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(54) **AIR-FLOW-SOLE-PUMP**

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(57) **ABSTRACT**

This technology initiates a new approach to the effort of reducing the moisture level on the inside of shoes as well as increasing the oxygen level inside shoes, both environmental factors long recognized as effecting the development of foot related bacterial and fungal problems. The AIR-FLOW-SOLE-PUMP is unique in its pro-active mechanism that utilizes a very small amount of the energy expended in walking, realized as pressure on the heel, directed to force fresh air through the innards of the shoe.

Side View

AIR-FLOW-SOLE-PUMP

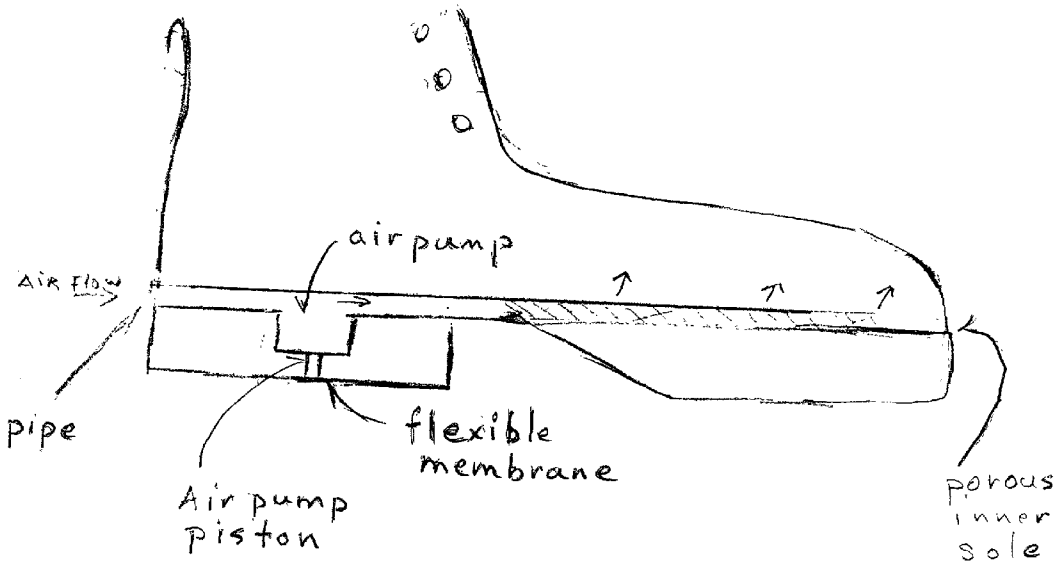


DIAGRAM - 1 Side View

AIR-FLOW-SOLE-PUMP

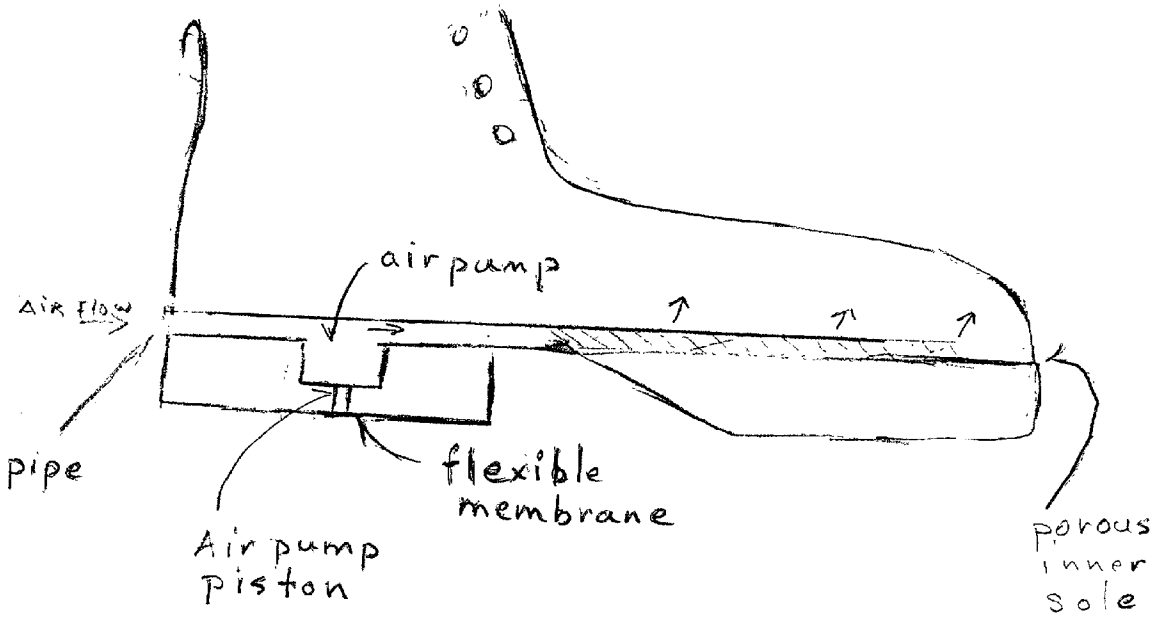
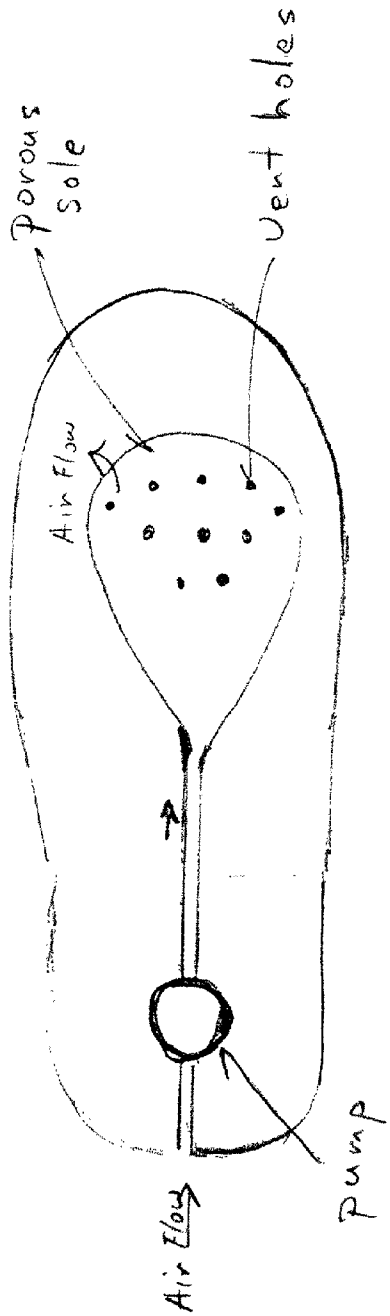


DIAGRAM - 2 Top View

AIR-FLOW-SOLE-PUMP



Direction Air Flow

AIR-FLOW-SOLE-PUMP

BACKGROUND OF THE INVENTION

[0001] Air-Flow-Sole-Pump

[0002] This invention deals with the age old problem of reducing moisture buildup in our shoes. Unlike other systems that deal with this universal problem by various systems of baffling, venting or porous material, the Sole-Pump utilizes a pro-active system, a miniature air pump fitted into the heel of the shoe and powered by the walking action that forces outside air under pressure through a porous sole and around the foot. This inventor believes this will greatly increase the drying effect.

BRIEF SUMMARY OF THE INVENTION

[0003] Air-Flow-Sole-Pump

[0004] The essence of the invention is a miniature simple air pump fitted into the heel of a shoe with a shaft protruding through the heel to the ground so as to be able to power the pump by the walking action. Air is sucked from outside the shoe via a small intake pipe and is forced through another pipe that delivers the air to a porous inner sole, thereby aerating the foot.

BRIEF DESCRIPTION OF THE DRAWING

[0005] Air-Flow-Sole-Pump

[0006] Diagram **1**

[0007] Side View

[0008] 1. Air pump

[0009] 2. Air pump piston

[0010] 3. Flexible membrane

[0011] 4. Intake pipe

[0012] 5. Delivery pipe

[0013] 6. Porous inner sole

[0014] Diagram **2**

[0015] Top View

[0016] 1. Air pump

[0017] 4. Intake pipe

[0018] 5. Delivery pipe

[0019] 6. Porous inner sole

DETAILED DESCRIPTION

[0020] Air-flow-Sole-Pump

[0021] This device consists of two primary parts, the heal pump and a porous inner sole. The pump is a simple double one-way valve style, which directs air under force of the pumping action, from a pipe leading to the outside of the shoe through another pipe to a porous inner sole. The force of the walking action on the heel is utilized to drive the pump via a pump shaft, which protrudes minimally through the bottom of the heel.

1. "What I claim as my invention is a system consisting of air pump so fitted in the heel of a shoe such that the walking action forces air from the outside of the shoe through to a porous inner sole to facilitate the removal of moisture buildup."

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