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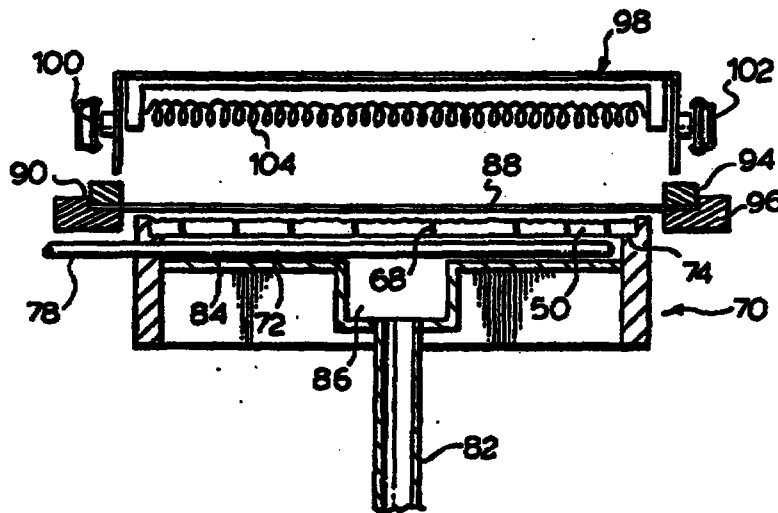
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3 INVS.

(54) Title: VACUUM FORMED THREE-DIMENSIONAL SURFACE ARTICLE



(57) Abstract

A vacuum forming apparatus and process is provided for molding a thin sheet (88) of thermoformable plastic into an accurate three-dimensional relief reproduction of an original artwork. The sheet of plastic (88) has printed on one side thereof a permanent image of the original artwork. The process comprises: (i) supporting the printed sheet of plastic proximate a vacuum forming female mold (70) with the printed side facing the mold; (ii) heat is applied to the plastic sheet (88); (iii) the mold (70) and heated sheet (88) are contacted while the sheet is heated to a first temperature at which the movement of the image (26) relative to the mold (70) is minimized, once the sheet (88) attains the first temperature vacuum is immediately applied to the holes (68) in the mold (70) to commence drawing the plastic sheet (88) into the mold (70) and fix thereby the sheet (88) relative to the mold; (iv) heating is continued while maintaining vacuum on the holes (68) to complete forming of the three-dimensional relief in the sheet (88); (v) heating is stopped once the sheet attains a second temperature while continuing to apply vacuum to the mold holes (68), cooling the sheet after; (vi) cooling being stopped and the sheet (88) removed from the mold ready for further processing and framing.