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2,260,245

HYGROMETER

Filed May 15, 1939

FIG-1

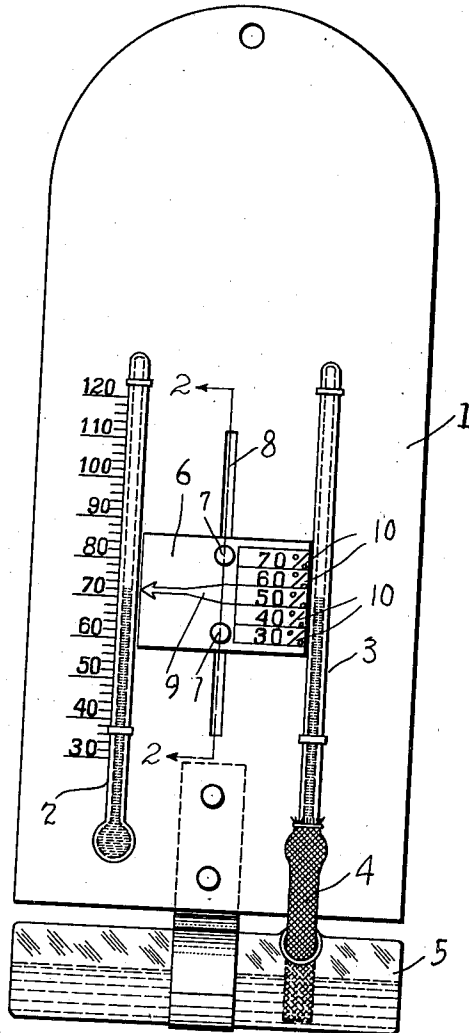
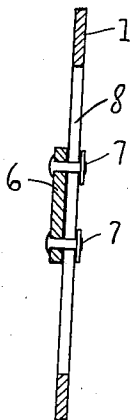


FIG-2



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23

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UNITED STATES PATENT OFFICE

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HYGROMETER

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2 Claims. (Cl. 73—338)

This invention relates to hygrometers, it more particularly relating to hygrometers of the dry and wet bulb type.

The object of the invention is to provide simple and effective means for readily indicating the humidity without the necessity of mental calculation.

A further and more specific object is to provide in connection with the tubes of the dry and wet bulbs a slidable indicator bearing indicia, one of which cooperates with the dry bulb and the balance of which cooperate with the wet bulb.

In the accompanying drawing:

Fig. 1 is a front elevation of a hygrometer embodying the improvements.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Referring to the drawing, 1 represents a supporting back of any suitable design upon which is mounted in spaced relation the tube 2 of the dry bulb and the tube 3 of the wet bulb. The wet bulb has in the usual way the wick 4 leading from the water reservoir 5 which is supported by a bracket from the back 1.

In order to quickly and accurately determine the humidity without the necessity of mental calculation there is slidably mounted on the back 1 an indicator 6 in the form of a slide, this indicator being adjustably connected with the back by means of rivets 7 which extend through a slotted opening 8 in the back and are adapted to hold the indicator normally against movement to permit its ready adjustment when desired. The indicator has an arrow 9 to cooperate with the dry bulb tube and also a plurality of numerical indications 10 to cooperate with the wet bulb tube, these indications 10 representing the humidity zones. In the drawing the parts are shown in what is considered the ideal condition; that is, the indicator when the arrow registers with the temperature of the dry bulb tube shows a humidity of 50°. The wet and dry bulbs are constructed in any usual way for instruments of this character but preferably the liquid in the wet bulb is of a more responsive character so that it expands and contracts faster than the liquid in the dry bulb but the same result may be secured by a change of bore in the wet bulb and its tube.

In the operation of the device when it is desired to determine the humidity, the indicator 6 is moved until the arrow 9 coincides with the

temperature indication of the dry bulb tube, after which by observing which one of the zones 10 stands substantially opposite the highest point of the liquid in the wet bulb tube a reading of the humidity may be readily ascertained, without the necessity of any mental calculation, and suitable correction may be made for humidity if necessary.

Having thus described the invention, what I claim is:

1. In a hygrometer of the wet and dry bulb type, a supporting base, a pair of wet and dry bulbs and their tubes stationarily mounted on said base in spaced apart relation, said wet bulb and its tube being constructed separately and independently of said dry bulb and its tube, whereby either the liquid or the bore in one tube may be of a different character from either the liquid or the bore in the other tube; a single movable indicating member slidably mounted on said base between and extending to the tubes of said wet and dry bulbs, said indicating member having on one side thereof a single indicating mark adapted to register with the reading of the dry bulb thermometer and having on the other side thereof a plurality of humidity indicating indicia any one of which may register with the reading of the wet bulb tube to indicate relative humidity.

2. In a hygrometer of the wet and dry bulb type, a comparatively thin supporting base, a pair of independent wet and dry thermometer bulbs and their tubes stationarily mounted on said base in spaced apart parallel relation, said base having a slot centrally positioned between said tubes, a single movable comparatively thin indicating slide slidably mounted on said base between and extending to the tubes of said wet and dry bulbs, means to slidably connect said slide with said base which extends through the slide and the slot in the base so as to engage the outer face of the slide and the inner face of the base, said indicating slide having on one side thereof a single indicating mark adapted to register with the reading of the dry bulb thermometer and having on the other side thereof a plurality of humidity indicating indicia any one of which may register with the reading of the wet bulb tube to indicate relative humidity.

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