

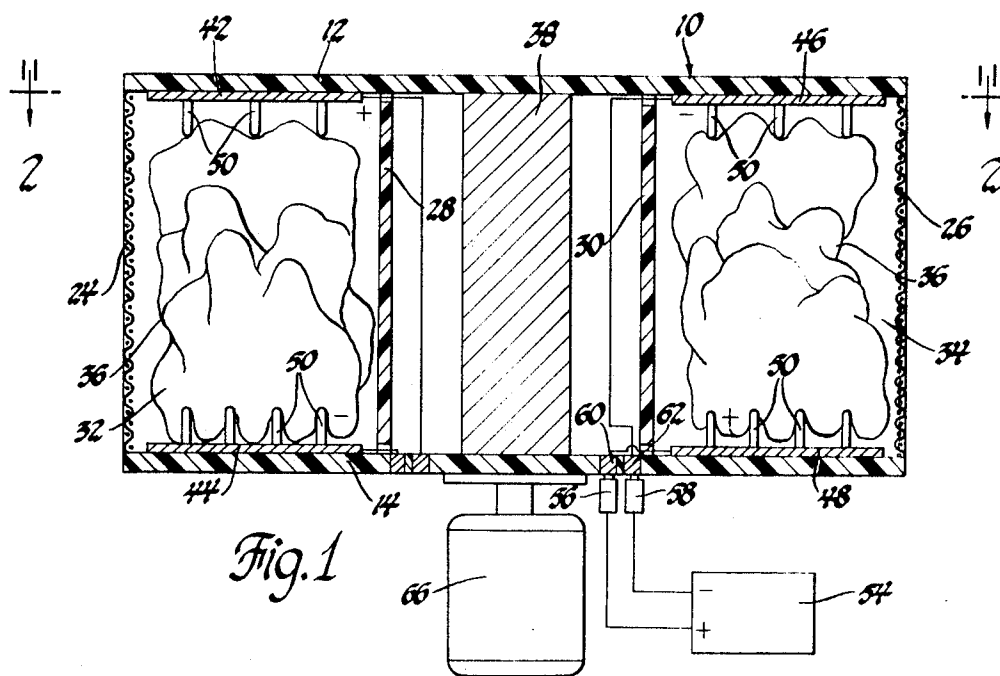
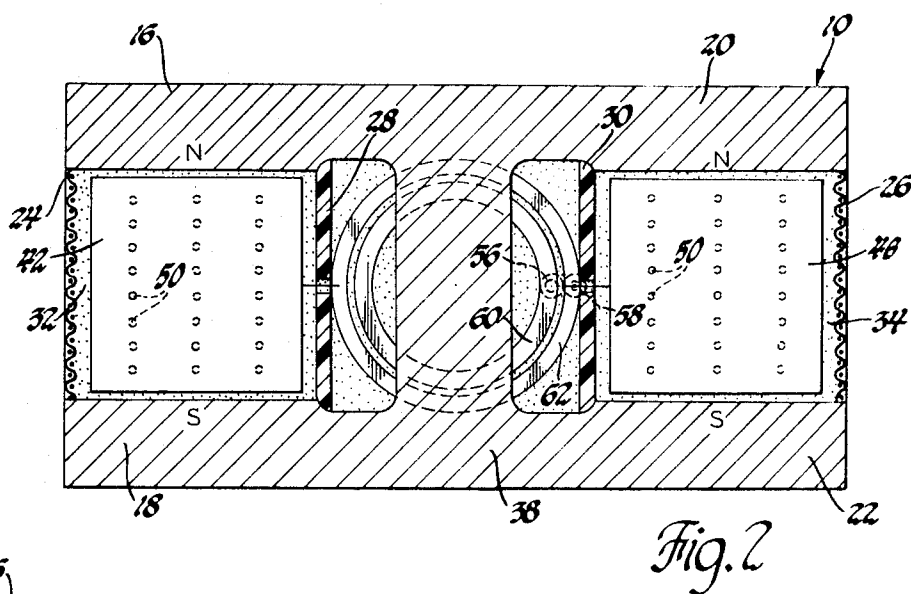
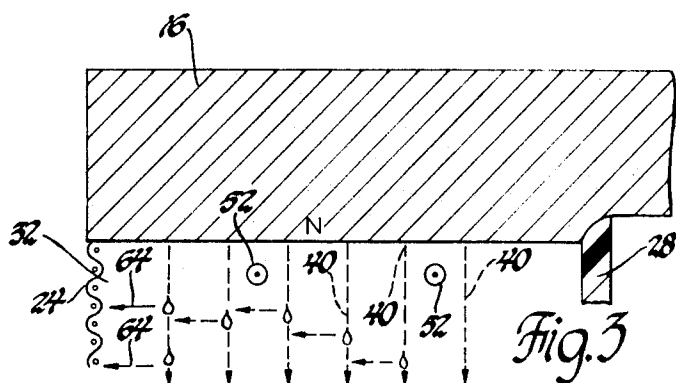
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ELECTROMAGNETIC MEANS FOR DRYING ARTICLES

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2 Claims

ABSTRACT OF THE DISCLOSURE

In preferred form, an electromagnetic clothes dryer including a generally cubic clothes receptacle having a pair of opposite side walls formed by the poles of a permanent magnet and electrodes on its top and bottom walls one of which is connected to the positive terminal of a direct current source and the other of which is connected to the negative terminal. The passage of electric current through damp clothing in a direction normal to the magnetic field produces a force on the water particles in the damp clothing which separates the water from the clothes.

This invention relates to clothes dryers and more particularly to an electromagnetic clothes dryer.

It is known that when a direct current of electricity passes through a magnetic field, a force normal to the magnetic field and to the current path is produced upon the current carrier. Common applications of this law of science include electric motors and generators. The subject invention encompasses an electromagnetic clothes dryer which includes electrode means for passing an electric current through damp clothing and a magnetic field which combine to produce a force upon water particles in the clothing causing the water particles to be separated from the clothing.

Therefore, an object of the inventor in the present invention is to provide an electromagnetic dryer for damp clothing including means for directing a magnetic field and an electric direct current through the damp clothing to produce forces on the water particles in the clothing which removes the water particles from the clothing.

Further objects and advantages of the present invention will be apparent from the following detailed description, reference being had to the accompanying drawings.

In the drawings:

FIG. 1 is a vertical sectional view of the electromagnetic clothes dryer;

FIG. 2 is a horizontal sectioned view taken along section line 2—2 in FIG. 1;

FIG. 3 is a fragmentary horizontal view illustrating the resultant electromagnetic force upon water particles in damp clothing.

In FIGS. 1 and 2 of the drawings, an electromagnetic dryer 10 is illustrated. Dryer 10 includes a top wall 12, a bottom wall 14 and side walls 16, 18, 20 and 22. Screened walls 24 and 26 extend between the top and bottom walls 12 and 14. Interior walls 28 and 30 divide the dryer's interior space into containers 32 and 34 into which damp articles of clothing 36 may be placed for drying.

The side walls 16, 18, 20, and 22 are formed by legs of an H-shaped permanent magnet 38 which walls are also poles of the magnet. The poles produce a magnetic field which extends through containers 32 and 34 and clothing 36 as illustrated in FIG. 3 by the numeral 40.

Electrodes 42, 44, 46 and 48 within containers 32 and 34 are attached to the top wall 12 and bottom wall 14. The electrodes include pins 50 which project into the containers 32 and 34. A direct current of electricity passes through the damp articles of clothing within containers

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32 and 34 between the electrodes. The direction of the current is schematically shown in FIG. 3 by the vectors 52. The electrodes 42, 44, 46 and 48 are connected to a DC power source 54 through brushes 56 and 58 which bear against concentric conductor rings 60 and 62 in the bottom wall 14.

The dryer 10 operates to force particles of water out of clothes as is schematically illustrated in FIG. 3. A magnetic field 40 extends from the side wall 16 of container 32 (north pole) to the side walls 18 (not visible in FIG. 3) of container 32 (south pole) as indicated by the numeral 40. A direct current passes from electrode 42 (located up from the plane of the drawing in FIG. 3) toward electrode 44 (located beneath the plane of the drawing in FIG. 3) as illustrated by vectors 52. The current between the electrodes is carried by the water particles within the damp articles of clothing. The effect of the magnetic field and the direct current on the water particles produces forces upon the water particles represented by the numeral 64. The forces 64 tend to move the water particles toward the screened wall 24 and from the clothing in accordance with the left-hand rule.

The dryer 10 may be mounted so as to rotate about its axis extending between the containers 32 and 34. An electric motor 66 is illustrated to rotate the dryer 10 at a desirable speed. The centrifugal force upon the water particles is additive to the force 64 caused by the electric current through the magnetic field and helps to remove the water particles from the clothing.

While only one embodiment of the present invention is herein described, it is to be understood that other forms may be adapted.

What is claimed is as follows:

1. An electromagnetic clothes dryer comprising: a generally cubic receptacle for holding damp articles of clothing having side, top and bottom walls; means including opposite side walls of said receptacle for producing a magnetic field which passes through the interior of said receptacle and through the damp clothing therein; electrodes on the top and the bottom walls of said receptacle connected to positive and negative terminals of a direct current source to cause an electric current to flow through the damp clothing in a path substantially normal to the magnetic field and whereby a force is produced upon water particles in said clothing for extracting water particles from the clothes.

2. An electromagnetic clothes dryer comprising: a generally cubic receptacle for holding damp articles of clothing having side, top and bottom walls; two opposite side walls of said receptacle formed by the poles of a permanent magnet to produce a magnetic field which passes through the interior of said receptacle and through the damp clothing therein; a wall of said receptacle adjacent said two opposite side walls having openings there-through for the passage of water; and electric motor operably connected to said receptacle for rotating said receptacle and the damp clothes therein; electrodes on the top and the bottom walls of said receptacle connected to positive and negative terminals of a direct current source to cause an electric current to flow through the damp clothing in a path substantially normal to the magnetic field and whereby a force is produced upon water particles in said clothing to move the water particles toward said openings in said adjacent wall.

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