O. F. BARCUS.

STAR FINDER.

APPLICATION FILED MAY 20, 1914.

1,150,731. Patented Aug. 17, 1915.

Fig. 2.

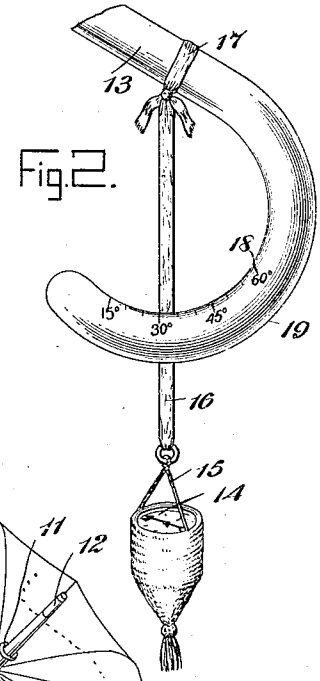


Fig. 1.

WITNESSES

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ORVILLE FOWLER BARCUS, OF SHANGHAI, CHINA.

STAR-FINDER.

1,150,731. Specification of Letters Patent. Patented Aug. 17, 1915.

Application filed May 20, 1914. Serial No. 839,873.

To all whom it may concern:

Be it known that I, ORVILLE F. BARCUS, a citizen of the United States, and residing in Shanghai, China, have invented a new and Improved Star-Finder, of which the following is a full, clear, and exact description.

My invention has for its object to provide a star finder in the shape of a parasol on which fixed stars and the constellations are marked as a guide to be used in finding their location in the heavens. The stars are positioned relatively to the stick of the parasol so that when the outer end of the parasol stick is pointed to Polaris the stars on the parasol will be positioned for convenient observation.

The position of certain stars and constellations on the parasol may be conveniently found by the means provided.

Additional objects of the invention will appear in the following specification in which the preferred form of my invention is disclosed.

In the drawings similar reference characters refer to similar parts in all the views in which—

Figure 1 is a perspective view showing the parasol as it is to be used to find the location of the stars; and Fig. 2 is a fragmentary view showing the handle of the parasol with the means for determining the position and the altitude of Polaris.

By referring to the drawings it will be seen that the parasol 5 is constructed in the customary manner preferably with 16 ribs 7 and on the parasol the stars and constellations are marked or are embroidered with silk, the edge 6 of the parasol being marked with divisions 8 which indicate how many hours the position so marked is east of the vernal equinox. It will be seen that the said edge 6 of the parasol has markings for twenty-four hours which is a whole day. When the right ascension of a star or constellation is known, the time of the star or constellation on the parasol may be conveniently found by means of the time markings 8. With knowledge of the declination and right ascension of a star the exact position of a star on the parasol may be ascertained by the tape 9 on which degrees 10 are marked and the time markings 8 which have been referred to. This tape 9 has a ring 11 which may be slid over the outer end 12 of the parasol stick 13. In some cases it may be necessary or convenient to find the position of the north star with a compass, and this may be done with the compass 14 which is supported by cords 15 connected with a flexible member 16 which is secured at 17 to the parasol stick 13. This flexible member or tassel 16 also serves in connection with the degrees 18 marked on the curved handle 19 to determine the altitude of Polaris should occasion require, and if the altitude of Polaris at a given place on the earth be known, the outer end 12 of the umbrella stick may be pointed in the general direction of Polaris with the assistance of the compass 14 and then the outer end 12 of the umbrella stick may be raised or lowered as may be desired until it is pointed at the right altitude which will be indicated by the degrees 18 on the curved handle 19.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

1. In an article of the class described, a parasol having a cover on which stars are indicated relatively to a position on the cover which serves to indicate Polaris, and a stick for the parasol having an end secured to the cover at the said position, by which the said parasol may be pointed as desired and may be rotated with the stick as its axis.

2. A parasol having a stick and a cover, there being stars marked on the cover in their relative positions, markings on the lower edge of the parasol cover indicating time, and a tape having degrees marked thereon normally extending from the outer end of the umbrella stick.

3. A parasol having a stick and a cover with stars marked thereon in their relative positions, the handle of the stick being curved with degrees marked thereon, and a weighted tassel extending from the stick adjacent the handle for determining in connection with the degrees on the handle the altitude of Polaris when the curved handle extends downward and the outer end of the stick is pointed at Polaris.

4. A parasol having a stick and a cover, there being stars marked on the cover in their relative positions, the handle of the stick being curved with degrees marked thereon, a tassel secured to the stick adjacent the handle and a compass secured to the tassel.

5. A parasol having a stick and a cover

with stars marked thereon in their relative positions, the handle of the stick being curved with degrees marked thereon, and a weighted tassel extending from the stick adjacent the handle for determining in connection with the degrees on the handle, the altitude of Polaris when the curved handle extends downward and the outer end of the stick is pointed at Polaris, there being time markings on the parasol.

6. In an article of the class described, a parasol having a cover on which stars are indicated relatively to a position on the cover which serves to indicate Polaris, a stick for the parasol having an end secured to the cover at the said position, by which the said parasol may be pointed as desired and may be rotated with the stick as its axis, and a tape having degrees marked thereon extending from the outer end of the parasol stick.

In witness whereof I have signed my name to this specification in the presence of the two subscribing witnesses.

ORVILLE FOWLER BARCUS.

Witnesses:

CLARENCE Z. GAUSS,

STEPHEN TUNG.

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