May 22, 1928. 1,670,507

V. R. JOSE, JR

THERMOMETER UNIT

Filed April 8, 1926

Fig. 1.

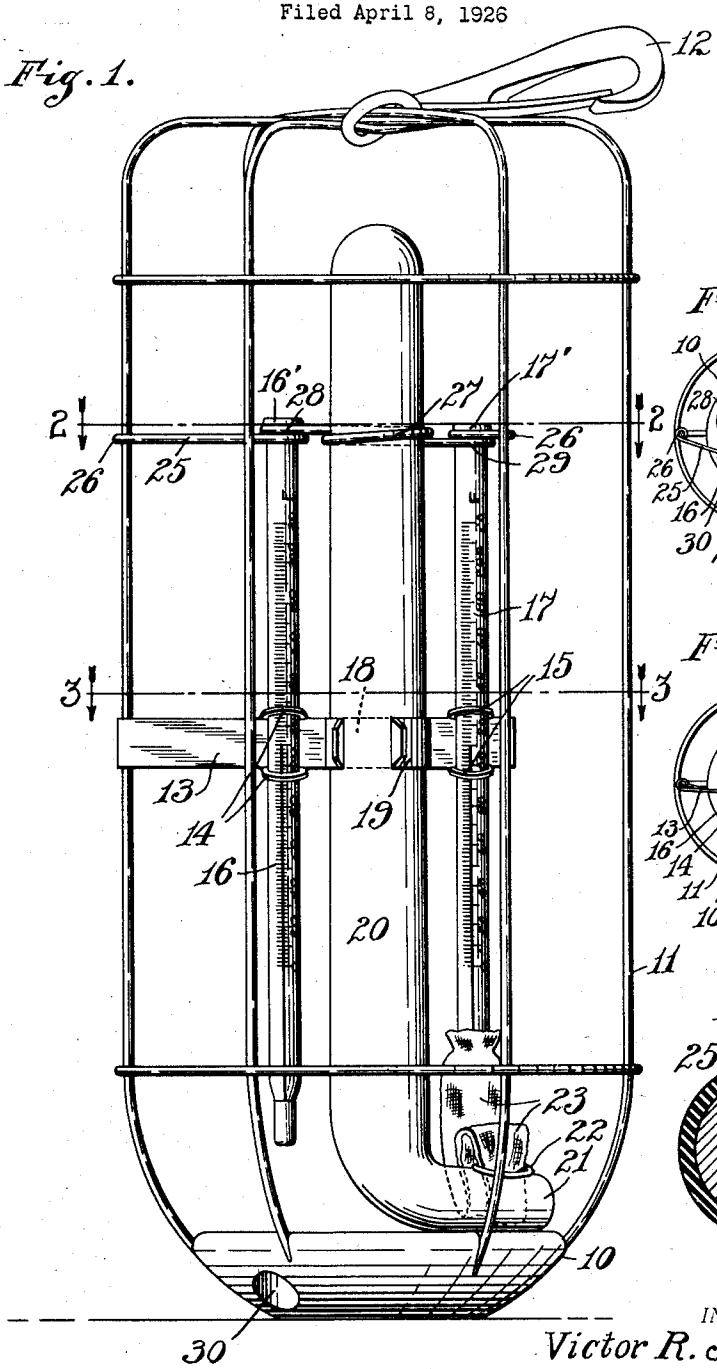


Fig. 2.

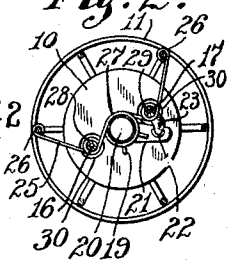


Fig. 3.

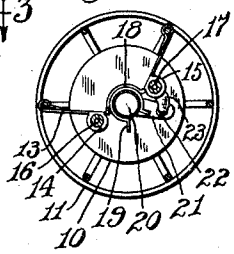
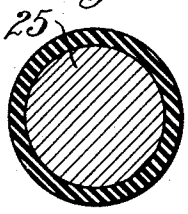


Fig. 4.



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UNITED STATES PATENT OFFICE.

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THERMOMETER UNIT.

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In the operation of dry kilns it is necessary to keep track not only of the temperature but the humidity within the kiln and for that purpose the operators use both wet bulb and dry bulb thermometers which are generally combined in a single portable unit. These units, heretofore, have been of such character that they may be readily hung upon a wall or laid upon a table or other support, but if they are leaned up against a support they are very apt to fall down or be kicked over and the thermometers broken.

The object of my present invention is to provide a thermometer unit of such character that it will automatically maintain an upright position and always protect the thermometer elements.

A further object of my invention is to so construct the parts that they may be readily handled when hot.

The accompanying drawings illustrate my invention. Fig. 1 is an elevation; Fig. 2 a section on line 2—2 of Fig. 1 on a smaller scale; Fig. 3 a section on line 3—3, and Fig. 4 a diagrammatic section, on a very much larger scale of one of the frame wires.

In the drawings 10 indicates a relatively heavy hemispherical base, from which arises a cage-like structure 11 provided at its top with a swiveled supporting hook 12. At an intermediate point in the height of frame 11 is a cross bar 13 conveniently formed from a sheet metal stamping having two pairs of ears 14 and 15 through which the dry bulb thermometer 16 and the wet bulb thermometer 17 may be projected and by which the stems of said thermometers will be frictionally held.

The middle of cross bar 13 is provided with a pocket 18 in which is secured a spring clip 19 adapted to receive and hold a tubular water reservoir 20 of common form provided with an out-turned foot 21, having a perforation 22 in which is mounted the wick 23 for application to the bulb of the wet bulb thermometer 17.

Above cross bar 13 is a cross bar 25 conveniently formed of wire having eyes 26 at its ends embracing wires of the cage 11 and at intermediate points being twisted into an eye 27 adapted to receive reservoir 20, and two eyes 28 and 29 adapted to receive respectively the stems of the thermometers 16 and 17, and so formed as to obstruct passage of the usual heads 16′ and 17′ which are formed upon the upper ends of the thermometer tubes.

An apparatus of this kind is, many times, allowed to stand inside the kiln and of course acquires the temperature of the kiln. The cage 11 is most conveniently formed of metal wire but this would be uncomfortable to pick up after it had become heated. In order to avoid this difficulty I coat the cage 11, hook 12 and the cross bars 13 and 25, with a coating of material having a comparatively low heat conductivity, say for instance bakelite, so that the device may be readily handled without discomfort.

In order to insure a proper circulation of the surrounding atmosphere relative to the thermometer bulbs, I form an upwardly tapered opening 30 through the base 10 immediately beneath each of the thermometer bulbs, thus insuring an upward circulation of air immediately adjacent the thermometer bulbs. The weight 10 is sufficient to bring the center of gravity of the entire structure well below the lower ends of the thermometer tubes and reservoir and thus insures an upright position of the apparatus at rest at all times, and thoroughly protects the glass tubes.

I claim as my invention:

1. A thermometer unit comprising a protective cage, having a top and a hemispherical weighted base, two thermometer tubes, a water reservoir, a water supply connection from said reservoir to one of said tubes, and means within the cage for removably supporting said thermometer tubes and water reservoir.

2. A thermometer unit comprising a protective cage, a hemispherical weighted base for said cage, two thermometer tubes, a tubular water reservoir, a supply connection from said reservoir to one of said tubes, a cross bar supported within said cage, means carried by said cross bar for frictionally supporting said thermometer tubes and a spring clip carried by said cross bar for receiving and supporting said water reservoir.

3. A thermometer unit comprising a hemispherical weighted base, a wire cage carried by said base and coated with a coating having a relatively low heat conductivity, two thermometer tubes, a water reservoir, a water supply connection from said reservoir to one of said tubes, and means within the cage for removably and protectively supporting

said thermometer tubes and said water reservoir.

4. A thermometer unit comprising a heavy hemispherical base having a pair of perforations therethrough, a protective cage carried by said base, a pair of thermometer tubes and a water reservoir having a water supply connection with one of said thermometers, and means within the cage for detachably and protectively supporting said tubes and reservoir, with said tubes in axial alignment with said perforations.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 2nd day of April, A. D. one thousand nine hundred and twenty-six.

VICTOR R. JOSE, JR.