

M. KLAIBER.
TEMPERATURE ANNUNCIATOR.
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1,252,811.

Patented Jan. 8, 1918.

Fig. 1.

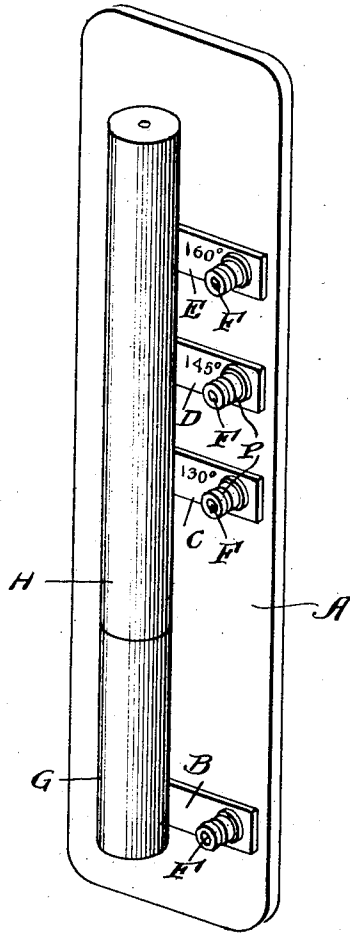


Fig. 2.

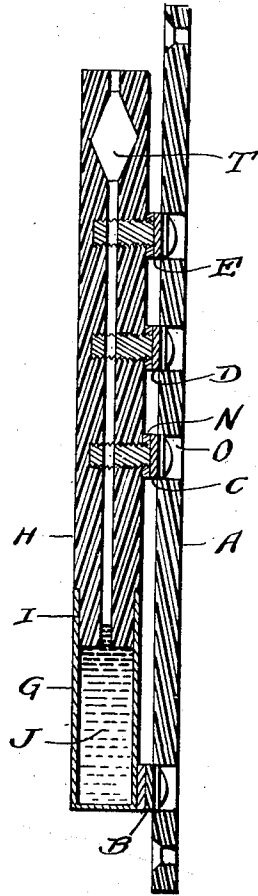
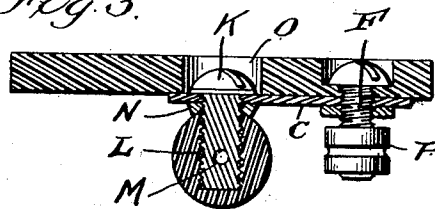


Fig. 3.



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TEMPERATURE-ANNUNCIATOR.

1,252,811.

Specification of Letters Patent.

Patented Jan. 8, 1918.

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To all whom it may concern:

Be it known that I, MAXIMILIAN KLAIBER, a citizen of the United States, residing at North Hackensack, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Temperature-Annunciators, of which the following is a specification.

My invention relates to that class of temperature annunciators or heat controlling devices in which an expansible liquid in a thermometer tube closes and opens an electric circuit to operate an alarm device at a predetermined temperature and more particularly to devices of this character where the expansible liquid is mercury. I am aware of a number of attempts, only partially successful, heretofore made to produce a practical device of this character, my aim herein being to produce a device which can be economically made and will be certain in its operation.

In the drawings, Figure 1 shows a perspective view of the device in position,

Fig. 2, a vertical section.

Fig. 3, a horizontal section showing the manner in which the thermometric column is brought into circuit with the alarm device.

A shows a backing of fiber, ebonite or other electrical non-conducting material to which the device is attached. G is a metallic tube containing a supply of mercury into which a fiber or ebonite tube H is fitted. This tube H is of the ordinary and well known type and is not, in itself, any part of my invention. It may be composed of any non-fragile non-conducting substance. The tube G is directly soldered or otherwise attached to the metal plate B forming part of the electric circuit. The tube H has threaded screws K connected thereto, which fit into holes O made in the fiber backing. These metallic screws are driven into the tube H before the bore M is made in same so that the bore M is formed continuously through the solid non-conducting cylinder as well as through the metallic screws K as shown. By this means, when the mercury column rises in the tube a perfect metallic contact is obtained between the body L of the screw K and the mercury in the thermometric tube. E, D and C show a series of metallic members connected to the tube H by means of screws K and which are fastened to the backing A by the threaded metallic contacts F,

P being the threaded heads of such contacting members.

It is apparent that the alarm device shown may be set for any predetermined temperature depending upon the number of contacting members and the particular contacting member for the setting of the alarm. I purposely leave the thermometric column open at the top to allow for the expansion and contraction of the mercury column.

By making the thermometric tube in two parts of a metallic member to contain the mercury and of a non-conducting member wherein the contact devices are located, I achieve great economy in manufacture, it having been found in practice that similar devices of this nature in which a glass capillary tube or a glass mercury tube was used with same were both impracticable and expensive. I have not shown herein the alarm device or the completed circuit to show its operation but it will be apparent to any person skilled in the art that one end of the electrical circuit containing the alarm or other actuated device will be attached to the member B and the other end to either C, D or E. At T, I show an enlargement in the bore of the tube which is for the purpose of holding any excess of mercury should the column of mercury in exceptional cases, expand above the contact member E.

I have shown a preferred embodiment of my invention, but it is obvious that numerous changes could be made in its details, without departing from its spirit, as defined in the claims. Thus, any suitable conducting material could be used for the members K and numerous other minor modifications could be made.

Having now described my invention, what I desire to own and claim by Letters Patent is:

1. A method of making a tube for a thermostatic circuit closer, which consists in firmly embedding a metal member in a solid non-conducting cylinder and afterward forming a bore through said cylinder and through said metal member, so as to form a continuous bore having an annular conducting contact member at a predetermined point along the said bore of said tube.

2. A method of making a tube for a thermostatic circuit closer, which consists in firmly embedding a metal member in a solid non-conducting cylinder and afterward

forming a bore through said cylinder, so that said metallic member is connected to the interior of said bore.

3. In a thermostatic circuit closer, a reservoir containing mercury, a non-conducting tube made of non-fragile material connected to said reservoir, said tube having a conduct-

ing member firmly embedded therein and having a continuous bore extending through it and said conducting member.

In testimony whereof I hereunto affix my signature.

MAXIMILIAN KLAIBER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."