July 16, 1929. E. T. ISAACSON 1,720,902

CLOCK

Filed Jan. 17, 1925 3 Sheets-Sheet 1

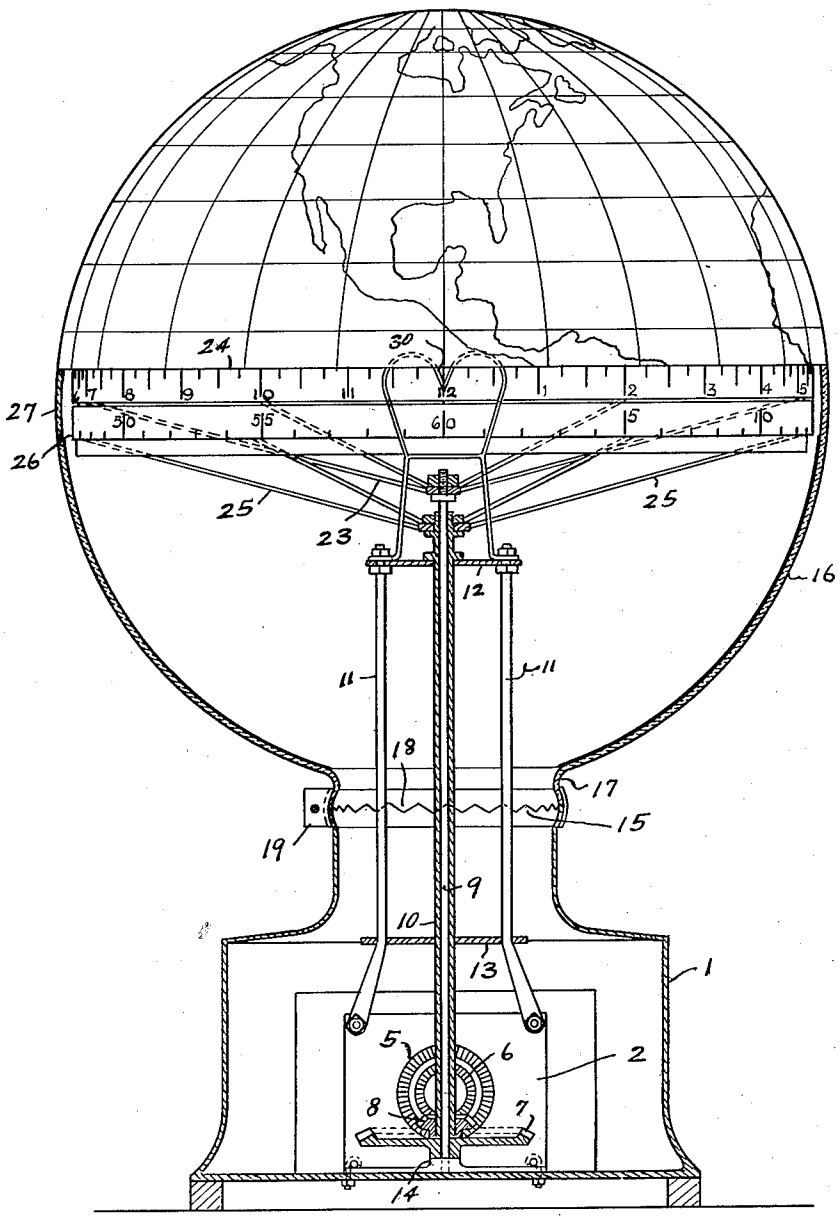


Fig. 1.

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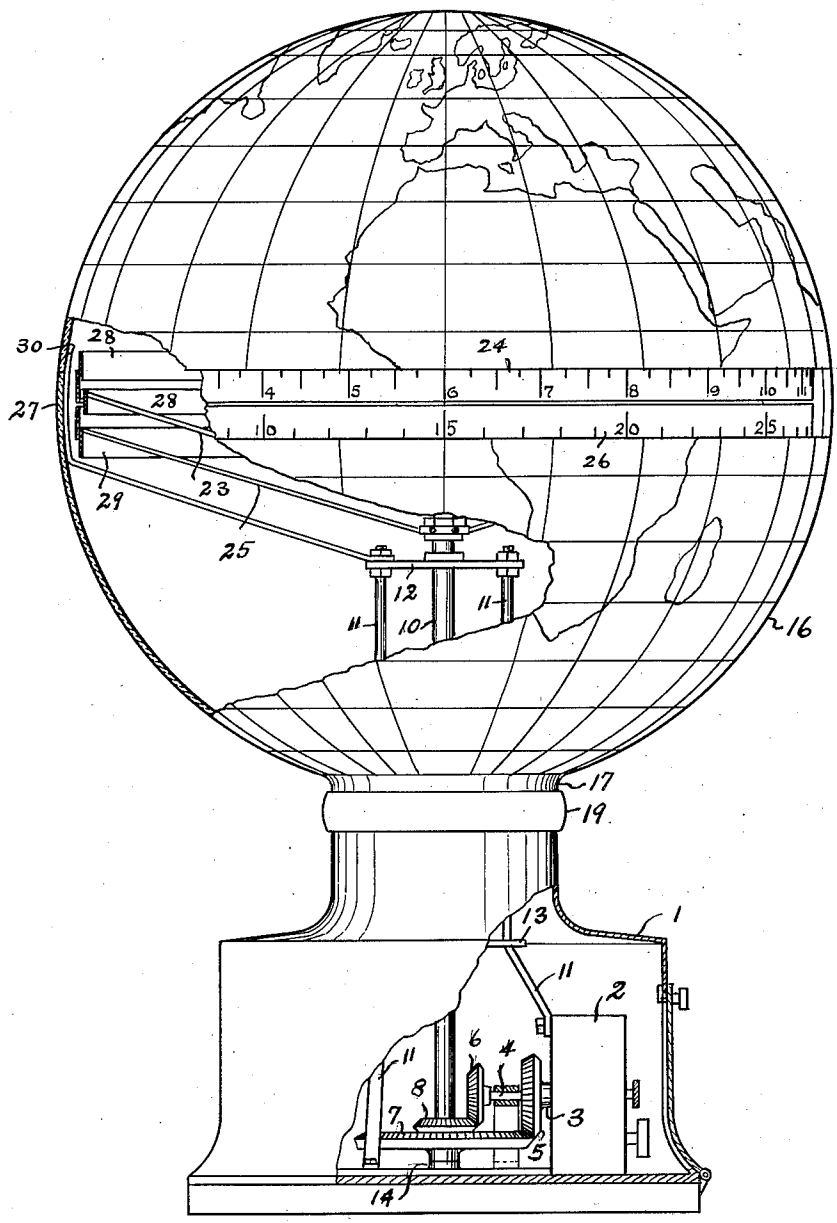


Fig. 2.

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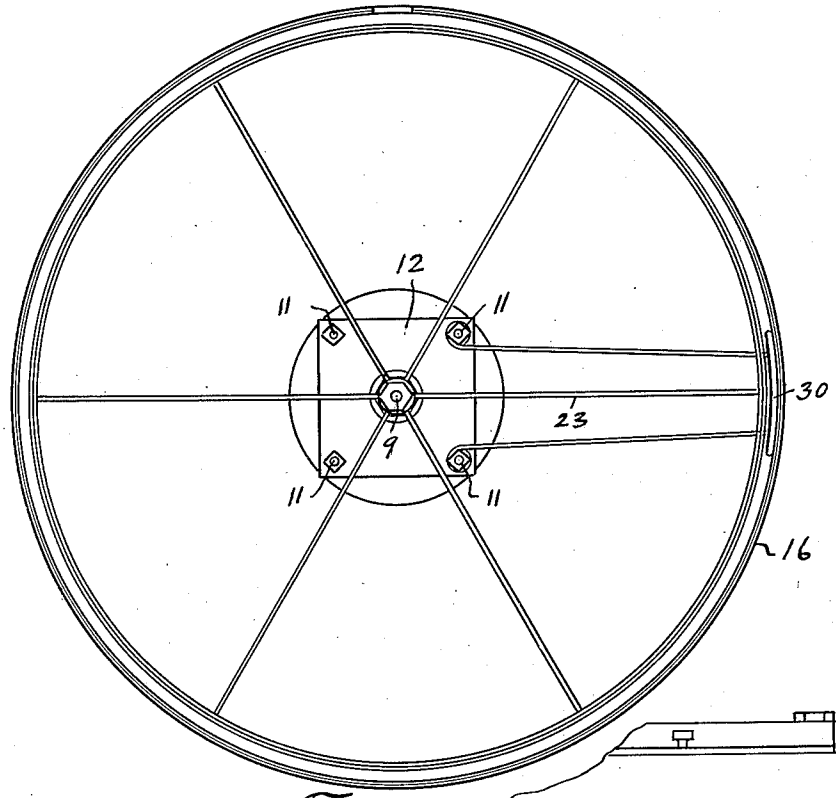


Fig. 3.

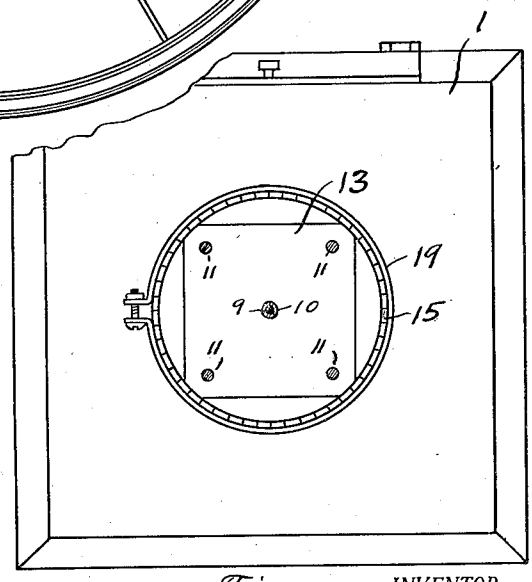


Fig. 4.

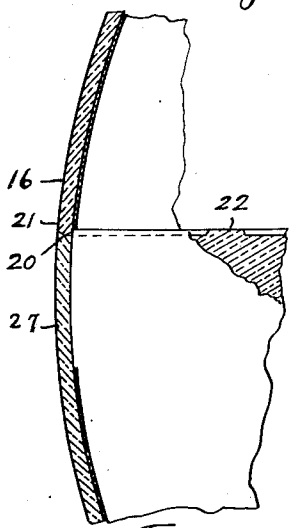


Fig. 5.

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Patented July 16, 1929. 1,720,902

UNITED STATES PATENT OFFICE.

ELMER T. ISAACSON, OF EL CAMPO, TEXAS.

CLOCK.

Application filed January 17, 1925. Serial No. 3,103.

This invention relates to new and useful improvements in a clock.

One object of the invention is to provide a novel type of clock having a stationary pointer and graduated dials, movable with respect to the pointer, and actuated by the mechanism of the clock, whereby the time may be readily ascertained.

Another object of the invention is to provide a clock mechanism in combination with a globe, which is a spherical representation of the earth's surface, and an annular graduated dial, or dials, driven by said mechanism, and associated with the globe, and with a fixed pointer whereby the standard time at any designated point on the earth's surface may be ascertained and the relative time at other points readily determined.

A further feature of the invention is to produce a clock of the character described wherein the globe, above referred to, may be adjusted, relative to the dials, and pointer, so as to set the time piece with reference to the actual time, at any given longitude.

With the above and other objects in view this invention has particular relation to certain novel features of construction, operation and arrangement of parts an example of which is given in this specification and illustrated in the accompanying drawings, wherein:—

Figure 1 shows a front elevation of the device, partly in section.

Figure 2 shows a side view thereof partly in section.

Figure 3 shows a plan view with the top part of the globe removed.

Figure 4 shows a plan view of the device, shown partly in section, with the entire globe removed, and

Figure 5 shows an enlarged fragmentary sectional view of the globe.

Referring now more particularly to the drawings, wherein like numerals of reference designate similar parts in each of the figures, the numeral 1 designates a casing enclosing the clock operating mechanism, said casing forming also a stand, or support for the globe. Within this casing is the conventional clock works, located in the housing 2. The clock works, include the outer and inner telescoping shafts 3 and 4 on which are fixed the respective pinions 5 and 6 which are in mesh with the respective bevel gear wheels 7 and 8. The gear 7 is fixed onto the lower end of the vertical shaft 9 which telescopes through the vertical shaft 10 on the lower end of which the gear 8 is fixed.

Four upstanding posts 11, are provided, two of which are anchored, at their lower ends, to the housing 2 and the other two are anchored, at their lower ends to the bottom of the casing 1. Anchored to these posts are the upper and lower plates 12 and 13, the former of which is fastened to the upper ends of said posts and these plates have central bearings in which the shaft 10 works. The lower end of the shaft 9 works in a bearing 14 in the bottom of the casing, said bearing also forming a support for the gear 7.

The upper end of the casing 1 is reduced and formed with marginal serrations 15, and mounted on this reduced portion there is a globe 16, preferably of glass, which is a spherical representation of the earth. This globe is formed with a depending neck 17 which is serrated, as at 18, to intermesh with the adjacent serrations 15 of the casing; and a clamp collar 19 surrounds the joint thus formed and secures the globe 16 on the casing 1. It is to be noted that the upper half of this globe is removable, the upper margin of the lower half being grooved as at 20 to receive the beveled margin 21 of the upper half, and in order to hold these sections in proper alignment, and to prevent their relative turning the lower section has a marginal lug 22, which fits into a registering notch in the margin of the other section.

Fastened to the upper end of the shaft 9 are the radiating stays 23 to the outer ends of which the annular band 24 is secured, said band being graduated to form the hour dial.

Fastened to the upper end of the shaft 10 are the radiating stays 25 to the outer ends of which the annular band 26 is secured, said band being concentric with and lying adjacent the band 24 and being graduated to form a minute dial. These dials revolve in horizontal planes within, and in close proximity to, the inside wall of the globe; and the surrounding section, or belt, 27, of the globe is transparent, so that the dials will be easily visible, the rest of the globe being, preferably, opaque.

As shown in Figure 2 they carry inside annular flanges, or rims, as 28, 28 and 29 which are disposed to break the joints between them and the adjacent margins of the belt 27 so as to conceal from view the operative mechanism within the globe. The numeral 30 designates a pointer which is anchored to the plate 12 and may be of any desired form. This pointer is arranged adjacent the dials and is provided to indicate the time.

The globe may be adjusted by loosening the clamp collar 19 and lifting the globe to disengage the teeth 15 and 18 and then rotating the globe as desired. In this manner the clock may be set to indicate the correct time of the longitude where it is located and the relative times of other longitudes.

The type of clock shown and described is suitable for general use and is particularly useful in school rooms for illustrating differences of time at different longitudes about the earth.

What I claim is:—

In a clock, a casing, operating mechanism therein, a globe on the casing, telescoping shafts operatively connected with said clock mechanism and extending up into the globe, annular rotatable dials fixed to the respective shafts and disposed adjacent each other around the inner wall of the globe, a pointer associated with the dials, upstanding posts anchored within the casing and whose upper ends project up into the globe, an anchor plate fixed to the upper ends of said posts, the outer shaft having a bearing in said plate and said plate forming an anchorage for said pointer.

In testimony whereof I have signed my name to this specification.

ELMER T. ISAACSON.