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ILLUMINATED GLOBE

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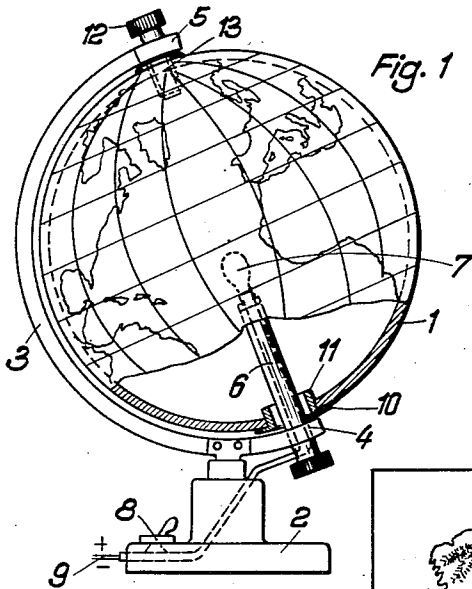
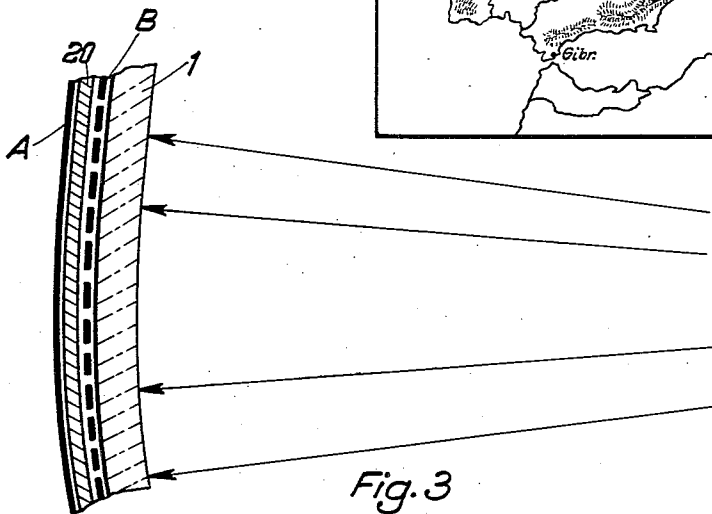
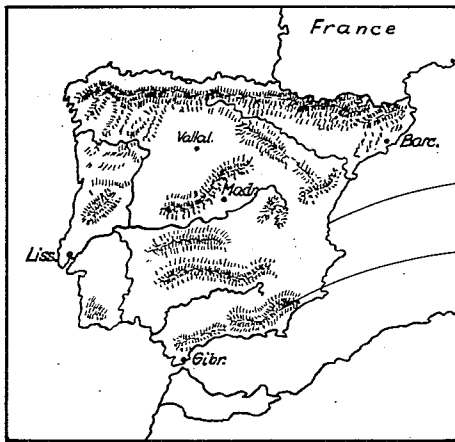


Fig. 2



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1 Claim. (Cl. 35—46)

This invention relates to a world globe or map of the type in which the cartographic representation is mounted on a sphere of transparent or translucent material as for example glass, plastic, etc. provided internally with a lighting device capable of being turned on or off as desired.

It is an object of the invention to provide a world globe with two map representations each having a different set of informative characters and outlines thereon and mounted one on the other on the outer periphery of the globe. A further object of the invention resides in the provision of an illuminated globe having two different and superimposed world maps which are provided one over the other in perfect register with each other. Another object of the invention resides in a globe in which the superimposed sheets in various colors and of which one sheet represents the political boundaries of the various countries and another sheet represents the physical characteristics of the various countries outlined by the political boundaries.

Further objects will be apparent from the following description when considered in connection with the accompanying drawing in which:

Figure 1 is a side elevation of the globe with parts in section;

Fig. 2 is a plan view of a part of the world map, and

Fig. 3 is a section of a part of the globe on an enlarged scale.

Referring to Fig. 1 the globe 1 having a world map diagrammatically represented thereon. The ball-shaped globe can be made of any suitable material such as glass or any other substance which will permit the passage of light. Instead of glass any suitable artificial material may be used which will let the light pass therethrough.

A base member 2 is provided having secured at its head a semi-circular frame arm 3 which has on its side surfaces the usual parallel scale, not shown. The frame arm 3 is secured to the base member 2 by means of bolts, screws and the like which may be adjustable to secure the globe on its proper axis angle relative to the ends parts 4 and 5. At the end 4 of the arm 3 there is secured a tubular support 6 preferably mounted by means of screw threads and which extends axially into the globe 1 a certain distance. An electric lamp bulb 7 is provided on the inner end of the support 6 which is energized by means of wires 9 controlled by a switch 8. The wires 9 pass through the support as indicated by the dotted lines in Fig. 1.

A supporting plate 10 for the globe 1 around the tubular support 6, rests on the lower end 4 of the arm 3. This plate 10 is provided with a ring collar 11 having an internal diameter which is at least the same as the largest diameter of the bulb 7. The globe 1 at the South Pole region of the world map is provided with a circular opening whose diameter is practically the same as the outer diameter of the ring collar 11.

The upper end 5 of the arm 3 is provided with an enlarged portion provided with an internal screw thread for a securing screw 12 having an elongated portion to co-

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operate with a hollow pin or bushing 13 which latter is provided with a head plate. The hollow pin 13 passes through and contacts a small opening in the top or North Pole region of the world map.

The globe 1 may be secured in and to its frame in the following manner. First the hollow pin 13 is set into the North Pole region of the globe in the small opening therein. Then the globe is passed over the electric bulb 7 which latter passes through the South Pole opening and the globe then passes down along the support 6 until the globe 1 rests on the plate 10 in the correct position in accordance with the ring collar 11. Then the securing screw 12 is screwed down in the screw threads in the end part 5 whereby the screw will then emerge and pass into the hollow pin 13 where the globe will be mounted in the arm 3.

Referring to Fig. 3 the globe 1 is made of glass or any other suitable material which will permit light to pass through and a world map 20 is provided on the globe with a sheet B between the globe 1 and the map 20 and a sheet A on the outside of the map. The sheet B is a physical representation of the world and sheet A shows the political subdivisions of the various countries and the continents themselves. As seen in Fig. 2 showing a portion of the globe A represents the country outlines of the outside sheet and B represents the physical characteristics of the various countries. Also on the sheet A the political sub-divisions are shown in full lines whereas on the sheet B the physical features are shown in dotted lines. Thus on the sheet A there are included the country border lines, cities, rivers and continents whereas on the sheet B there are shown the mountain ranges, ocean depths, differences in altitudes, etc.

The world map is prepared, before it is mounted on the globe, in a plurality of segments which is known per se and each segment has for example 30° latitude. The map or sheet is preferably printed on both sides and preferably is completely covered by color areas and contrasts. Instead of printing other transfer methods may be used such as the use of lithography, etc.

When the electric bulb 7 is turned off by the switch 8 the observer may consider only the political map A which is contrasted by the various colored country designations. When however the bulb 7 is turned on the light rays will illuminate both maps A and B on the backing 20 so that the physical country boundaries will be each provided with its river, mountain, etc. characteristics.

It is of course possible to provide any material on the maps A and B including any contrasting color tones and shades to produce the desired effects and taking due consideration of the type of light bulb used in the globe.

It is also possible to use such colors on the maps which will produce a fluorescent effect to the light rays.

The world map consists, before it is secured on the globe, of a plurality of spherical sections, as for example 30° in width for each section. The map is printed on each side whereby by means of identifying marks a complete covering of the front and rear sides of the map will be achieved. Any type of printing or coloring may be used. When the light in the globe is not energized, then the outer representation A will be visible, that is only the political world map with the usual colored country outlines. When however the light is turned on the light rays will shine through both pictures A and B and thus the physical characteristics of the various continents and countries will be apparent.

It is also possible to so mount the maps that the sheet A having the country outlines on the inside of the map 20 in place of the sheet B which latter is then mounted on the outside of the map 20 in place of the sheet A. It is of course within the scope of the invention to provide printed representations on the outside and inside surface of the

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map 20 either as such or as separate sheets secured on the map 20. In both modifications the map 20 will have the physical and political representations provided on both sides of the maps which latter is either transparent or translucent to permit the passage of some light from internally of the globe when the bulb 7 is energized. It is thus understood that the portions A and B may be separate sheets or they may be printed or otherwise represented effective data.

It is of course obvious that the globe may be made of any suitable materials and any combination of representations may be utilized within the scope of the appended claim.

Since the outer sheet picture A also functions to reflect light from the outside in addition to light which comes through the globe from its interior, it is possible to choose the colors in such a way that the proper contrasts are obtained relative to both sheets A and B so that an outer color will not disturb the superposed inner color to such a degree that the colors will negative each other.

We claim as our invention:

A map globe comprising a sphere of transparent material, illuminating means mounted inside the globe, means for controlling the energization of said illuminating means, a series of gores in form of spherical diangles consisting of sheets of a translucent material carrying on one side part representations of political characteristics of

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the various parts of the world and fixed in exact side by side position on the outside of said sphere for providing a complete global map, said gores carrying on the other side the part representations of geographical characteristics of said various parts of the world, the corresponding details of both representations being in exact superposed relationship on said gores, the translucency of the sheet material being such as to render visible the representations on the inner side of said gores only when said illuminating means is energized, while at least said details of the representations on the outer side of said gores are visible at all times, and the representations include colored areas on both sides of said gores, the colors being so selected that the inner and outer color representations blend with each other with the inner color representations prevailing when the illuminating means is energized.

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