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[54] HOT ZONE ARRANGEMENT FOR USE IN A VACUUM FURNACE

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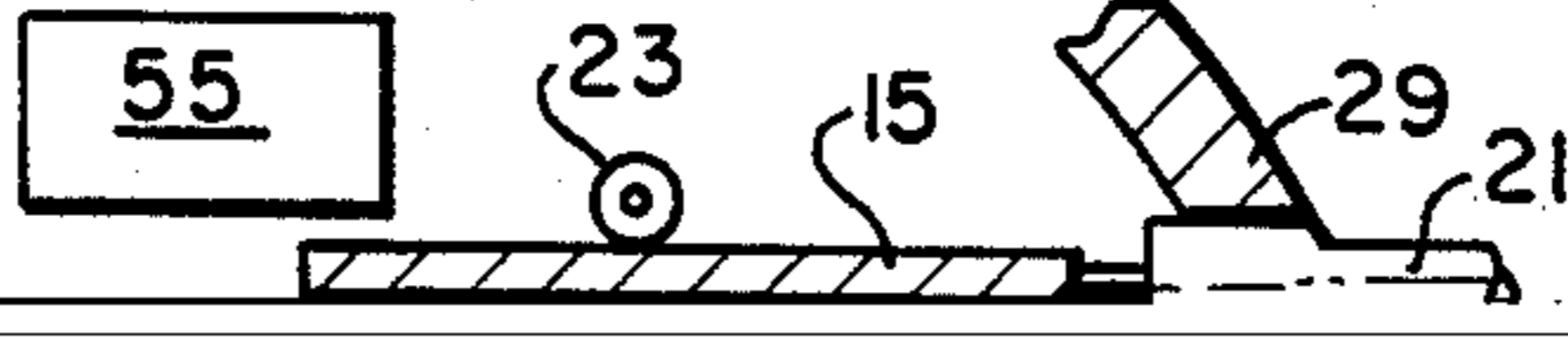
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fined by said insulation wall. The cooling gases pass into the heat chamber and out of the heat chamber through the first and second pairs of apertures to cool a work-piece which has been heat treated. The pairs of apertures lie (in pairs) opposite one another on the periphery of the heat insulation wall. Outside of the heat insulation wall, lying opposite the first pair of apertures, is located a heat reflecting member and opposite the second pair of apertures, outside of the heat insulation wall, there is located a heat reflecting baffle. Accordingly when the heat chamber is operating in a heat treating mode any heat which passes through an aperture or a pair of aper-

FIG. 1
(PRIOR ART)



~~heat chamber. The present system provides a heat~~

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BACKGROUND

In the vacuum furnace art a workpiece is held within a heating element to receive heat therefrom for what-

5 flecting surface member located outside of the lower apertures so that when heat passes through the lower apertures, it is reflected back into the heat chamber. At the upper section of the heat insulation wall there is formed a pair of apertures which act for a two-fold purpose. When the system is operating in a quenching

section 41 goes along with that door and accordingly

molybdenum shaft to hold the nut 83 in position. It

ber through the opening 43, or remove a workpiece therefrom, as the case may be.

In FIG. 1 there is shown a workpiece 45 which is surrounded to a great extent by four heating elements

5 bracket assemblies holding the heating element 69 which are not shown in order to simplify the drawing.

As can be seen in FIG. 2 there are two apertures 85 and 87 shown cut through the insulation wall. While

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come in contact with the workpiece 135 thereby cooling that workpiece. The inert gasses continue to be drawn toward the exhaust fan 131 through the apertures 111 and 113. When the gases pass through the apertures

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first and second aperture means in the periphery of said upper section and third and fourth aperture means in the periphery of said lower section; heat reflecting means