No. 637,343. Patented Nov. 21, 1899.

H. VON KOEHRING.

PYROMETER.

(Application filed Nov. 9, 1898.)

(No Model.)

Fig. 1.

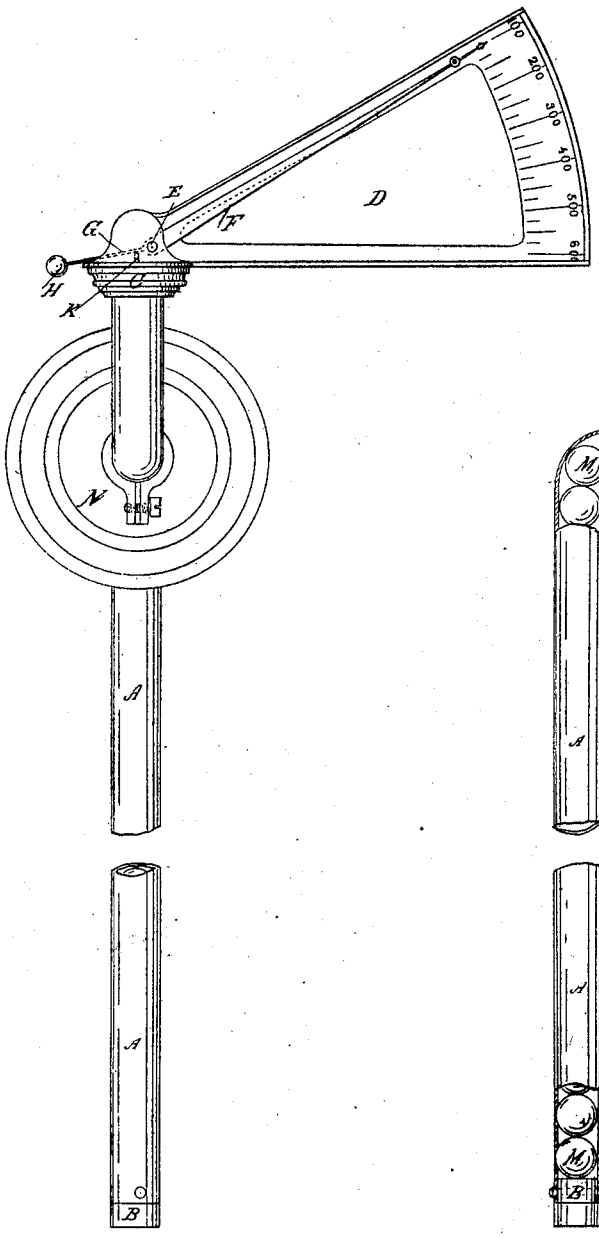
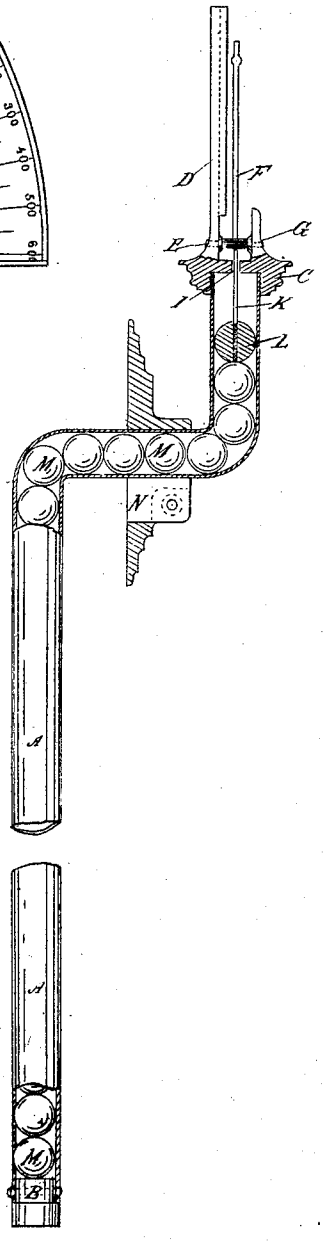


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY VON KOEHRING, OF SEGUIN, TEXAS.

PYROMETER.

SPECIFICATION forming part of Letters Patent No. 637,343, dated November 21, 1899.

Application filed November 9, 1898. Serial No. 695,964. (No model.)

To all whom it may concern:

Be it known that I, HENRY VON KOEHRING, a citizen of the United States, residing at Seguin, in the county of Guadalupe and State of Texas, have invented a new and useful Pyrometer, of which the following is a specification.

My invention relates to improvements in pyrometers in which the motive power is a column of metallic balls of high expansive quality inclosed in a metallic tube of less expansive power; and the object of my improvements is to produce a pyrometer which is simple in construction and cheap to manufacture and may readily be used for any ordinary cooking-stove. I attain this object by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a vertical front view of the entire apparatus; and Fig. 2 is a side view, partly in section.

Similar letters refer to similar parts throughout both views.

A is a tube, of convenient size, of steel or other suitable material of low expansive capacity and has near its upper end two rectangular bends. The tube A is firmly closed at the lower end by a stud B, which is riveted into the same. To the top is screwed a cap C, of brass, on the side of which is attached a sectorial-shaped arm D, its arc forming the scale and being accurately graduated into degrees. Into the sector D is pivoted at E a light arm F, the point end of which moves on the face of the arc, and the other shorter end G is flattened and terminates into a ball H for balancing the arm.

The tube A is filled up near to the top with balls M, of zinc or other material of high expansive capacity, and I have selected this form of balls, as experiments have proved that they give the least friction and will be uniformly heated and expanded better than a solid bar, and into the upper ball is screwed with its one end a pin K. The other free end passes through the center hole I of the cap C and touches against the flat part G of the light arm F.

When the tube A is inserted into a suitable hole of the door or the side of a cooking-stove and fastened with the flange N to the same and exposed to the heat, the zinc balls will soon expand, the pin K of the upper ball L will lift up the flat part G of the light arm F, and, according to the degree of heat applied, the balls will expand more or less, and the point of the light arm F will indicate on the arc the degree of the heat applied.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a pyrometer, the combination with a continuous tube bent to form two legs extending in substantially the same direction in offset relation to each other and connected by a transverse portion, of a row of expansible balls or spheres of smaller diameter than the tube and positioned in a single row in the legs and transverse portion thereof in contact with each other, a closure for one of the legs of the tube forming a support for the column of balls, and an indicator on the other leg which is actuated by the ball at the top of the column.

2. In a pyrometer, the combination with a continuous tube bent to form two upright legs extending in substantially the same direction in offset relation to each other and connected by a horizontal portion, of a column of expansible balls or spheres of smaller diameter than the tube and positioned in a single row in the legs and transverse portion thereof in contact with each other, a flange adjustably positioned on the horizontal portion of the tube which is adapted for holding the device in position, a closure for the end of the lower leg of the tube on which the column of balls rests, a scaled arm on the upper leg, a pivoted pointer therefor having a weighted arm, and a slidable pin connected to the uppermost ball of the column and bearing against said pointer.

Signed by me at San Antonio, Texas, this 3d day of November, 1898.

HENRY VON KOEHRING.

Witnesses:

E. KENNEY,

JOHN BOSSHARDTZ.