

July 22, 1941.

F. A. NODINE

2,250,231

THERMOMETER AND MOUNTING

Filed Oct. 5, 1938

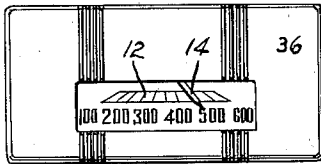


Fig. 1

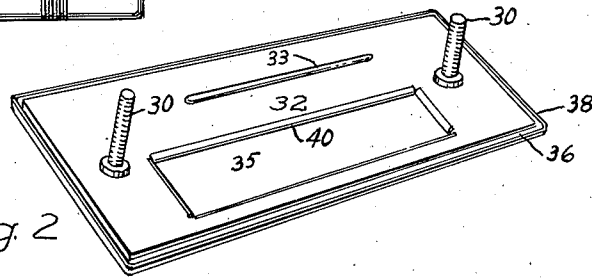


Fig. 2

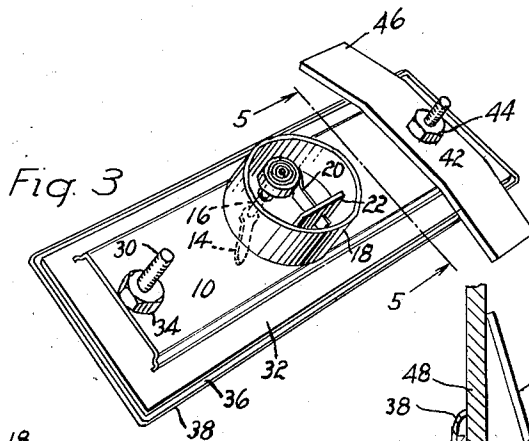


Fig. 3

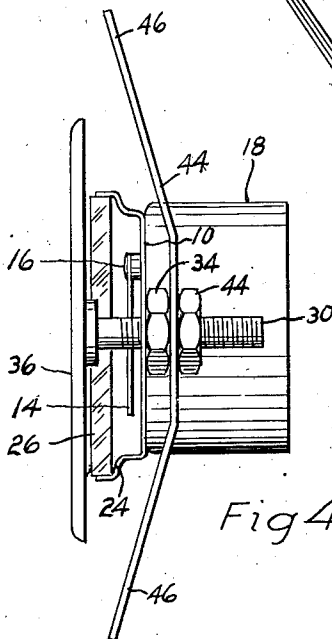


Fig. 4

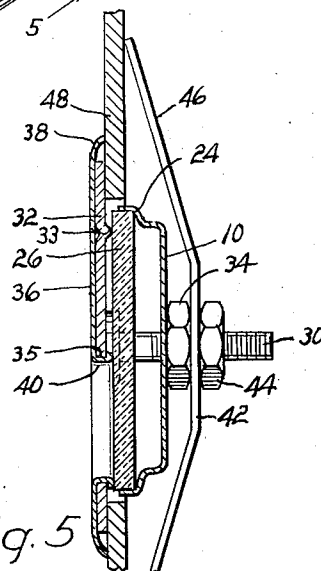


Fig. 5

INVENTOR;
FREDERICK A. NODINE,
BY *Romeyn A. Spare*
HIS ATTORNEY.

UNITED STATES PATENT OFFICE

2,250,231

THERMOMETER AND MOUNTING

Frederick A. Nodine, Terryville, Conn., assignor to
The Cooper Oven Thermometer Company,
Pequabuck, Conn., a corporation of Connecticut

Application October 5, 1938, Serial No. 233,366

11 Claims. (Cl. 73—367)

This invention relates to thermometers and mountings therefor and comprises all of the features and aspects of novelty herein disclosed. An object of the invention is to provide an improved thermometer especially for ovens. Another object is to provide simple means for securing an ornamental face plate to a supporting plate. Another object is to provide an improved means and method of assembling and mounting a thermometer upon an oven door.

To these ends and also to improve generally upon devices of this character, the invention consists in the various matters hereinafter described and claimed. In its broader aspects, the invention is not necessarily limited to the specific construction selected for illustrative purposes in the accompanying drawing in which

Fig. 1 is a front view to small scale.

Fig. 2 is a perspective view of the supporting plate.

Fig. 3 is a perspective view of the device looking from the back.

Fig. 4 is an end view.

Fig. 5 is a sectional view on line 5—5 of Figure 3.

The numeral 10 indicates a back plate of channel cross section with a coating of porcelain enamel at the base of the straight portion and having a dial 12 thereon for cooperation with a pointer 14. The pointer is secured to an arbor 16 projecting through the back plate into a cup-shaped housing 18 open to the rear and secured to the back plate in any suitable way. The end of the arbor is connected to the usual thermostatic spiral ribbon 20 which is anchored to a leg 22 on an angle bracket secured to the bottom of the housing. The back plate 10 is of rectangular outline and has its flanges offset to form seats 24 to locate the upper and lower edges of a glass 26 through which the dial and pointer are viewed from the front.

The back plate 10 has openings adapted to loosely receive threaded studs or screws 30 which have their heads secured, as by spot welding, to a supporting plate 32. Nuts 34 clamp the back plate and the glass 26 against the supporting plate. The supporting plate 32 has a rectangular opening 35 directly in front of the dial 12. This opening and the plate itself are given a finished appearance by a thin face plate 36 which entirely covers the plate 32 and any discoloration left by welding on the screws 30. The face plate is desirably chrome plated and ornamented as by vertical ribs pressed from the metal. The face

plate has all its outer edges 38 bent around the outer edges of the supporting plate but enclosing them loosely. It is secured to the supporting plate by extruding the metal at the inner edges of an opening 40 which is substantially co-extensive with the opening 35 but slightly smaller. Thus the excess metal at the edges can be bent around to the inside surface of the supporting plate and tightly against it. This securely holds the face plate in a simple manner and provides a smooth outline or beading at the opening.

The screws 30 project beyond the nuts 34 and are adapted to receive spring-metal bars 42 clamped by nuts 44 and each having a straight central portion and diverging ends 46. The foregoing structure is a unitary device adapted to be shipped in assembled condition to a stove manufacturer for installation on an oven door or the like. Such an oven door, panel, or other wall member is indicated at 48 and has a rectangular opening smaller than the supporting plate 32 but large enough to let the back plate 10 pass freely through it when the spring bars 42 and nuts 44 are temporarily removed. Thereupon the spring bars and nuts are reassembled upon the screws and the nuts 44 set up. The ends 46 of the spring bars which are bent towards the oven door engage the inside of the door while the supporting plate 32 engages the outer surface. The channel of the back plate 10 is of such depth and the nuts 34 are of such thickness that the latter act as stops for the spring bars when the nuts 44 are set up, engagement occurring when the spring ends 46 bear against the oven door with a sufficient yielding pressure to securely hold the unit but avoiding undue pressure such as might distort the door or cause chipping of the porcelain enamel which customarily coats the outer surface of such door.

I claim:

1. In an oven thermometer for mounting on a wall member having an opening, a supporting plate having an opening and rearwardly projecting studs, a face plate covering the front of the supporting plate and also having an opening, heat indicating means supported by the studs and visible through all of said openings, and means for tightly securing the face plate to the supporting plate at the rim of the last opening.

2. In an oven thermometer, a back plate carrying heat indicating means, a supporting plate in front of the back plate and projecting beyond it, the supporting plate having an opening through which the heat indicating means is

visible, clamping bars extending across and beyond the back plate, screws secured to the supporting plate and passing through the back plate and the clamping bars, means for spacing the back plate from the supporting plate, and nuts for causing the clamping bars to approach the supporting plate to clamp an interposed member therebetween.

3. In an oven thermometer, a back plate carrying heat indicating means, a supporting plate in front of the back plate and projecting beyond it, the supporting plate being spaced from the back plate and having an opening through which the heat indicating means is visible, clamping bars extending across and beyond the back plate, screws secured to the supporting plate and passing through the back plate and the clamping bars, nuts for causing the clamping bars to approach the supporting plate to clamp an interposed member, and nuts between the back plate and the clamping bars to limit said approach of the clamping bars.

4. In an oven thermometer, a back plate carrying heat indicating means, a supporting plate in front of the back plate and projecting beyond it, the supporting plate being spaced from the back plate and having an opening through which the heat indicating means is visible, spring bars extending across and beyond the back plate, screws projecting from the supporting plate through the spring bars, and nuts on said screws for causing the projecting portions of the spring bars to yieldingly engage a member interposed between them and the supporting plate.

5. In an oven thermometer mounting, a unitary structure comprising a back plate of channel shape, heat indicating means supported by the back plate and having a pointer movable in the channel, a supporting plate extending across the open side of the channel and having an opening, means for securing the plates together, in combination with an oven wall having an opening of a size to freely pass the back plate and the heat indicating means but not the supporting plate, and clamping means secured to the back plate and projecting into engagement with the back of the oven wall.

6. In an oven thermometer, a back plate of channel shape supporting heat responsive means on the back and a pointer connected to said means and movable in the channel at the front, a supporting plate extending across the open side of the channel and having an opening through which the pointer is visible, means for securing the supporting plate to the back plate, and means for securing the assembled structure to an oven wall.

7. In an oven thermometer, a back plate of channel shape supporting heat responsive means on the back and a pointer connected to said means and movable in the channel at the front, the flanges of the channel having offsets to form

seats, a glass engaging said seats, a supporting plate in front of the glass and having an opening through which the pointer is visible, and means for securing the supporting plate to the back plate.

8. In an oven thermometer, a back plate carrying heat indicating means, a supporting plate in front of the back plate and projecting beyond it, the supporting plate being spaced from the back plate and having an opening through which the heat indicating means is visible, clamping bars extending across and beyond the back plate at the rear of the latter, studs projecting from the supporting plate through the clamping bars, and means engaging the studs and the clamping bars for securing all of said parts together with the projecting portions of the supporting plate and the clamping bars embracing an interposed member.

9. In an oven thermometer, a back plate carrying heat indicating means having a pointer, a supporting plate in front of the back plate and projecting beyond it, the supporting plate being spaced from the back plate to provide room for the pointer therebetween and the supporting plate having an opening through which the pointer is visible, clamping bars extending across and beyond the back plate at the rear of the latter, studs projecting from the supporting plate through the clamping bars, and means engaging the studs and the rear of the clamping bars for securing the projecting portions of the supporting plate and the clamping bars against opposite sides of an interposed member.

10. In an oven thermometer, a back plate carrying heat indicating means, a supporting plate in front of the back plate and projecting beyond it, the supporting plate being spaced from the back plate and having an opening through which the heat indicating means is visible, clamping bars extending across and beyond the back plate at the rear of the latter, threaded studs secured to the supporting plate and passing through the back plate and the clamping bars, and nuts threaded on the studs for causing the clamping bars to approach the supporting plate to clamp an interposed member therebetween.

11. In an oven thermometer mounting, a unitary structure comprising a back plate supporting heat indicating means, a supporting plate spaced in front of the back plate and having an opening through which to view the heat indicating means, and means for securing the back plate and supporting plate together at the opening in an oven wall, the back plate being of a size to pass freely through the wall opening and the supporting plate being of larger size than the wall opening to close the same, clamping bars removably mounted on said unitary structure, and means for forcing said bars against the rear of said wall in opposition to the supporting plate.

FREDERICK A. NODINE.