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C. E. HERRICK, JR

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APPARATUS FOR DEVELOPING DIAZOTYPE MATERIAL PARTICULARLY FOILS

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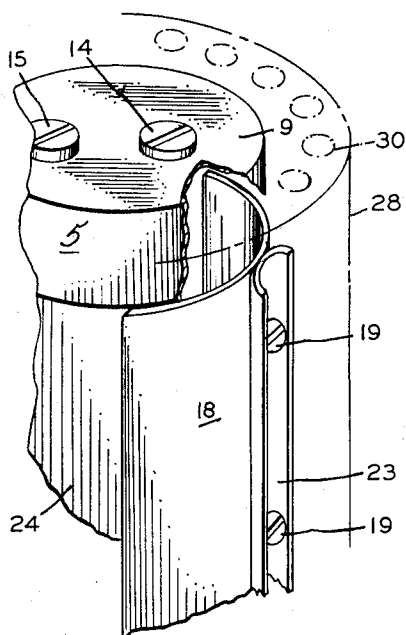


FIG. 2

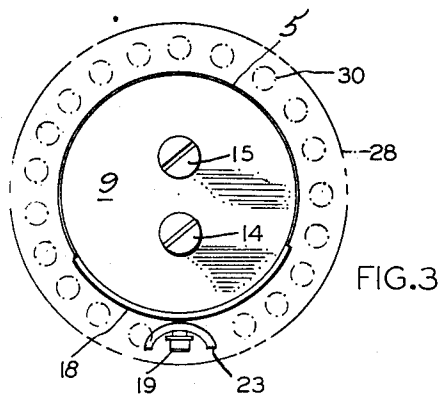


FIG. 3

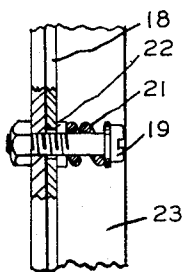


FIG. 4

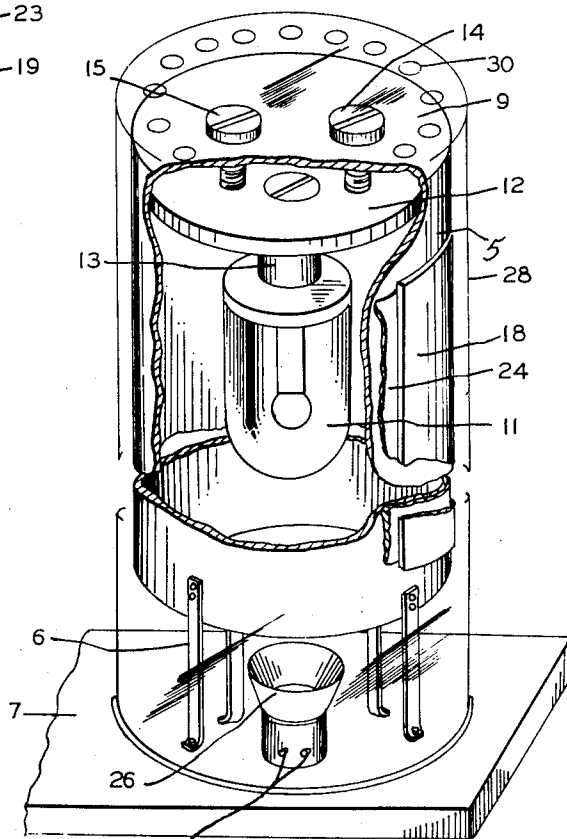


FIG. 1

INVENTOR.

CLIFFORD E. HERRICK, JR.

BY *Harry W. Ogden*
Frederick W. Hartley

ATTORNEYS

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APPARATUS FOR DEVELOPING DIAZOTYPE MATERIAL, PARTICULARLY FOILS

Clifford E. Herrick, Jr., Chenango Forks, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

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1 Claim. (Cl. 95—89)

This invention relates to apparatus for developing exposed diazo sensitized material and, more particularly, to a simple, portable unit requiring no liquid developing medium.

It is well known that diazotype materials develop slowly at room temperature and that, for rapid development, heat and a certain amount of moisture are necessary when ammonia is used.

In developing foil instead of paper material, the moist ammonia vapor may often form a condensate on the foil causing fogging of the background.

In the present apparatus, the above is eliminated in that the foil is maintained at an elevated temperature.

It is a particular object of this invention to provide for the individual user an inexpensive, compact apparatus capable of developing exposed diazotype sheet material, especially foils, in a convenient manner.

Other objects and advantages will become apparent from the following description of the invention, pointed out in particularity in the appended claim, and taken in connection with the accompanying drawing wherein:

Fig. 1 is an elevational view in perspective of the apparatus;

Fig. 2 is a partial perspective view showing a simple grip for holding the material to be developed;

Fig. 3 is a top view of the apparatus shown in Fig. 1; and

Fig. 4 is a partial cross-sectional view of the flexible mounting of the grip.

The apparatus consists essentially of a support for the material to be developed in the form of a cylinder 5, open at the bottom, which is mounted by means of legs 6 onto a base plate 7. The other end of the cylinder 5 is closed by the cover 9. A heating element 11 in the form of an incandescent lamp is supported within the cylinder 5 in any suitable manner, for example, by means of the plate 12 to which the socket 13 of the lamp is attached. The plate 12 is mounted by means of screws 14 and 15 located in the cover 9 so that the lamp 11 may be raised or lowered to obtain even heat distribution on the wall of the cylinder 5.

A semi-cylindrical clip 18 is provided around the wall of the cylinder running parallel to the longitudinal axis thereof and held thereagainst by resilient mountings. The latter comprise two or more bolts 19 which are firmly affixed to the wall of the cylinder 5.

The clip 18 is provided with suitable holes so that it fits loosely over the bolts 19, each of which retains a spring 21 which presses against the clip 18. A washer 22 between the spring 21 and the clip 18 assures firm seating of the spring 21 upon movement of the clip 18. Sufficient flexibility is provided by this mounting so that either edge of the clip may be raised or tilted by means

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of the handle portion 23 so as to insert a foil or paper 24 under the clip to be held by the pressure of the spring 21 against the wall of the cylinder 5.

Underneath the cylinder 5 and substantially in the center thereof, is placed a cup 26 having a conventional electrical heater element (not shown here) such as is used for a cigaret lighter.

The assembly just described is covered by another cylinder 28 of larger diameter so that an annular space of about one half inch is maintained between the inner cylinder 5 carrying the sensitized material and the inside surface of the outer cylinder 28. In order to observe the rate of development and completion of development of the sensitized material 24, it is desirable that the outer cylinder 28 be transparent and, for this reason, it is preferably made of glass or plastic. A plurality of vents 30 are provided in the top of the cylinder 28 to permit the air to escape and be displaced by the developing gaseous medium.

In using the developing apparatus, an exposed diazo foil or paper is placed around the cylinder 5 and under the clip 18 to be held in good thermal contact against the wall of the cylinder. Ammonium carbonate, preferably in the form of pellets, is placed in cup 26 to be heated so as to generate the developing gas. The outer cylinder 28 is then lowered to enclose the entire assembly. The metal cylinder 5, being heated by the radiation of the lamp 11 maintains the material to be developed at such a temperature that condensate may not form on the foil.

The gas, so generated, quickly displaces the air which may escape through the apertures 30 and permeates the narrow confines between the cylinder walls. Upon observing the developing of the diazo image the operation may be stopped by shutting off the current to the heater in the cup 26 so that no more gas is generated. The small amount of gas required for developing a foil or paper is insufficient to permeate the atmosphere so that this apparatus may be used in a room without causing unpleasant odors.

I claim:

Apparatus for development of diazo sensitized material, particularly foils, comprising, in combination, a cylindrical support, a spring biased clip for retaining said material around said support, a transparent cylindrical cover over said support enabling the viewing of the progress of development and of sufficiently larger diameter to form an annular space for the developing gas, an electrically-heated cup-shape container located axially to said cylinder and adapted to hold pellets of ammonium carbonate for generating developing gas to permeate said space, vents in said cover for permitting residual air to escape and an incandescent lamp mounted inside said support for maintaining said support at an elevated temperature thereby preventing the formation of condensate of the developing gas upon said sensitized material.

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