U.S. Weather Bureau.

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Appendix

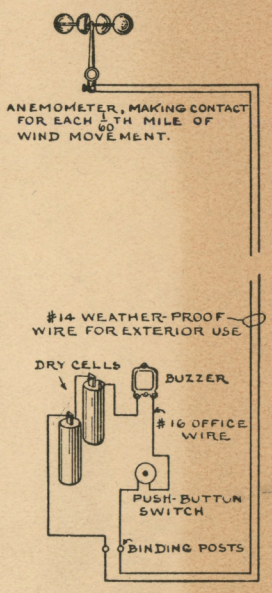
(Appendix to Circular D, Instrument Division, Fourth Revision.)

[June 4, 1918.]

INSTRUCTIONS FOR WIRING AND OPERATING AN INDICATING ANEMOMETER.

Apparatus used.—A standard Robinson anemometer, modified to make electrical contact for each $\frac{1}{60}$th mile of travel of the wind, is required. This anemometer, properly exposed, is connected electrically with a single dry cell, a buzzer, and a push-button switch; all as shown in the accompanying diagram of circuits.

Operation.—To determine the velocity of wind in miles per hour, close the push-button and count the number of times the buzzer sounds during *one minute*. The number counted is the number of miles per hour the wind is blowing, i. e., the velocity of the wind. The anemometer should be exposed at a place where the movement of the wind is least obstructed by buildings or other artificial objects, in order that the velocity measured is representative of the region. The support used for the anemometer should be substantial and rigid, and the instrument held with its axis vertical.



Wiring.—Connect in series the buzzer, the push-button switch, the battery, and the two anemometer binding posts provided for that purpose. Use No. 16 or larger copper wire for short lines, and No. 14 or larger for long lines. Do not use more than a one-cell battery on a short line or a two-cell battery on a long line, as too much current is likely to fuse the contacts in the anemometer. The line must not exceed 500 feet in length. In some instances a specially designed box to contain the dry cells inside and the buzzer and push-button mounted outside will be furnished.

Caution.—There are two loose nuts and one set screw about the base of the anemometer. The loose nuts are intended to receive the wires of the electric circuit, while the set screw is intended to clamp the anemometer to its support. Neither the nuts nor the screw should be turned up with much force, but should merely be turned home.

INSTRUCTIONS FOR THE CARE OF ANEMOMETERS.

1. The spindle bearings of the anemometer must be oiled every Monday.

2. To oil the top bearing, remove the cups by loosening the side screw, and apply a drop of clock oil, using only the special oil furnished by the bureau. To oil the lower bearing, slip off the oil-hole cap and insert a drop of oil in the cup in which the lower end of the spindle rests. Also apply a drop of oil to the worm on the spindle.

3. On the first Monday following the 15th of the month, unscrew and remove the top bearing, lift out the spindle, and with a *clean*, soft cloth wipe off all parts that rub together and return to position, using several drops of oil on each bearing.

4. Every three or four months write to the supervising Weather Bureau office for an anemometer that has had all its parts newly cleaned and oiled, and return to him for cleaning the one you have been using.

5. When the anemometer is neglected the spindle bearings become dry and squeak. This indicates friction, and such friction makes the indications of the instrument entirely unreliable.