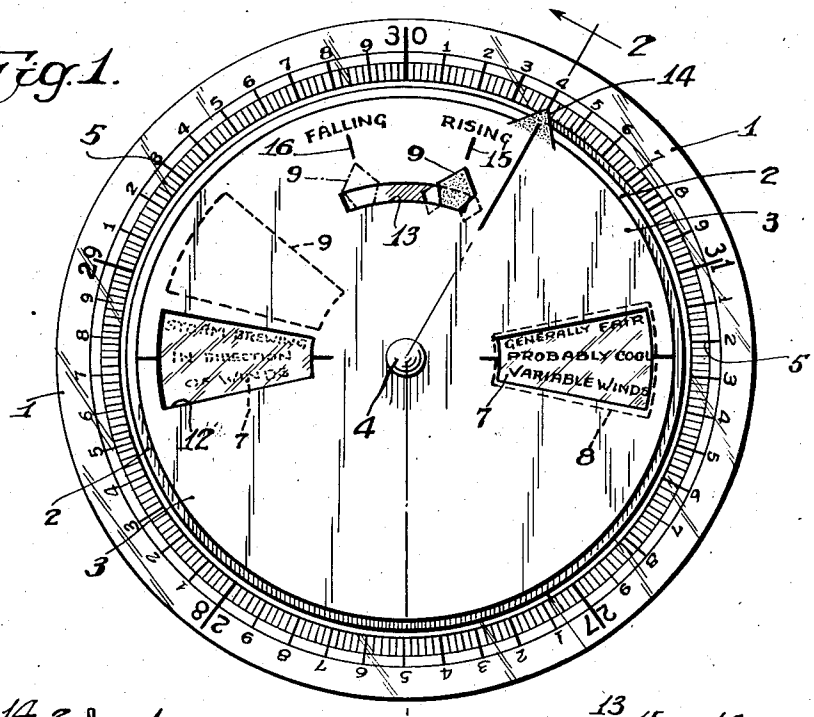
Sept. 25, 1945. W. H. REDDING 2,385,732

BAROMETER INTERPRETER

Filed July 16, 1943

Fig. 1.



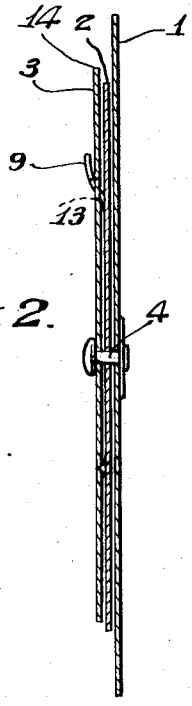
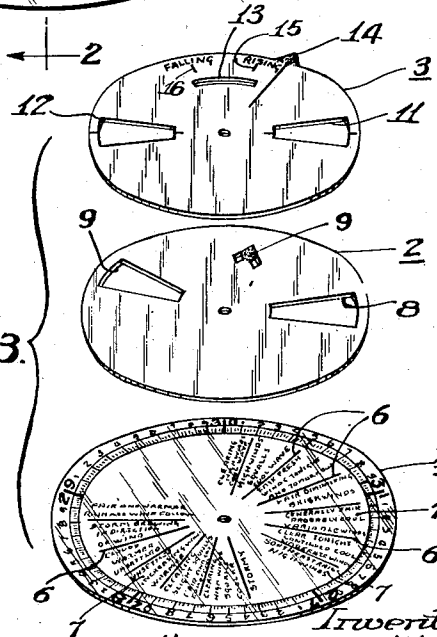


Fig. 2.

Fig. 3.



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BAROMETER INTERPRETER

William Halbert Redding, Philadelphia, Pa.

Application July 16, 1943, Serial No. 495,020

6 Claims. (Cl. 35—1)

The principal object of this invention is to provide an inexpensive device for interpreting barometer readings and for indicating simply and intelligibly the significance of the barometric indications.

In the attached drawing,

Fig. 1 is a face view of an interpreter made in accordance with the invention;

Fig. 2 is a section on the line 2—2, Fig. 1, and

Fig. 3 is an exploded perspective view showing the three major elements of the device.

With reference to the drawing, the device consists essentially of three discs designated 1, 2 and 3 respectively which may suitably be made of cardboard or any other sufficiently strong and durable sheet material. These discs, as best shown in Fig. 2, are secured together in concentric relation by means of a rivet 4 so that they may be rotated one with respect to the others. The disc 1, which constitutes the base element, is of greatest diameter and carries in the outer peripheral portion thereof a scale 5 corresponding to the dial scale of a barometer, the main divisions of this scale represented by the numbers 27 to 30 indicating atmospheric pressures and the secondary divisions represented by the numbers 1 to 9 indicating tenths of the main division, all in accordance with barometic practice. Inside of the scale 5, the disc 1 contains a number of radial lines or markings 6 which divide areas of the disc surface at opposite sides of the pin 4 into a number of segmental sections indicated generally by the reference numeral 7, as best shown in Fig. 3. Each one of these segmental sections contains a legend pertaining to weather conditions in terms of forecast and the segments are arranged on the disc with respect to the scale 5 in a manner to afford, in conjunction with the discs 2 and 3 as hereinafter described, an accurate forecast of the weather based upon any given barometric reading.

Actually, the segmental spaces are divided into two groups which appear respectively at opposite sides of the disc center as viewed in Fig. 3.

The disc 2 contains two radially disposed segmental apertures or windows 8 and 9 and these apertures are adapted to register with the segmental spaces 7 of the underlying disc 1, the legends on this latter disc being covered and rendered invisible by the disc 2 except as to those which, in any position of relative adjustment of the discs 1 and 2, may appear through the windows 8 and 9. The disc 2 comprises also a pointer 9 which may be formed as an integral part of the disc, as illustrated. The apertures 8 and 8 are arranged at opposite sides of the disc 2 so as to coact respectively with the segmental sections 7 of the separate groups referred to above.

The disc 3, which in assembly overlies the disc 2, also comprises two radially disposed segmental apertures or windows, 11 and 12 respectively. These windows are placed in diametrically opposite relation on the disc whereas the apertures 8 and 9 of the disc 2 are separated by angles other than 180°. The arrangement is such that whereas the apertures 11 and 12 are adapted to register with the apertures 8 and 9 respectively, such registration cannot occur in both apertures at the same time. When, for example, the apertures 8 and 11 are in registration, as in Fig. 1, the aperture 9 of the disc 2, which is indicated in broken lines in Fig. 1, will occupy a position offset from the aperture 12 of the disc 3. When the apertures 9 and 12 register with each other, the aperture 8 will be correspondingly displaced with respect to the aperture 11. The disc 3 contains also a segmental slot 13 which is positioned so as to receive the pointer element 9 of the disc 2 in the manner shown in Fig. 1. Slot 13 is concentric with the discs so that relative movement between the discs 2 and 3 is permitted, although angular extent of this relative movement is limited by the length of the slot. This slot is dimensioned to permit relative movement of the discs 2 and 3 to an extent required to bring the respective pairs of apertures 8—11 and 9—12 selectively into registered condition. With reference to Fig. 1, it will be noted that when the pointer 9 is at the right hand end of the slot 13, the apertures 8 and 11 will be in registration; and when the pointer 9 is at the opposite end of the slot 13, as indicated in broken lines, the apertures 9 and 12 will be in registration. The disc 3 also carries at its periphery a projecting pointer 14 which coacts with the scale 5 on the disc 1, as shown in Fig. 1, whereby the disc may be placed in predetermined position with respect to the disc 1 in accordance with the barometer reading.

The operation of the device is as follows:

The barometer reading is taken both as to pressure and to direction in which the pressure may be undergoing change. Let it be assumed, for example, that the barometer shows a pressure of 30.4 and is rising. The disc 3 is then adjusted with respect to the disc 1 so that the pointer 14 is directed to 30.4 on the scale 5 (see Fig. 1). Also since the pressure is rising, the discs 2 and 3 are relatively adjusted so that the pointer 9 will be directed to the marking 15 on the face of the disc 3 which is designated by the word "ris-

ing," the said pointer then being at the right hand end of the slot 13 and the apertures 8 and 11 of the discs 2 and 3 being in registration with each other. The window 9 of the disc 2 is, in these circumstances, displaced from the aperture 12 of the disc 3 so that the solid underlying portion of the disc 2 will obstruct the latter aperture. The registered apertures 8 and 11, however, will expose a portion of the face of the disc 1 containing the segmental sections 7 and one of these sections will register with the apertures and will be visible therethrough. The legend appearing in this segment will give the weather forecast in accordance with the barometric reading, and in the present instance, it is to be noted that this forecast is "generally fair, probably cool, variable winds." This forecast in other words corresponds to a reading of 30.4 on the barometer scale under rising pressure conditions. If however, the pressure, as indicated on the barometer, is 30.4 and the pressure is falling, the pointer 9 would then be shifted to the left hand end of the slot 13 to a position opposite the marking 16 on the face of the disc 3 which bears the designation "falling." Under these conditions, the apertures 8 and 11 will be out of registration but the aperture 9 will have been moved to a position under the aperture 12 so that a segmental section of the surface of the disc will be visible therethrough. This will be in the area at the opposite side of the disc occupied by the other group of segmental sections, and as indicated in Fig. 1 the legend "storm brewing in direction of winds" will appear.

It will be apparent that for some settings of the discs, parts of two of the segmental sections 7 may appear within the registered apertures of the discs 2 and 3. The legends however appearing predominate in the window will nevertheless constitute the proper forecast for the particular barometer reading.

I claim:

1. In a barometer interpreter, a base element carrying a barometric scale and a plurality of legends related to weather forecast and differing as to position with respect to the scale, and a second element relatively adjustable with respect to the base element to selective positions on the scale and having means effective in any scale position for indicating particular relationships between that position and at least two non-contiguous legends of said plurality, one of said relationships pertaining to a rising and the other to a falling barometric pressure and means for indicating which of said relationships pertains to the said rising and which to the said falling pressure.

2. In a barometer interpreter, a base element carrying a barometric scale and a plurality of legends related to weather forecast and differing as to position with respect to the scale, and a second element relatively adjustable with respect to the base element to selective positions on the scale and having means effective in any scale position for indicating particular relationships between that position and at least two non-contiguous legends of said plurality, one of said relationships pertaining to a rising and the other to a falling barometric pressure, and means relatively adjustable with respect to the second element in accordance with a changing pressure condition for rendering said indicating means ineffective for indicating one or other of said relationships.

3. In a barometer interpreter, a base element carrying barometric scale, and a plurality of legends related to weather forecasts and differing as to position with respect to the scale, said legends being divided into two groups one of which groups pertains to a rising and the other to a falling barometric pressure condition and a second element relatively adjustable with respect to the base element to selective positions on the scale and having means effective in any scale position for indicating particular relationships between that position and at least one of the legends of each of said groups.

4. In a barometer interpreter, a base element carrying an annularly arranged barometric scale and a plurality of legends referring to weather forecasts similarly annularly arranged at the inner side of said scale and related to the latter, a disc rotatably secured to the base element concentrical with the scale and overlying said legends, means providing for adjustment of said disc to any given position with respect to the scale, said disc having therein a pair of apertures through which two separate and different of said legends are exposed when the disc is in the said adjusted positions, and means adjustable with respect to the disc for blanking out one or the other of said apertures in accordance with the direction of change in barometric pressure.

5. In a barometer interpreter, a base element carrying an annularly arranged barometric scale, and a plurality of legends referring to weather forecasts in similar annular arrangements at the inner side of said scale and related to the latter, said legends being separated into two separate groups, a disc rotatably secured to the base element concentrical with the scale and overlying said legends, means providing for adjustment of said disc to any given position with respect to the scale, said disc having therein a pair of apertures associated respectively with said groups of legends and through which one legend at least of each of said groups is exposed when the disc is in the adjusted positions, and means adjustable with respect to the disc for blanking out one or other of said apertures in accordance with the direction of change in barometric pressure.

6. In a barometer interpreter, a base element carrying an annularly arranged barometric scale, and a plurality of legends referring to weather forecasts in similar annular arrangements at the inner side of said scale and related to the latter, said legends being separated into two separate groups, a disc rotatably secured to the base element concentrical with the scale and overlying said legends, means providing for adjustment of said disc to any given position with respect to the scale, said disc having therein a pair of apertures associated respectively with said groups of legends and through which one legend at least of each of said groups is exposed when the disc is in the adjusted positions, a concentric rotary element interposed between the disc and the base element and adjustable with respect to the disc, said element in different positions of adjustment relative to the disc being effective to blank out the respective apertures in the latter in accordance with the direction of change in barometric pressure.

WILLIAM HALBERT REDDING.