

Conclusion — Right kidney is damaged or malfunctioning. Conventional medical follow-up testing revealed that the right kidney and the spleen had been damaged in the accident.

Any magnet can be used in which the poles are sufficiently separated that the energy of each pole can be isolated from the energy of the other pole and a selected pole individually applied to a particularly body part of a living system. Thus, separation of the poles is the prime requisite in selecting an appropriate magnet. Straight bar or cylindrical magnets provide maximum pole separation and are preferred. Either solid state or long-wound electromagnets are equally useful. FIGS. 2-8 are exemplary of some of the preferred magnets and magnet configurations for use in the diagnostic screening examination of the present invention.

Turning to the drawings, FIG. 2 illustrates a conventional cylindrical permanent magnet 10, such as an Alnico magnet, having north and south poles at opposite ends thereof. A cylindrical sleeve 12, which may be constructed of steel, iron or like material, is adapted to slidably receive magnet 10 in its central bore 14. In a preferred form, bore 14 is formed through only a portion of the length of sleeve 12 such that, when fully inserted, one end (pole) of magnet 10 abuts or seats on the bore base 16 with the other end (pole) projecting outwardly from the bore 14. In this manner, with the south pole of the magnet, for example, within sleeve 12, the energy of the south pole is substantially contained and the effective pole separation is enhanced. At the same time, the north pole energies can be applied to the body of an animal or human, without interference from the south pole energies, and the magnet and sleeve of FIG. 2 can function effectively, efficiently and selectively as a diagnostic screening tool in the process of the present invention. When it becomes desirable to scan using the south magnetic pole, magnet 10 can be removed from bore 14 and replaced therein with the north magnetic pole abutting or seated on bore base 16.

Conventional electromagnets 20 and 30, as shown in FIGS. 3 and 4, may also be utilized as the diagnostic screening tool in the process of the present invention. Electromagnets 20, 30, consist of a core 22, 32 of soft steel or other suitable material, and windings 24, 34 of suitable insulated wire around core 22, 32. When D.C. power is applied to ends 26, 36 of winding 24, 34, one end of the core becomes the north, and the other end of the core becomes the south, magnetic pole with the poles separated by the length of the core 22, 32. Electromagnet 30 differs from electromagnet 20 in that there are a larger number of windings 34 and the windings are confined to the central portion of core 32. The increased number of windings makes electromagnet 30 more powerful than electromagnet 20. In addition, the effective pole separation has been found to be improved utilizing the configuration of electromagnet 30.

A preferred embodiment of a diagnostic screening tool is illustrated in FIG. 5 wherein electromagnet 40 consists of core 42 having a large number of windings 44 surrounding the core at only one end thereof so that the other end of the core projects from the windings 44. The windings 44 are surrounded by metal shield 48, which may be formed of steel mesh, thin tinned steel, heavy cast steel, or other well known suitable shielding materials. When D.C. power is applied to the ends 46 of winding 44, the magnetic poles are developed at opposite ends of the core 42. However, one pole (the south pole as illustrated) is physically housed within the wind-

ings and shielding and can contribute little magnetic energy. The result is a magnetic tool which effectively provides the energies of a single pole, i.e., the pole projecting from the windings (the north pole as illustrated), for scanning the body parts of animals or humans. The further value of electromagnet 40 is that when it becomes desirable to utilize the south pole for scanning, it is only necessary to switch the positive and negative electric potentials applied to winding ends 46, whereupon the core end projecting from the windings becomes the south pole. This can be readily accomplished by installing a conventional double pole-double throw switch (not shown) between the windings and the D.C. power source. A similar electromagnet 50 depicted in FIG. 6 differs primarily in the extent to which core 52 is inserted into windings 54. By varying the length of core within the windings, the strength and pole selectivity of the electromagnet can be altered. As with electromagnet 40, by changing the positive and negative electric potentials applied to winding ends 56, the polarity of the projecting end of the core, the end applied against the body during scanning, can be changed.

In the practice of the detection process of the present invention, it is sometimes desirable, rather than to scan the body with a single magnetic pole, to affix individual magnets to various parts of the body (e.g., one each attached over the heart, each lung, each kidney, liver, spleen, etc.) and then to select the desired polarity for the pole adjacent the body and to operate each magnet individually to determine whether there is a malfunctioning body part adjacent the location of the operating magnet. Electromagnets 60 and 70 shown in FIGS. 7 and 8 are particularly valuable for this sort of application in that they are compact and semi-flat in design. The electromagnets include a core 62, 72 having one end embedded within and surrounded by windings 64, 74 and including D.C. power supply connections at the ends 66, 76 of the windings, at which ends conventional DPDT switches can be installed for altering the effective polarity of the electromagnet. The electromagnets may be either unshielded (as in FIG. 7) or shielded (as in FIG. 8). One means of affixing the electromagnets to the body is by use of a suction cup 68, formed of a flexible material, such as rubber or plastic. The cup 68 may be attached to the electromagnet in any convenient manner provided that when the cup is pressed against the human or animal body, the projecting pole end 69 is held in place adjacent the body. Desirably, the end of cup 68 attached to the electromagnet surrounds the pole end 69, as illustrated. Alternative means of affixing the electromagnets to the body include the use of tape, straps, or the like. When affixed in this manner, the tape or straps (not shown) pass over and in contact with the exterior of the electromagnets, for example over shield 78 of electromagnet 70, and then are suitably pressed into contact with or strapped to the body.

While the present invention has been described with reference to particular embodiments thereof, it will be understood that numerous modifications may be made by those skilled in the art without actually departing from the scope of the invention. Accordingly, all modifications and equivalents may be resorted to which fall within the scope of the invention as claimed.

What is claimed:

1. A method of conducting a screening diagnostic examination to detect malfunctioning parts of a body comprising the steps of: