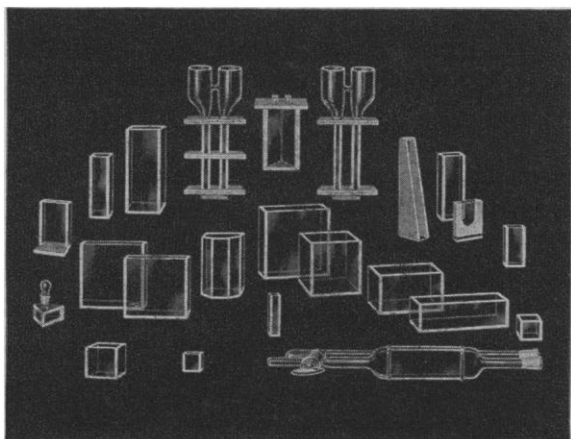


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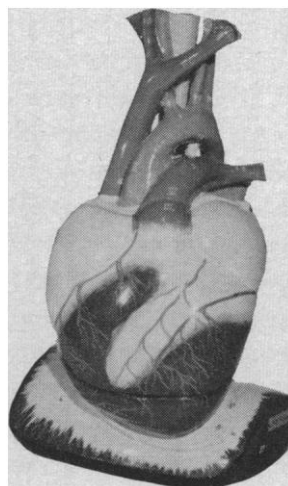


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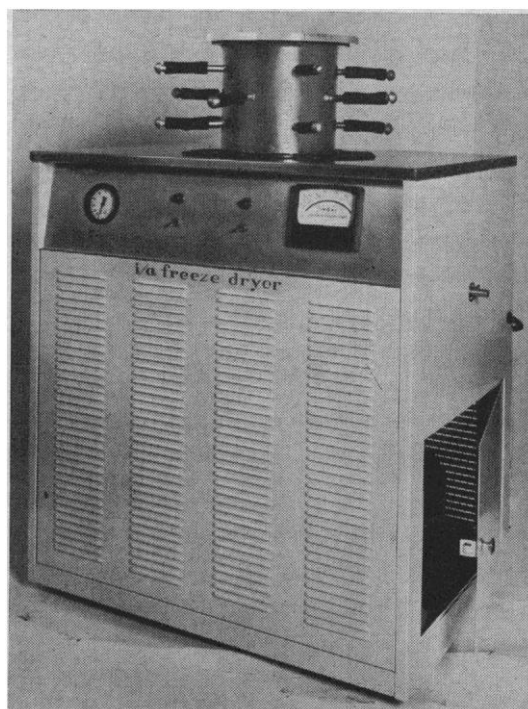
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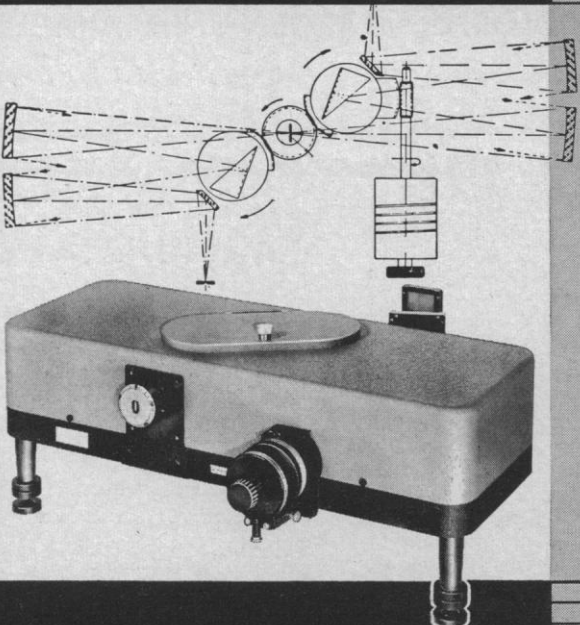


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5 APRIL 1963

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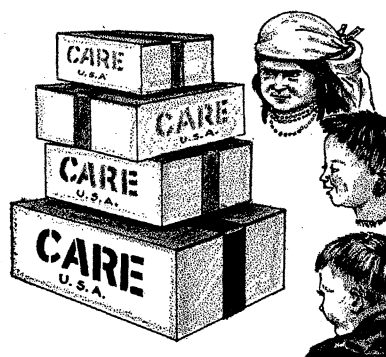
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- Bath media is nonflammable and nonfuming
- Ideal for multiple neck flasks or those of irregular geometry

A multipurpose heater designed to replace oil baths and heating mantles in the temperature range to 300°C. Employs low pressure, low velocity compressed air to convert sand or similar refractory materials to a fluidized solid. The aerated sand assumes the properties of a nonvolatile, nonflammable, nonwetting insulated liquid permitting easy immersion and withdrawal of flasks and other vessels. Temperature regulation can be achieved by means of an autotransformer or simple proportional control of input to the heater coil. Built-in cut-off switch turns off heater when air pressure to bath is interrupted.

#### Advantages:

- Rapid heating and cooling
- Bath media do not splash
- Vessels are not wetted or coated by bath
- Bath media remain clean and do not decompose

**Principle**—Air diffused through the porous bottom of the bath produces a flotation effect upon the sand particles, reducing the relative density. The expanded bed behaves as a fluid; surface bubbles give the appearance of a boiling liquid. Heat is distributed through the bath by air passage and the displacement of sand particles. The fluidized bed exerts a buoyant effect upon immersed objects.

**Size**—Inside dimensions 7¼ inches diameter × 5¾ inches deep to heater coil. Depth is sufficient to immerse 1000 ml round bottom flasks to the neck, or 2000 ml flasks to over half flask diameter. Overall dimensions, approximately 11 inches high × 9½ inches diameter, exclusive of air valve and safety switch, which extend near base approximately 4 inches to the right and rear respectively.

**Air Supply**—Requires a filtered air input, free of oil and dust, of approximately 3 p.s.i. pressure, at a flow rate of 4 cu. ft. per minute. Compressor or impeller type sources are required. Diaphragm pumps do not ordinarily provide the required free air capacity.

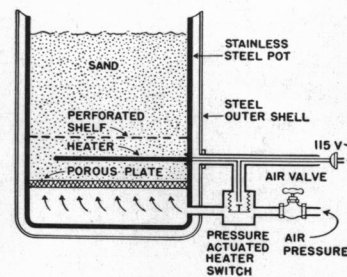
**Bath Media**—Clean, dry, free-flowing sand or material of similar density, screened to approximately 80 mesh, is required. Fines must be avoided. Approximately 10 lbs. required.

**Wattage**—Heater is rated at 750 watts at 115 volts, a.c.

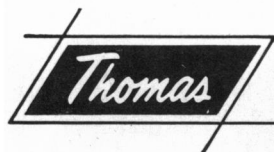
**Construction**—Interior is stainless steel, with full diameter ceramic porous plate at bottom. Tubular immersion heater is steel jacketed. Outer shell is enameled steel.

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**8868. Sand Bath, Fluidized, Tecam<sup>®</sup>**, as above described. With built-in heater, air pressure cut-off switch, air control valve, 10 lbs. of sand, but without air pump or temperature control device; 115 volts, a.c.; 750 watts... **160.00**



Schematic cross-section of Fluidized Sand Bath



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