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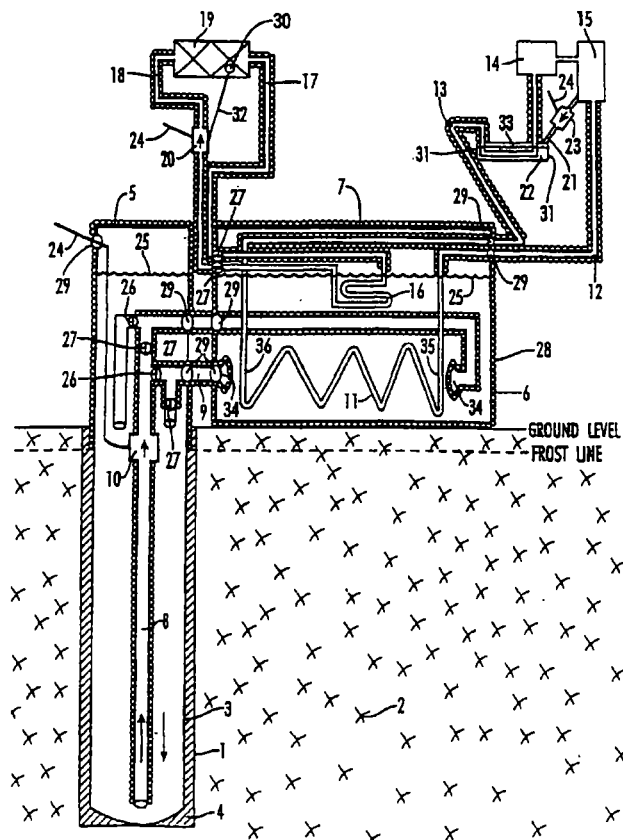
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(54) Title: **SEALED WELL DIRECT EXPANSION HEATING AND COOLING SYSTEM**



(57) Abstract: A sealed well direct expansion geothermal heat exchange unit, whose sealed well (3) can be placed in ground (2) and/or in water, consisting of a conventional direct expansion, or other heat pump, system wherein the exterior refrigerant heat exchange lines are placed within an insulated and sealed container (6), which container (6) is supplied with a circulating heat conductive liquid (25) from and to a sub-surface sealed well encasement (3), which container liquid may be supplemented with heat from a solar heating system (19), and which unit's hot refrigerant vapor line may be supplementary cooled by means of condensate water evaporative cooling.

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