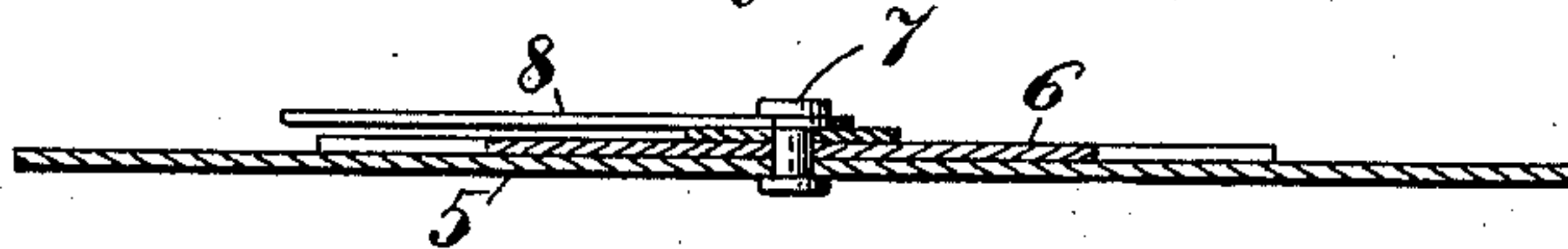


A. H. LESSELLS.  
NON-MAGNETIC COMPASS.  
APPLICATION FILED AUG. 16, 1909.

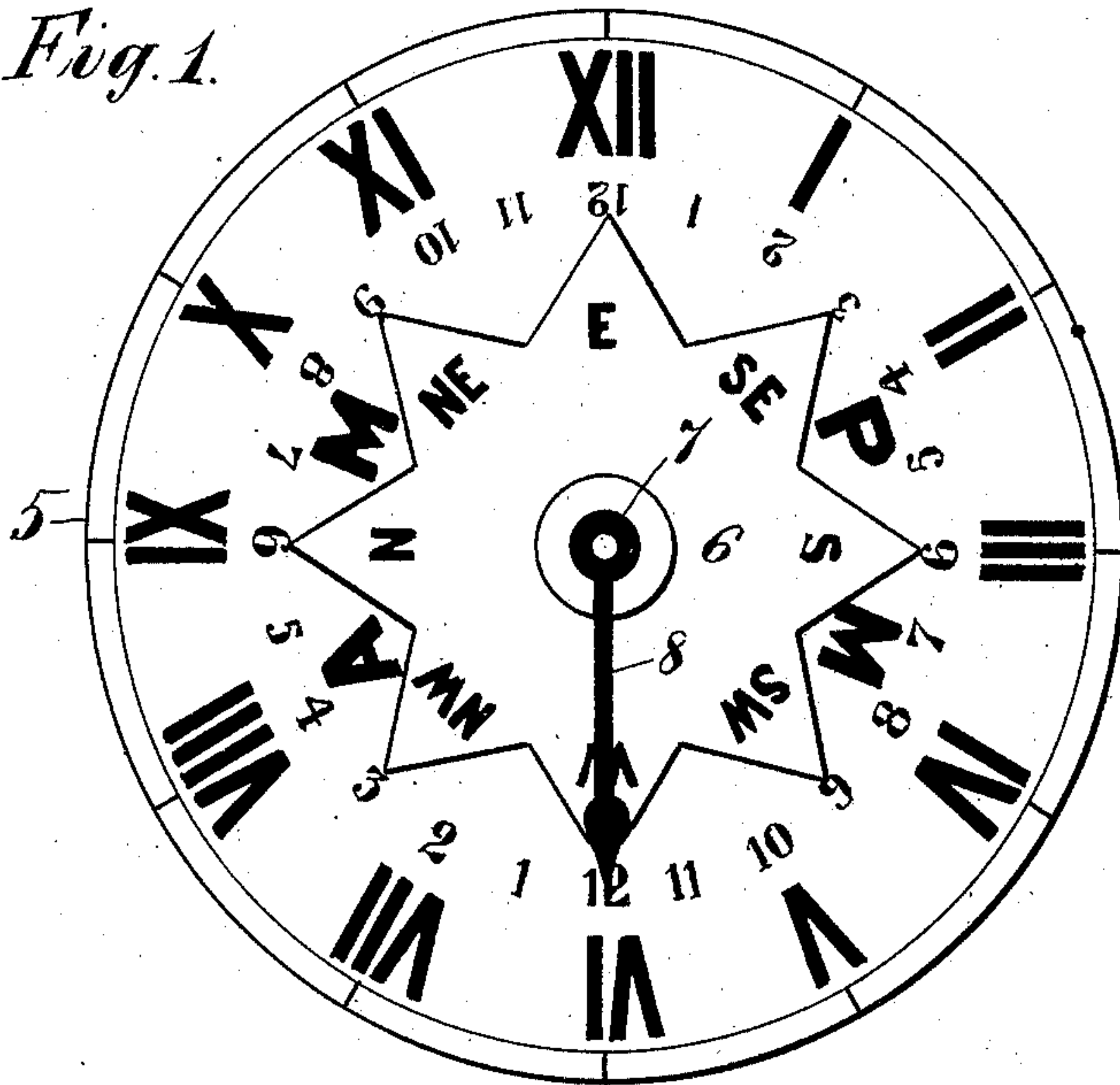
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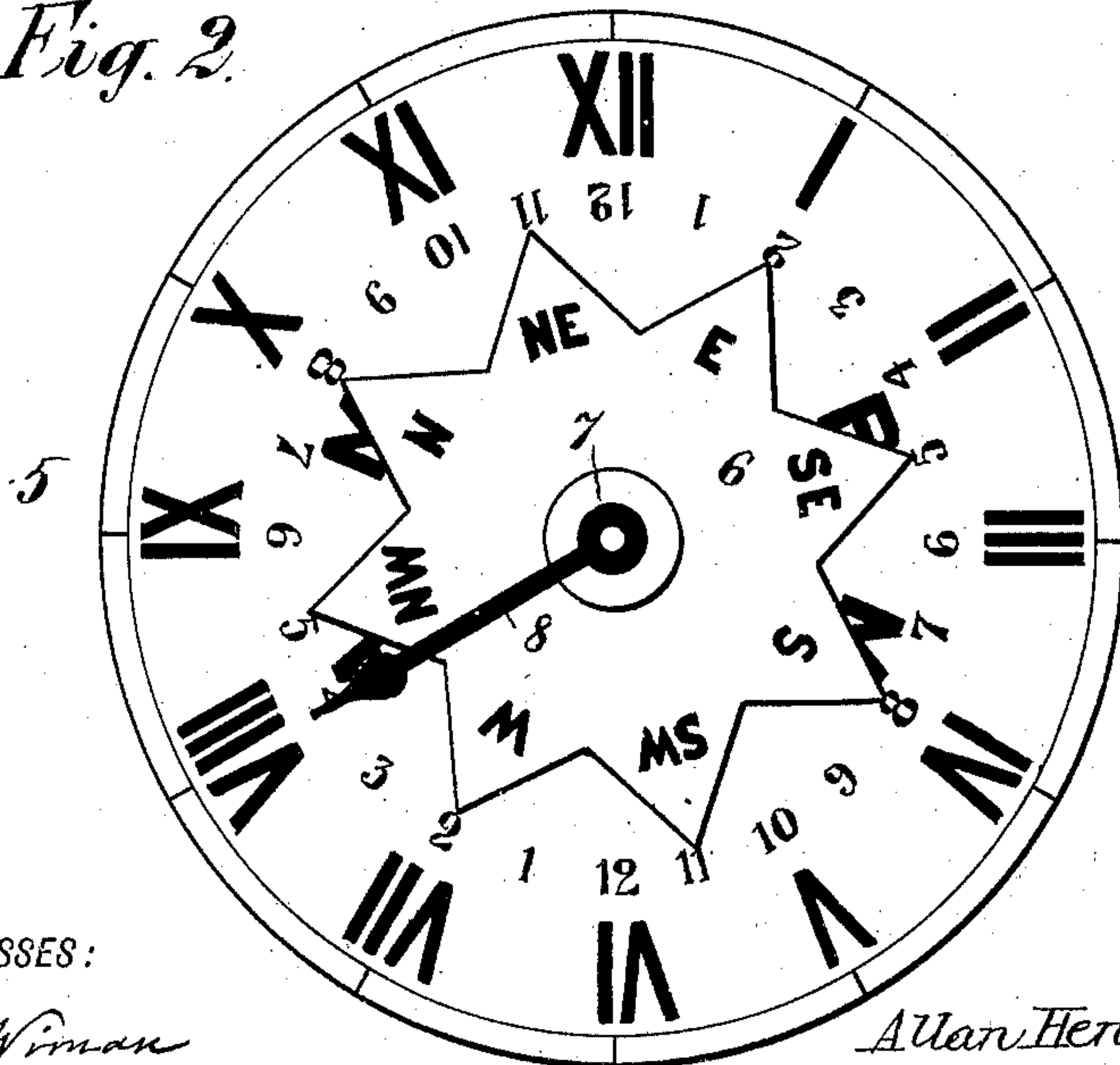
*Fig. 3.*



*Fig. 1.*



*Fig. 2.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ALLAN HENDERSON LESSELLS, OF NEW BRIGHTON, ENGLAND.

NON-MAGNETIC COMPASS.

963,597.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed August 16, 1909. Serial No. 513,170.

*To all whom it may concern:*

Be it known that I, ALLAN HENDERSON LESSELLS, a citizen of Great Britain, and a resident of New Brighton, in the county of Chester, England, have invented certain new and useful Improvements in Non-Magnetic Compasses, of which the following is a specification.

This invention relates to non-magnetic compasses, and its object is to provide a simple and cheap means which may be set according to apparent position of the sun at any time of day, and when thus positioned with relation to the sun, it indicates the direction of the points of the compass, or it may be used in connection with a watch or clock, all of which will be more fully explained in the following specification, set forth in the claim and illustrated in the drawings, wherein:

Figure 1 is a face view of the device. Fig. 2 is a similar view, but showing it set at a different hour of the day. Fig. 3 is a cross section.

The device preferably consists of a dial of cardboard or any other thin substantial material and having on its face the usual Roman numerals from I to XII, also a second set of numerals on a smaller scale than the first and in a circle within the same, this second set consisting of two series of numbers from 1 to 12, one series representing the hours before noon and the other series the hours between noon and midnight, and each series being designated respectively by a. m. and p. m.

Pivoted on the dial around the pivot 7 is a disk 6 preferably star shaped to represent the points of the compass and which are designated by proper initials. Around the pivot 7 also revolves a hand 8 which may be moved freely over the disk and dial.

When it is desired to find the points of the compass, the time of day is first found and the hand 8 is turned around the pivot 7 until it indicates the hour of the day on the large scale. The hand 8 and dial 5 are then

turned so as to be brought in line with the sun. The card 6 is then turned until the S point is opposite the hour number on the small scale. As illustrated in Fig. 1 if the hour is 6 o'clock p. m., the hand 8 is brought to the figure 6 on the outer scale and in line with the sun and the S point on card 6 is brought to the figure 6 p. m. of the inside scale. In this position, the card will correctly indicate the points of the compass.

As shown in Fig. 2, the device is set to find the points of the compass at 8 p. m. in which case the hand 8 is placed opposite the figure 8 on the outside scale and the S point opposite the figure 8 on the inside scale. If now the hand 8 without changing the relative position of the cards is brought in line with the sun, the card 6 will accurately show the points of the compass.

This device will be found a convenient and entertaining means for locating the points of the compass and may be cheaply constructed to form a toy, or it may be made a part of a watch or clock so that it will be always handy and convenient to use.

It is obvious that the general construction of the device with its numerals and lettering may be modified and otherwise arranged without departing from the essential features above illustrated.

What I claim as new is:

In a compass, the combination of a dial having the numerals of a clock face, and two sets of twelve numerals, each set being between the hour numerals twelve and six, and one set designated for a. m. and the other for p. m., a disk concentrically pivoted to the dial and containing the points of the compass, and a hand pivoted at the common center.

Signed at New York in the county of New York and State of N. Y. this 31st day of July A. D. 1909.

ALLAN HENDERSON LESSELLS.

Witnesses:

C. A. O. ROSELL,  
JORAISON WILLS.