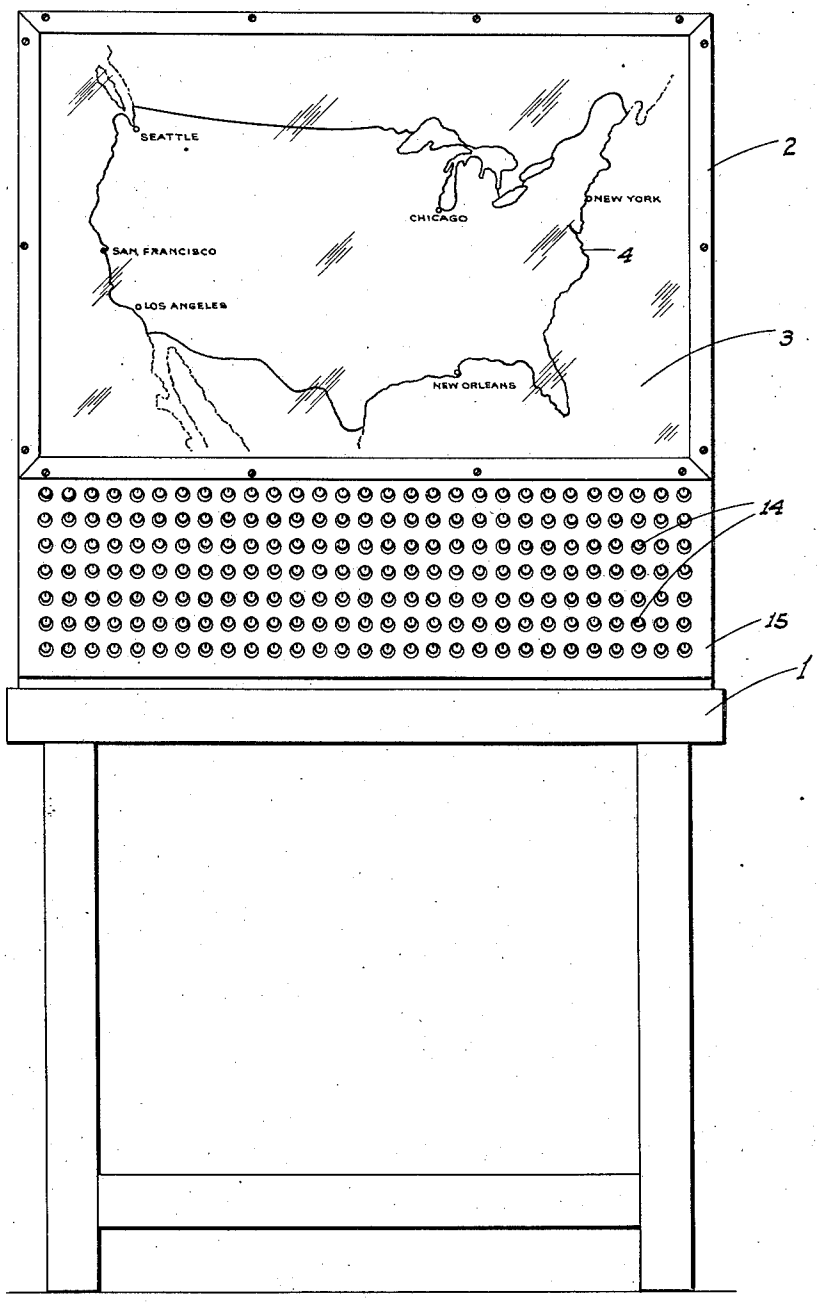
March 11, 1947. S. E. BLEWETT ET AL 2,417,043

ILLUMINATED WEATHER MAP

Filed Aug. 25, 1944 2 Sheets-Sheet 1

Fig. 1



INVENTORS
Stephen E. Blewett
Thomas A. Gaffney

BY Webster & Webster
ATTORNEYS

March 11, 1947. S. E. BLEWETT ET AL 2,417,043

ILLUMINATED WEATHER MAP

Filed Aug. 25, 1944 2 Sheets-Sheet 2

Fig. 2

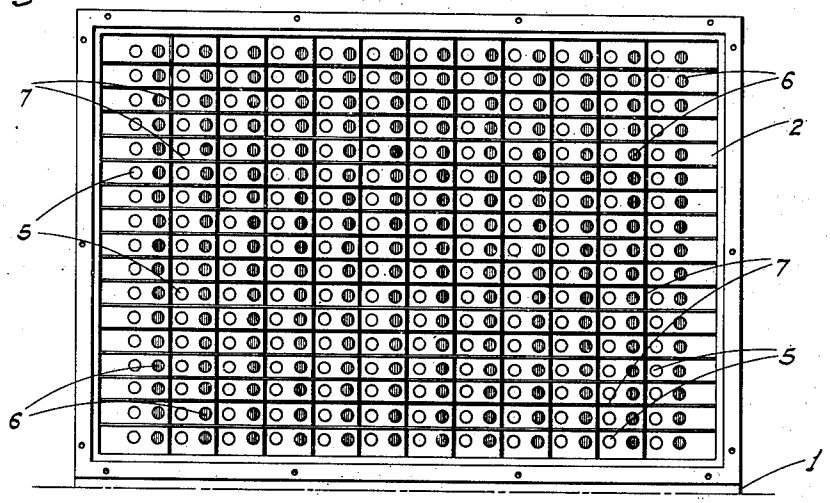


Fig. 3

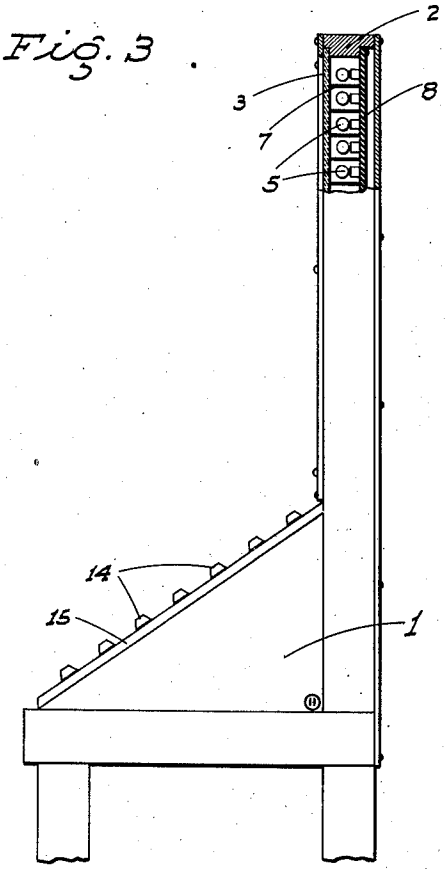
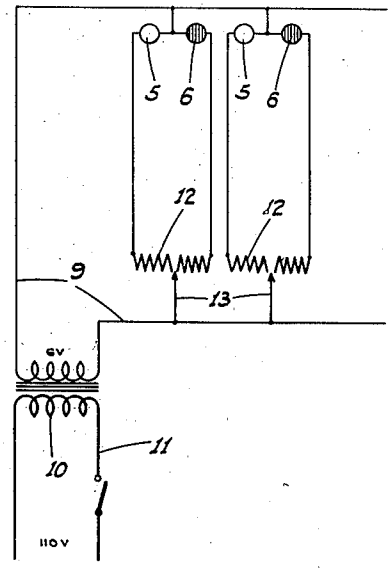


Fig. 4



INVENTORS

Stephen E. Blewett

Thomas A. Gaffney

BY Webb & Webb

ATTORNEYS

Patented Mar. 11, 1947

2,417,043

UNITED STATES PATENT OFFICE

2,417,043

ILLUMINATED WEATHER MAP

Stephen E. Blewett and Thomas A. Gaffney, Pasadena, Calif., assignors of one-half to Stephen N. Blewett and Robert N. Blewett

Application August 25, 1944, Serial No. 551,176

1 Claim. (Cl. 177—311)

1

This invention relates to meteorological equipment, and particularly to a weather map. The preparation of such a map at the present time, to portray low and high pressure areas over any given part of the country, requires plotting and drawing for three or four hours, and a redoing of this operation as pressure conditions change.

The principal object of our invention is to provide a weather map structure so constructed that a visual indication of barometric pressure conditions over any area of the map may be instantly presented to the onlooker and as quickly changed and kept up to date as pressure conditions change, and without any drawing or plotting being necessary.

A further object is to provide a structure for the purpose which is easy to operate and which has no complicated mechanism apt to give trouble—the renewal of any burnt-out electric lamps being the only cost of upkeep.

These objects we accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claim.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Figure 1 is a front elevation of the improved weather map structure.

Figure 2 is a front elevation of the upper portion of the cabinet, with the map panel removed to show the arrangement of lamps behind the panel.

Figure 3 is a fragmentary end elevation of the structure, partly broken away and in section.

Figure 4 is a diagram of the control circuit arrangement for a pair of the lamp units.

Referring now more particularly to the characters of reference on the drawings, the structure comprises a cabinet 1 of suitable proportions, the upper portion of which is formed as a rectangular box 2, the front of which is closed by a pane or panel 3 of opal glass or the like (which is translucent but not transparent), and on which a map is outlined, as at 4.

The box behind the panel 3 contains a plurality of low voltage electric lamps as close together as possible, and arranged in units, each of which comprises a white-light bulb 5 and a red-light bulb 6. The lamps of each unit are enclosed in a shield 7 which extends from the base 8 on which the lamps are mounted to the map panel, the shield structure being preferably of honey-comb form, as shown in Fig. 2, for convenience of manufacture and assembly.

The lamps of each unit are as close as possible

2

so that either one will illuminate the same area on the map, the shield preventing the illumination from such lamps from spreading beyond the corresponding area. Either the panel 3 or the base 8 may be made readily removable from the box so as to render the lamps accessible for instant replacement of any lamp when necessary.

The functioning or illumination of the lamps and the intensity of their illumination is controlled by the operator by the following means:

The current in the lamp circuit 9 is suitably reduced from that of the main circuit 10 by a transformer 11. The lamps of each unit are interposed in parallel in the circuit 9, one terminal of each lamp being connected to one side of the circuit, while the other terminals of the two lamps are connected to the opposite ends of a center-tap rheostat 12, the movable element 13 of which is connected to the other side of the circuit.

With such an arrangement it will be seen that the greatest resistance in the circuit to either lamp of the unit (and which of course reduces the intensity of the light therefrom) will be had just before the circuit is broken by the movement of the center-tap element 13; and when said element is then moved to close the circuit to the other lamp there is a correspondingly great resistance and a low light intensity of said other lamp, which intensity is increased as the element 13 is shifted about the rheostat.

The different elements 13, of which there are as many as there are lamp units, are connected to operating knobs 14 mounted on a control board 15 provided with the cabinet 1 in front of and below the map panel.

In operation it may be arbitrarily assumed that the white lights represent high pressure areas from 30'' up and that the red lights represent low pressures from 30'' down. Also, it is assumed that with a high pressure of 31'' the white light is the brightest or has its greatest intensity, while with a low pressure of 28'' the red light will be brightest, or at its greatest intensity.

As the pressure reports for any designated area come in over the teletype or other source of information the operator manipulates the knob 14 of the lamp unit for the corresponding area on the map, the resultant relative intensity or color of the light visible through the map giving a visual indication of pressure conditions. As each different pressure report is received the proper knob is accordingly manipulated to give a corresponding indication on the map, so that said

map may be kept current or up to date with a minimum of work and loss of time.

Since the entire map panel is backed by a close arrangement of lamp units, the map (if the entire area thereof is being charted) appears as a series of white high-pressure areas and red low-pressure areas, shading off into each other as the pressure increases or decreases. The shields between the lamp units are employed to give a clearer cut shading where the pressure gradient is changing rapidly.

While we preferably use the two-color light arrangement, we may use single color lights only, with a rheostat control to give a wider range of light intensity than is necessary with the two-color arrangement.

From the foregoing description it will be readily seen that we have produced such an illuminated weather map as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the illuminated weather map, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claim.

Having thus described our invention, what we

claim as new and useful and desire to secure by Letters Patent is:

A weather map comprising a translucent panel having a map outlined thereon, a plurality of lamp units behind the panel, each unit comprising a lamp of one color and a lamp of a different color, and individual control means for the lamps of each unit to gradually decrease the intensity of the light from the lamp of one color and then extinguish the same, and then place the lamp of the other color in operation with an increasing intensity.

STEPHEN E. BLEWETT.
THOMAS A. GAFFNEY.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
777,116	Louis	Dec. 13, 1904
1,401,608	Kingsley	Dec. 27, 1921
1,884,500	Anderson	Oct. 25, 1932
2,091,086	Taylor	Aug. 24, 1937
1,222,083	Dickerson	Apr. 10, 1917
2,354,888	Smith	Aug. 1, 1944