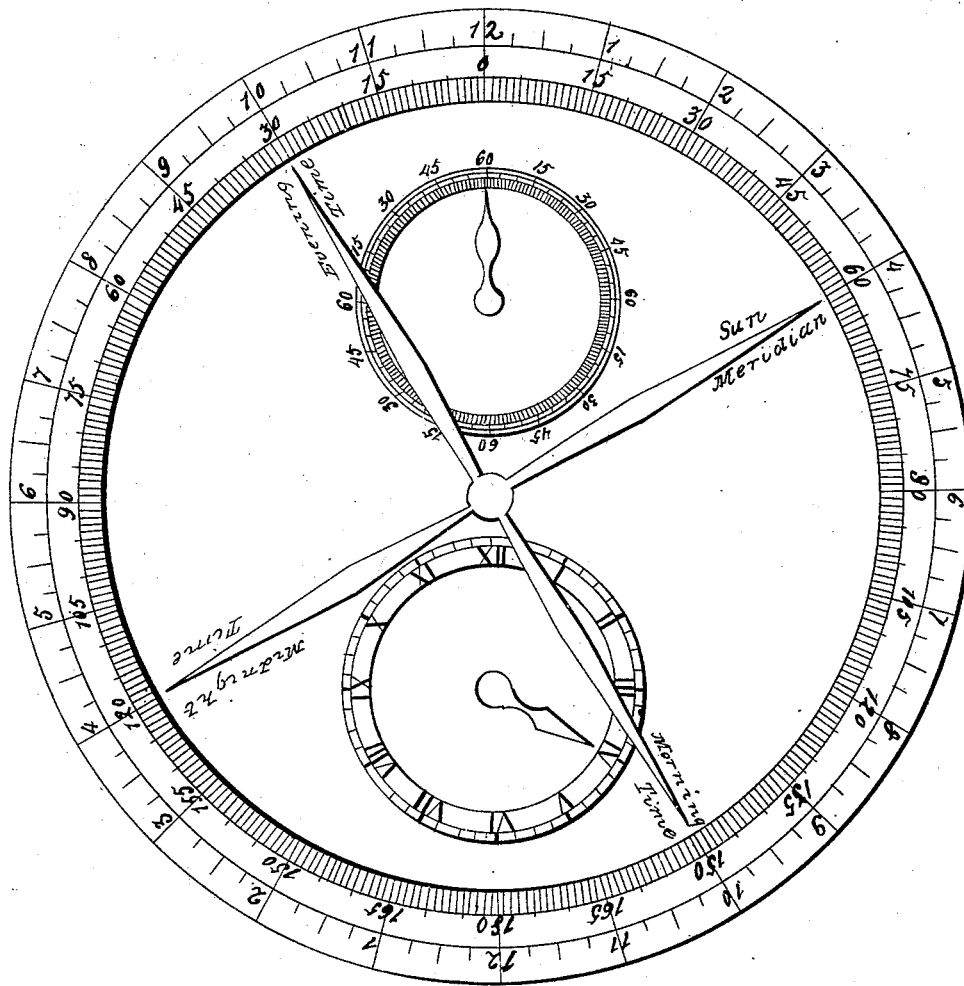


### Geographical Clock.

Patented Nov. 20, 1849.



Inventor  
John Sheldon

# UNITED STATES PATENT OFFICE.

JOHN SHELDON, OF MILLVILLE, NEW JERSEY.

## CHRONOMETER FOR LONGITUDE.

Specification of Letters Patent No. 6,877, dated November 20, 1849.

*To all whom it may concern:*

Be it known that I, JOHN SHELDON, of Millville, in the county of Cumberland and State of New Jersey, have invented a new  
5 Mode of Ascertaining the Longitude Without the Aid of the Usual Instruments; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed  
10 drawing, making a part of this specification, which represents the dial-plate of an instrument containing the works whereby the indices are moved.

The speed or rate of the time-piece is  
15 supposed to be known, the same as it is known on the chronometer. The main hands on the dial move at the same rate that the earth revolves on its axis (however in an opposite direction), and consequently  
20 keep time with the sun.

My starting point is at Greenwich, England; and my time is regulated by Greenwich-time, that is to say longitude, nothing. My dial is furnished with four indices or  
25 hands, which are at right angles with each other, and are calculated to revolve once in every 24 hours. These hands are respectively marked: "Midday," "Evening,"  
30 "Midnight," and "Morning." Near the circumference of the dial, there is one rubric containing the hour-division, and another containing the division into degrees, as shown on drawing.

The midday-hand gives the longitude at  
35 noon. When you are taking the sun to get your latitude, take the minute time of the hanging of the sun, and the time she is

hanging, divide equally. Then count to the left from the midday-hand, when you will obtain your true longitude at noon, in  
40 any part of the world, premising the rate of time being known to you.

2. Evening time: Knowing the length of the day, you get your longitude when the sun dips or disappears below the horizon.  
45 If the day is over 12 hours long, you count from the evening-hand to the left, when you will get your longitude at evening-time.

3. Midnight: When you are getting the  
50 latitude at midnight, proceed as at midday, and you will obtain your longitude.

4. Morning time: At sunrise look at the morning-hand of the dial, which will give  
55 you the longitude at that time, knowing the length of the day; if it is more than 12 hours long, count from the morning hand to the left; if less than 12 hours, count from said hand to the right.

At twilight look at the morning- or  
60 evening-hand, and work the same as for morning or evening-time.

What I claim as my invention and desire to secure by Letters-Patent is—

The dial with four hands, which are at  
65 right angles to each other, and revolve once in 24 hours; said dial being divided into hours and degrees, substantially in the manner and for the purposes above described.

JOHN SHELDON.

Witnesses:

ANDREW FINLEY,  
FRANCIS BENNE.