

United States Patent [19]

Kreider et al.

[11] **3,737,553**

[45] **June 5, 1973**

[54] **VACUUM ELECTRIC FURNACE**

3,295,843 1/1967 McMaster et al. 263/40 R X

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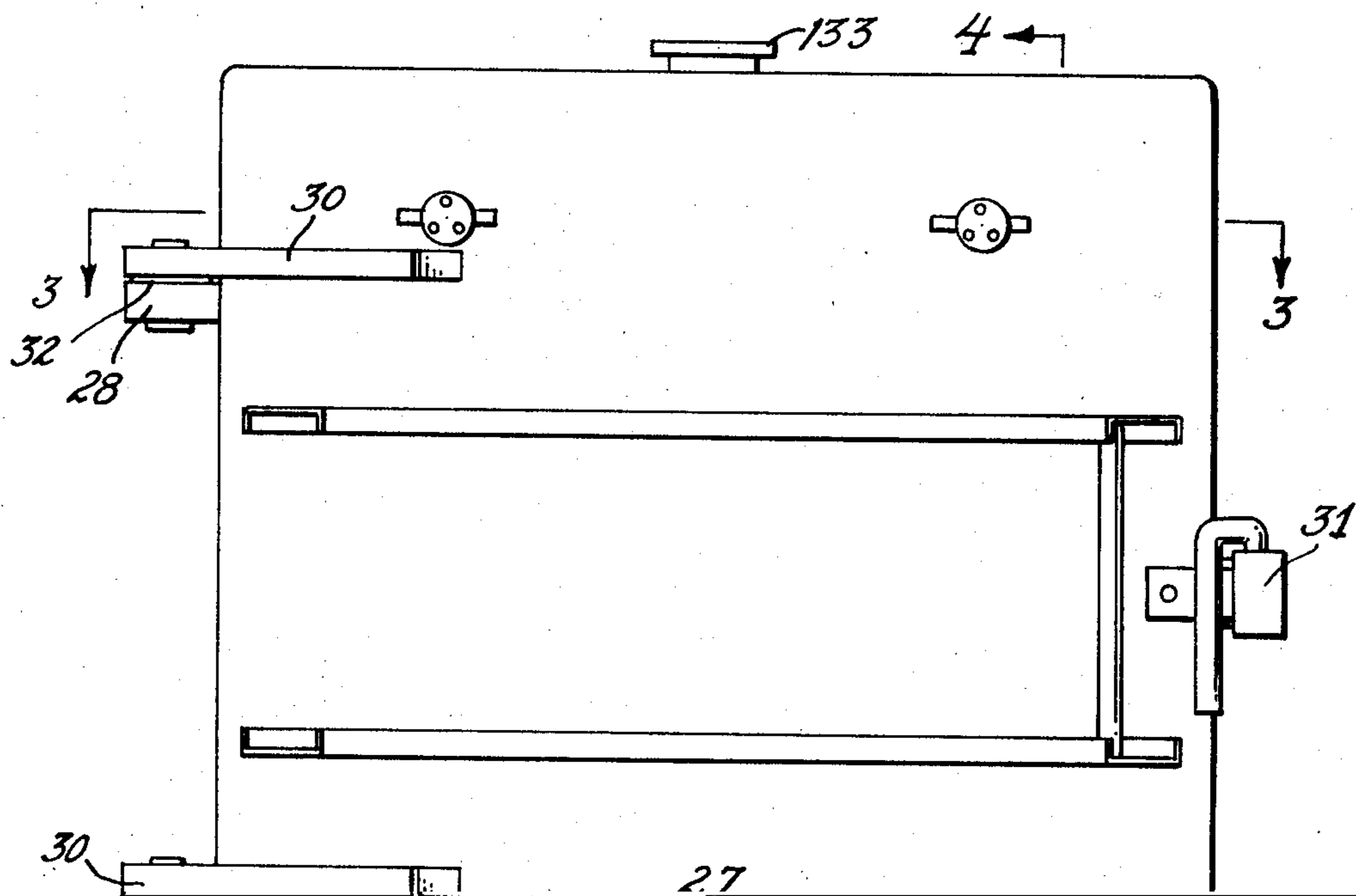
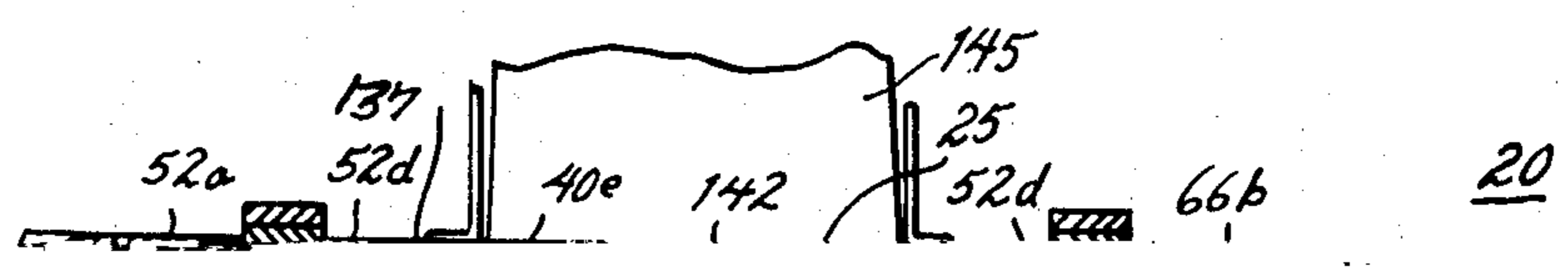
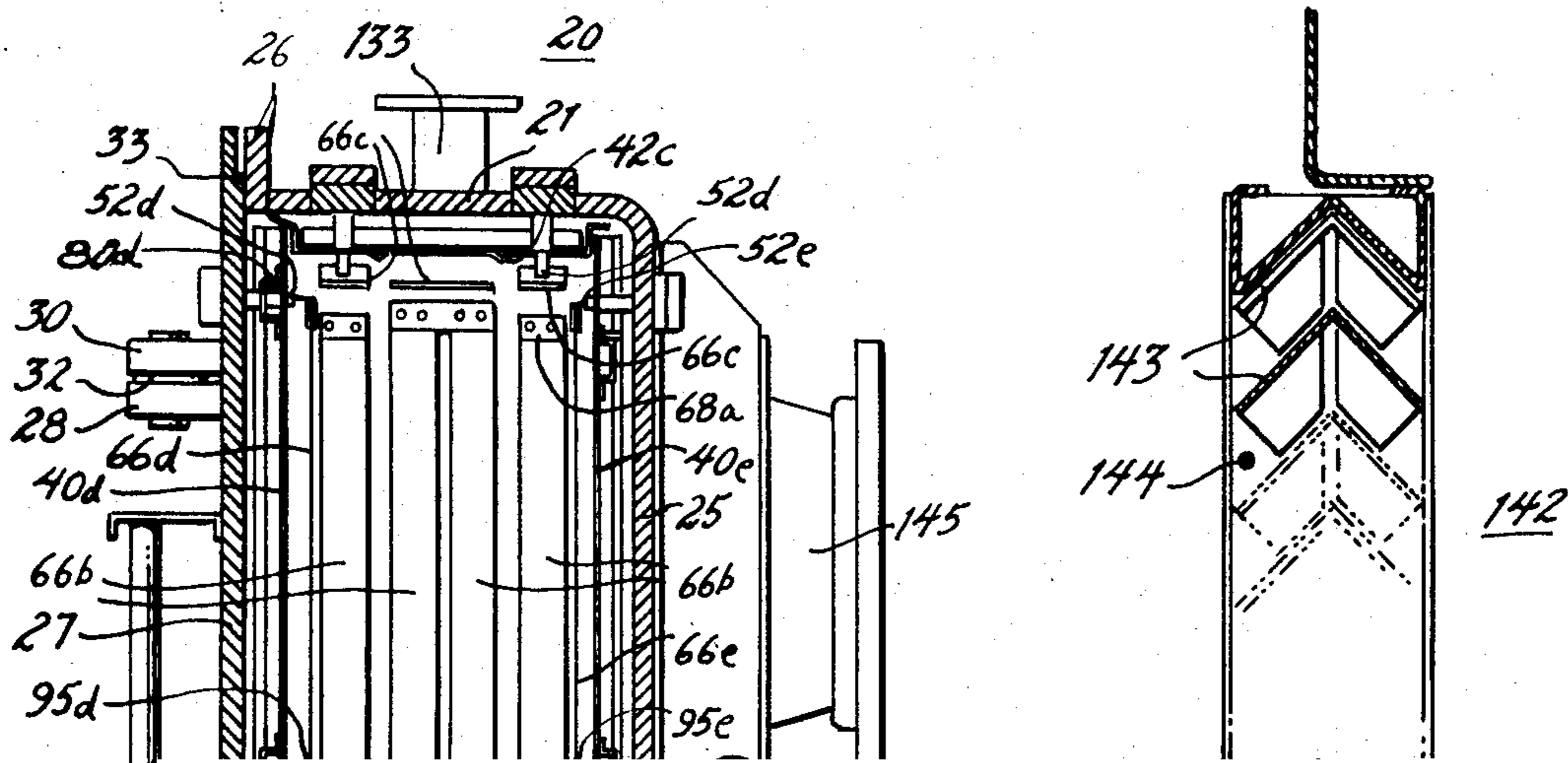
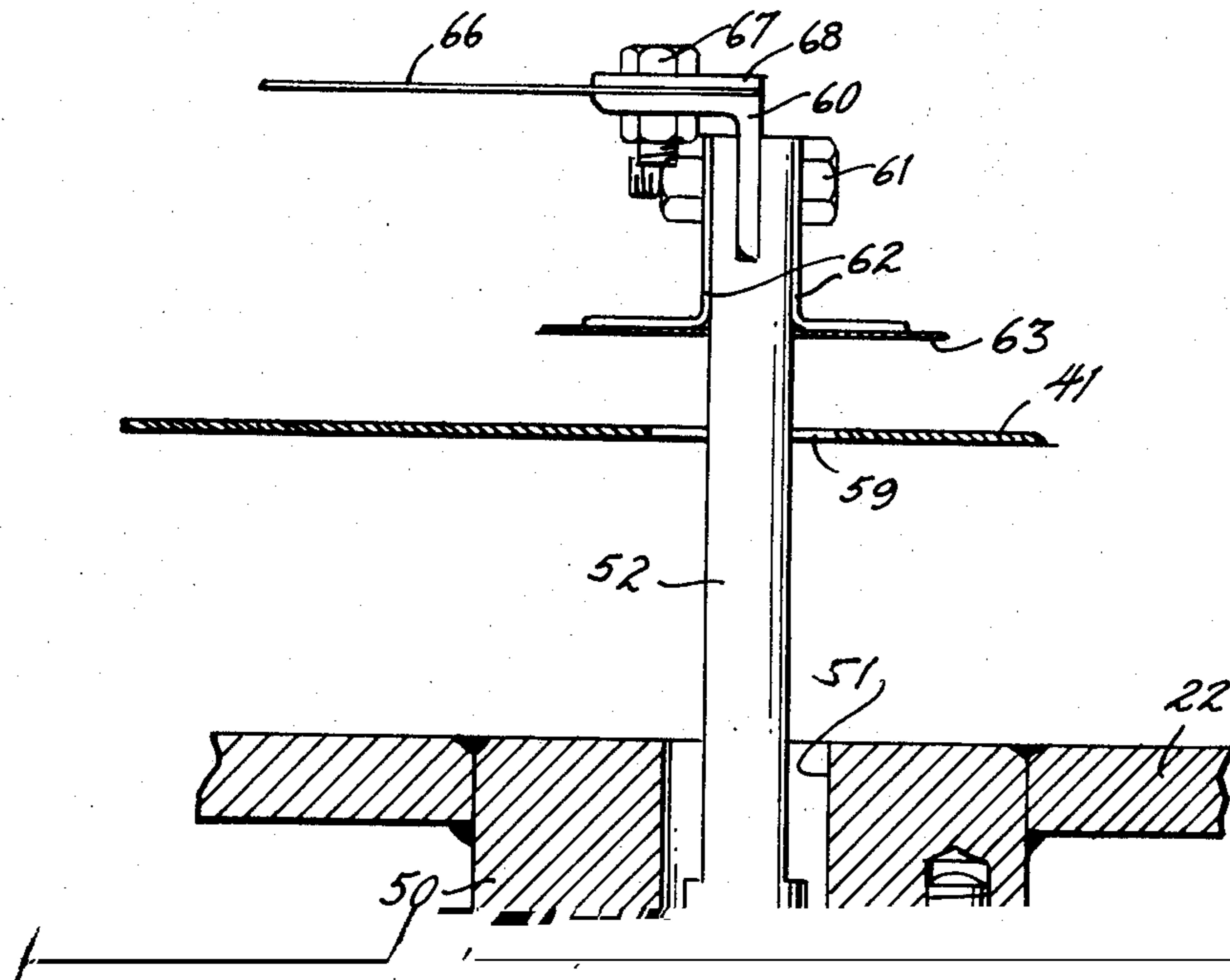


Fig. 3.





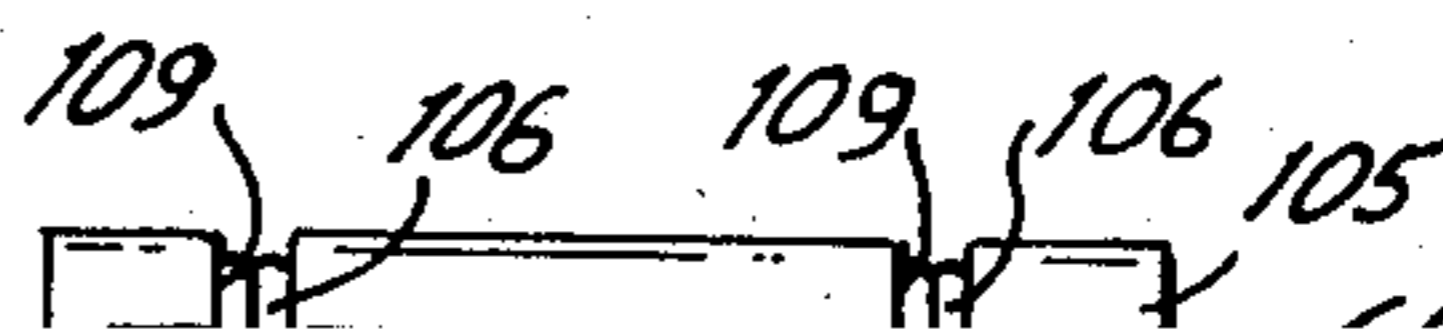
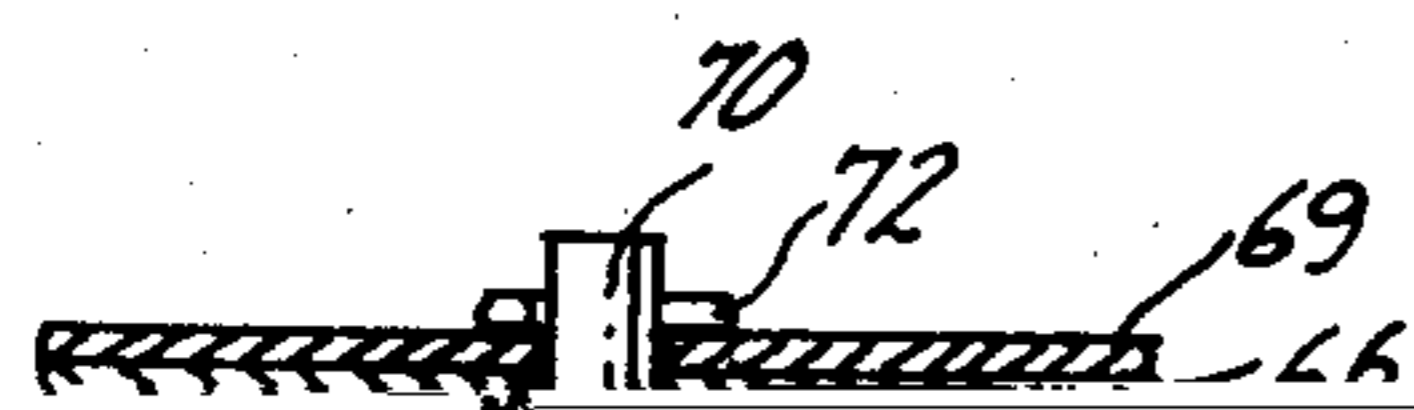
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3,737,553

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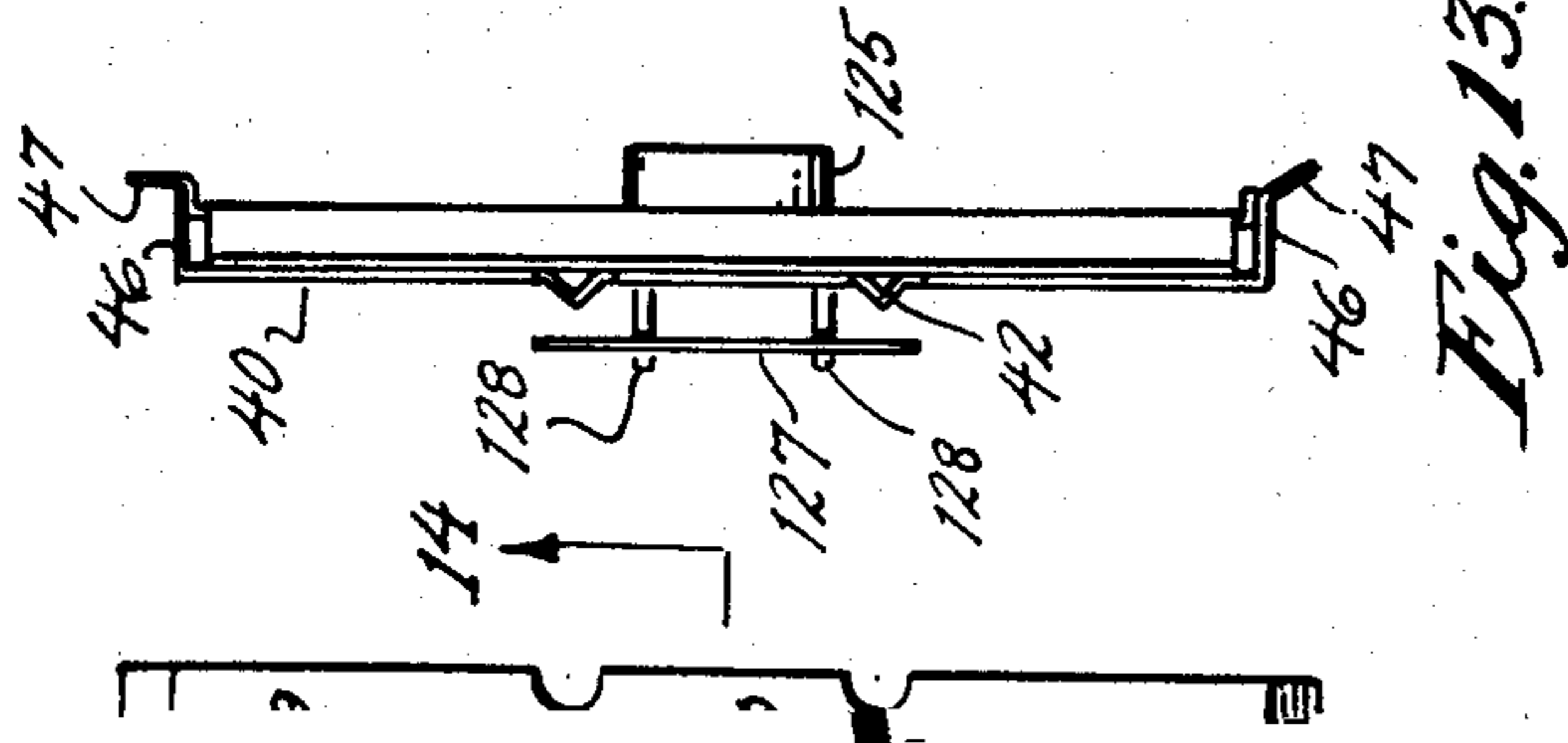
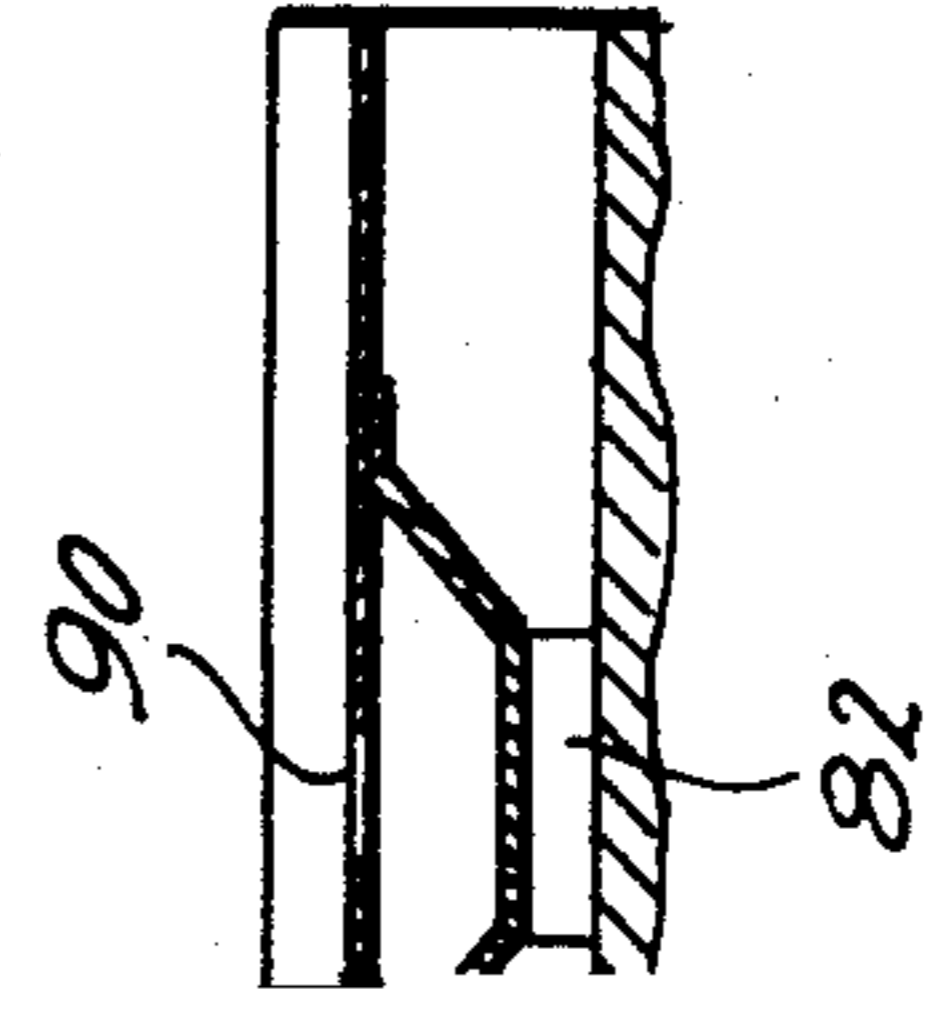
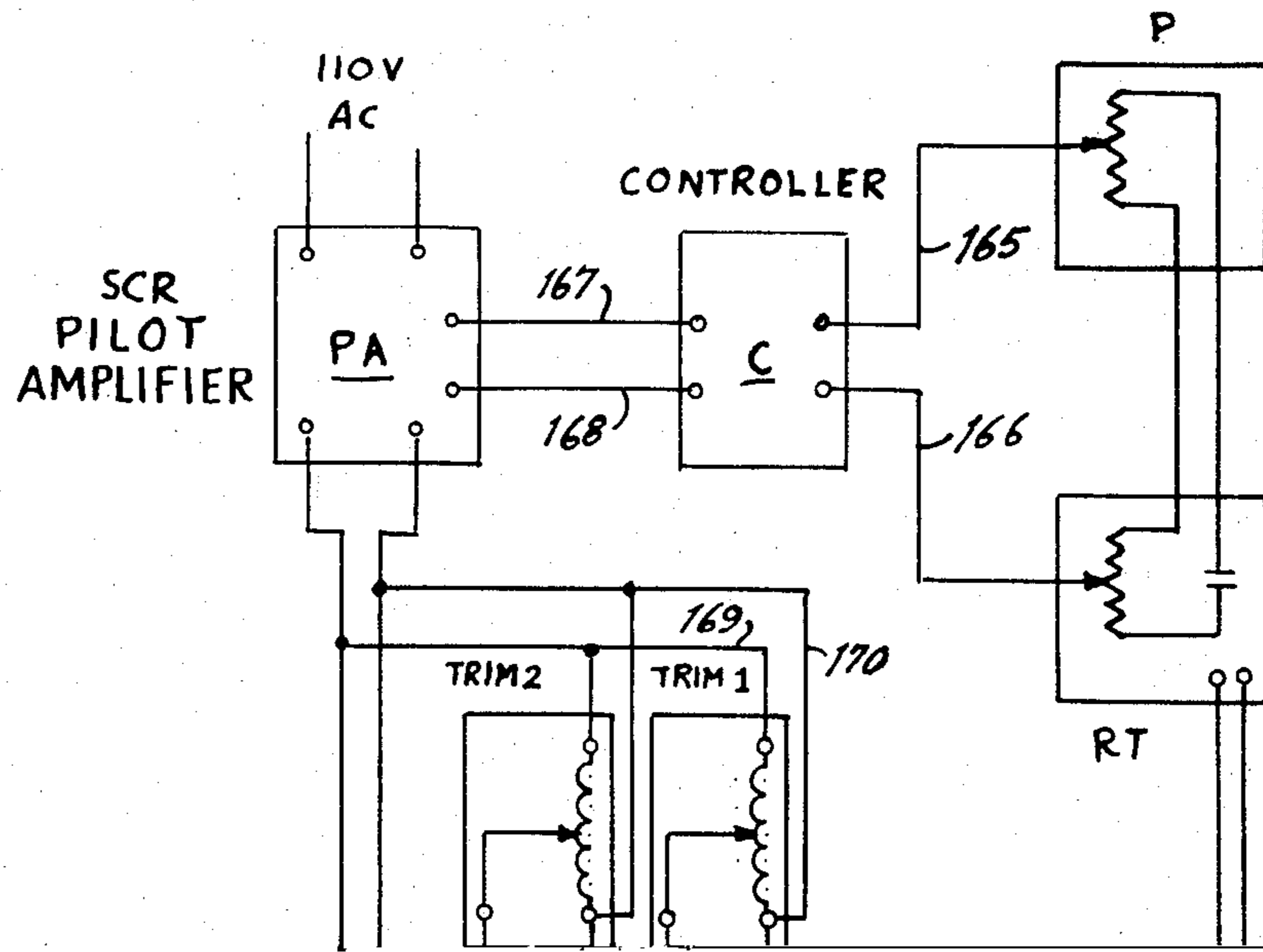


Fig. 13.





3,737,553

1

VACUUM ELECTRIC FURNACE

2

FIG. 4 is a vertical sectional view taken approxi-
mately as shown in FIG. 1.

enlargements 36 having upper and lower retaining washers 37 and 38 and retainer wires 39 penetrating the pins 35 for retention.

A heat radiation shield 40 composed of a single thickness flat plate portion of reflective material and preferably of stainless steel 0.015 inches thick has spaced longitudinal stiffening ridges 42 thereon and transverse box stiffeners 43 secured thereto on their

In a specific embodiment an exposed area of heating element to wall area of 60 percent has been found to be quite satisfactory.

The first strip 66 is secured at one end to the bracket 60 by bolts 67 which extend through clamping plates 68 and at its other end extends between upper and lower supporting plates 69 carried on a supporting pin 70 (see FIG. 9). The supporting plates 69

3,737,553

7

down transformer T2 with the conductor 154 connected through a saturable core reactor SR2 to vary the output of the transformer T2 as required.

8

argon, the furnace opened and the work pieces removed.

The low mass of the heating strip (6.66 g) is a

9

strips of metal covering a substantial portion of the corresponding shield member, and the shield member of one of said walls has

10

vertical rear wall and said removable closure wall is a front wall.