plate 9 is a dial, as shown, upon which is marked the twenty-four hours of the day and the fractions thereof, the numerals

being arranged to ascend from right to left instead of from left to right, as in the usual clock-face. Thus it will be seen that if the disk 5 be rotated with its top to the left, so that the lines 12 will register with the numerals upon the dial, these lines will indicate those points upon the northern hemisphere at which the time corresponds to the numerals registering with the several lines, the numerals 12 being preferably arranged at diametrically-opposite points of the dial and at the uppermost and lowermost sides thereof, the word "Noon" being printed above the uppermost numeral and the word "Midnight" below the lowermost numeral.

In order to indicate the different days of the week, one of the lines 12 and its alining line is the international date-line, and concentric with this line and upon the under side of the disk 5 is rotatably mounted a disk 15, from which extends a flange 16, divided into seven parts, each part marked with a day of the week, and at the edge of which flange are formed seven teeth adapted to successively engage a projection 17 upon the block 7 as the disk 5 is rotated. An arc-shaped opening 18 is formed in the disk 5 at a point to lie equally upon opposite sides of the international date-line and having a length sufficient to expose two of the day-names at one time. The teeth of the flange 16 and the projection 17 are so proportioned that for each rotation of the disk 5 the disk 15 is rotated sufficiently to move one day-name from the opening 18 and bring up another day-name, the mechanism being so located that the change will be made or will begin as the international date-line passes the midnight point upon the dial of the plate 9. By this means the length of each day will be shown and will be illustrated the manner in which each day ceases and the next day begins. This is illustrated in Fig. 1 of the drawings, and with the parts in the position shown it is Friday from the line marked "180°" to the midnight-line, estimating to the right of the 180°-line, while it is Saturday morning on those portions of the earth lying between the midnight or 150° line to the 180° or international date-line.

In order to illustrate the manner in which a traveler in going from east to west loses one day as he goes over the international date-line,

a drum 20 is rotatably mounted upon the upper face of the disk 5, and passed around this drum and the handle 10 is a belt 21, having a body 22 thereon. Upon the drum 20 is mounted a disk 23, having teeth 24, adapted to engage with a projection 25 upon the plate 9 as the disk 5 is rotated. The proportions of the drum 20 and the other elements of structure are such that the body 22 will pass the midnight-mark of the dial at the time of movement of the disk 15—that is, if the body 22 is adjacent the midnight-point on Saturday when the international date-line is in alignment therewith, when the tooth of disk 15 engages the projection 17 to move Sunday to the right of the date-line a tooth of disk 23 will engage the projection 25 to move the body 22 over the date-line—that is, Sunday passes under the line, while the body passes over, the body thus arriving at Monday and skipping from Saturday to Monday over Sunday, in this way losing one day.

In practice the midnight-line is shown by a wire or rod 30, fixed to the plate 9 and extending inwardly to approximately the center of the disk 5 and at a sufficient distance above the upper surface thereof to permit the mechanism carried by the disk passing thereunder. It will thus be seen that as the disk 5 is rotated the time at different points of the earth will be indicated, that the day of the week at the different points of the earth will be shown, the manner of change from one day to the other will be indicated, and the loss of a day to the traveler moving west may be explained.

It will of course be understood that in practice various modifications may be made and that alterations in material and proportions may be observed without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new is—

1. In a tellurian, the combination with a stationary dial, of a map-disk adapted to rotate with respect to the dial, a toothed disk mounted upon the map-disk and graduated for the days of the week, said map-disk being provided with an opening to disclose always two days of the week, a stop in the path of the teeth of the second disk for engagement thereby to rotate the disk step by step, a line denoting the international date-line, a drum upon the map-disk having a toothed disk, a belt operatively connected with the drum and extending across the date-line, a body carried by the belt, and a stop in the path of the

last-named toothed disk for engagement with the teeth thereof to operate the drum simultaneously with the second-named disk, to move the body over the date-line and to move the day graduations across the date-line and bring up a second day graduation.

2. In a tellurian, the combination with a rotatable map-disk, of a stationary dial graduated for the hours of the day, a disk graduated for the days of the week and mounted to travel with the map-disk, means whereby said disk may be partially rotated step by step relative to the map-disk, a drum mounted upon the map-disk, a belt carried by the drum, a body carried by the belt, an international date-line upon the map-disk and means for operating the graduated disk and the drum simultaneously.

3. In a tellurian, the combination with a map-disk having an international date-line and adapted for rotation, a second disk mounted upon the map-disk and provided with day graduations arranged to disclose always two days of the week, one at each side of the date-line, a drum upon the map-disk, a belt operatively connected with the drum and extending across the date-line, a body carried by the belt and means for simultaneously operating the drum and the second disk to move the body over the date-line and to move a day graduation across the date-line and bring up a second day graduation.

4. In a tellurian, the combination of a rotatable map-disk, said disk having an international date-line thereon, additional lines upon the disk equally defining the latter, a dial concentric with the disk and graduated for hours of the day, a second disk mounted upon the map-disk and having day graduations and adapted to expose always two graduations, a drum mounted upon the map-disk a belt upon the drum and crossing the date-line, a body carried by the belt, and means for operating the second disk and the drum simultaneously to move the body upon the belt, and a graduation upon the disk simultaneously in opposite directions across the date-line.

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

JOHN W. SMITH.

Witnesses:

WILL S. WALKER,
CARL H. GIFFORD.