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**Bare**

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[54] **RESONANT FREQUENCY THERAPY DEVICE**

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[51] **Int. Cl.<sup>6</sup>** ..... **A61N 1/02**

[52] **U.S. Cl.** ..... **607/1; 607/2; 607/156**

[58] **Field of Search** ..... 607/1-2, 145, 607/150, 151, 154, 155, 156, 88, 89, 93, 100, 101, 115; 606/1-2; 333/32-35, 227; 343/762, 772; 340/384.8, 384.2; 367/137-139

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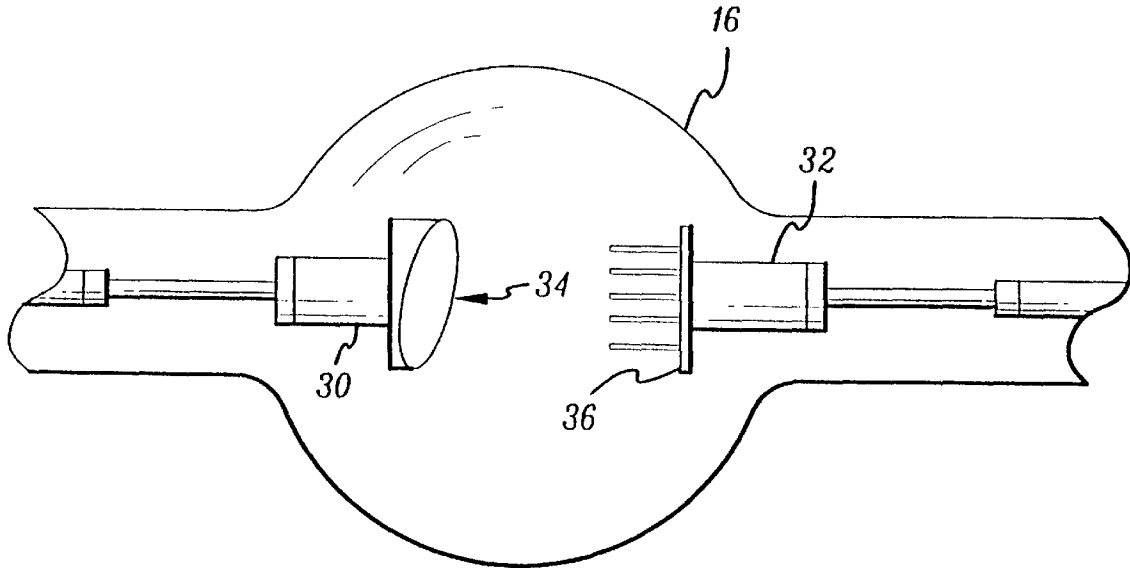
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[57] **ABSTRACT**

A generator of a complex energy wave, having audio, radio and light components, including an audio frequency oscillator, a radio frequency transmitter, a radio frequency amplifier, an antenna tuner, an antenna, tuned coaxial cables and an optional reverberation unit.

**10 Claims, 3 Drawing Sheets**



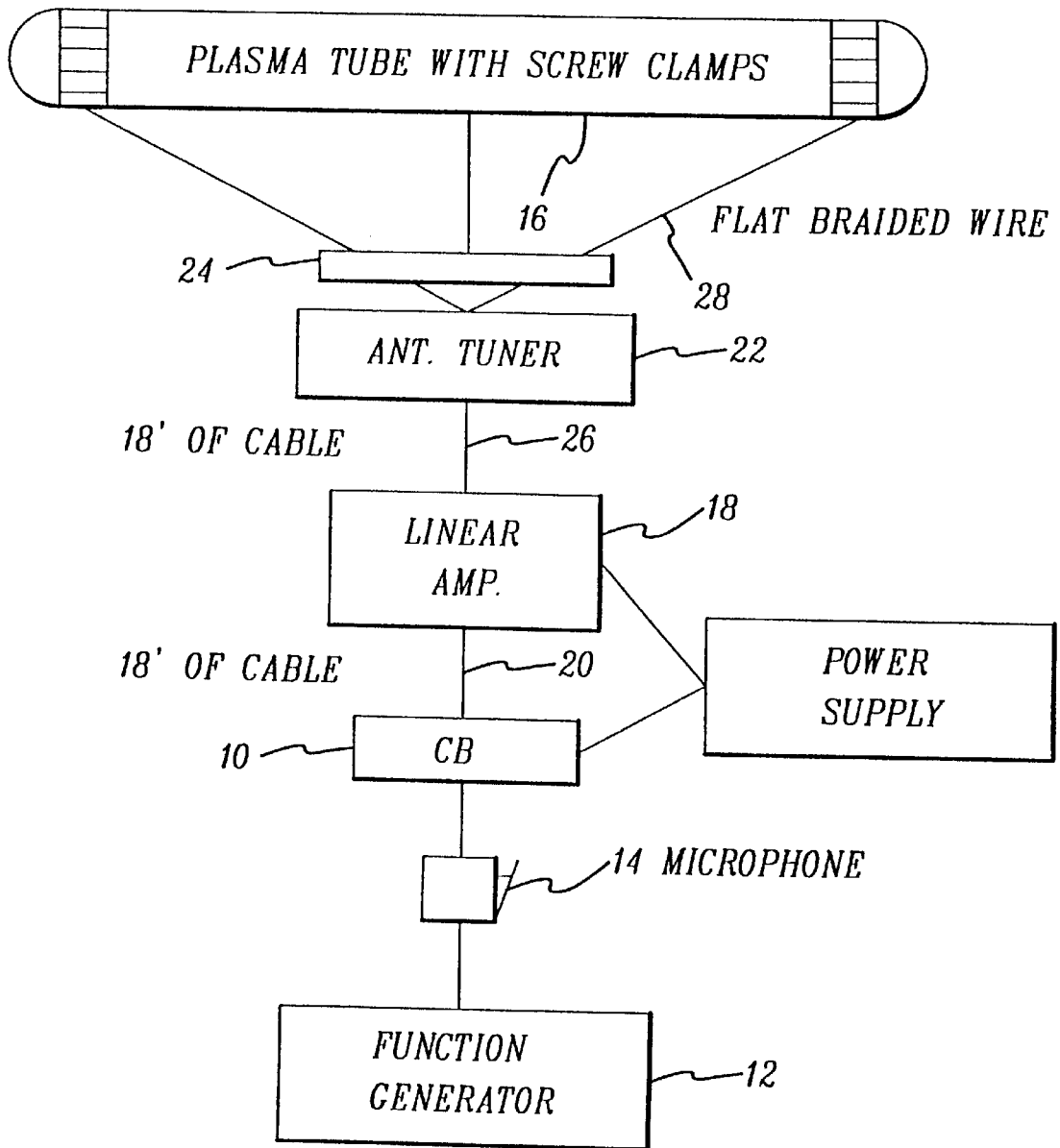
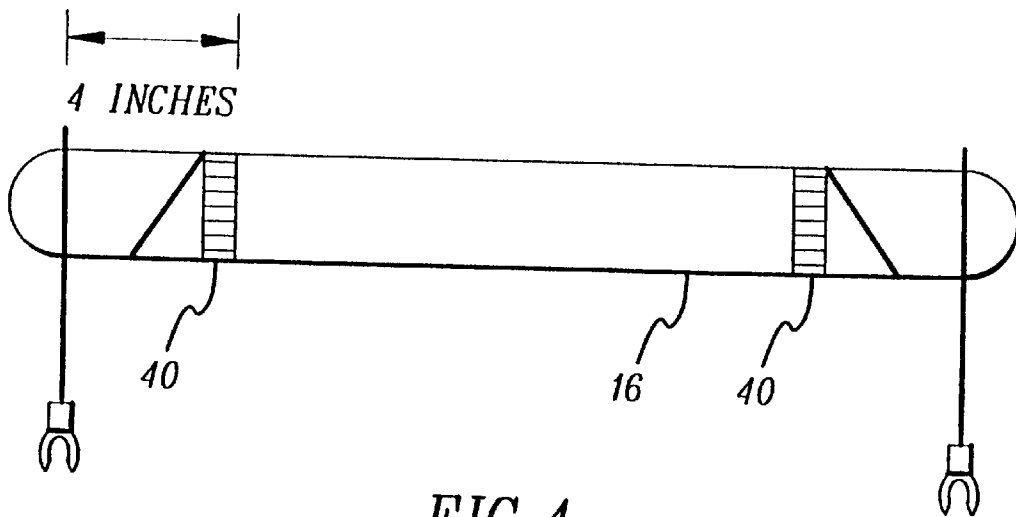
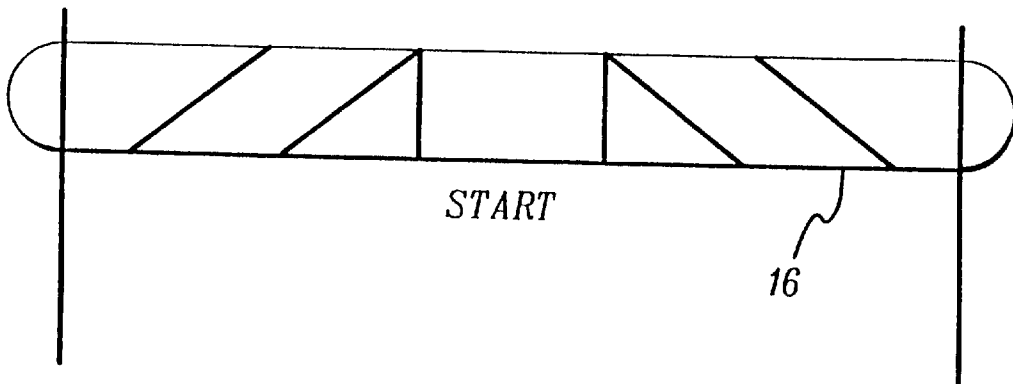
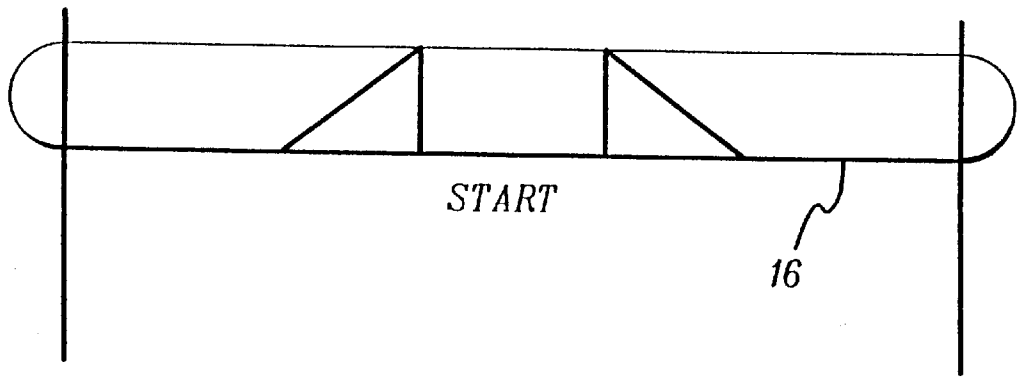


FIG. 1



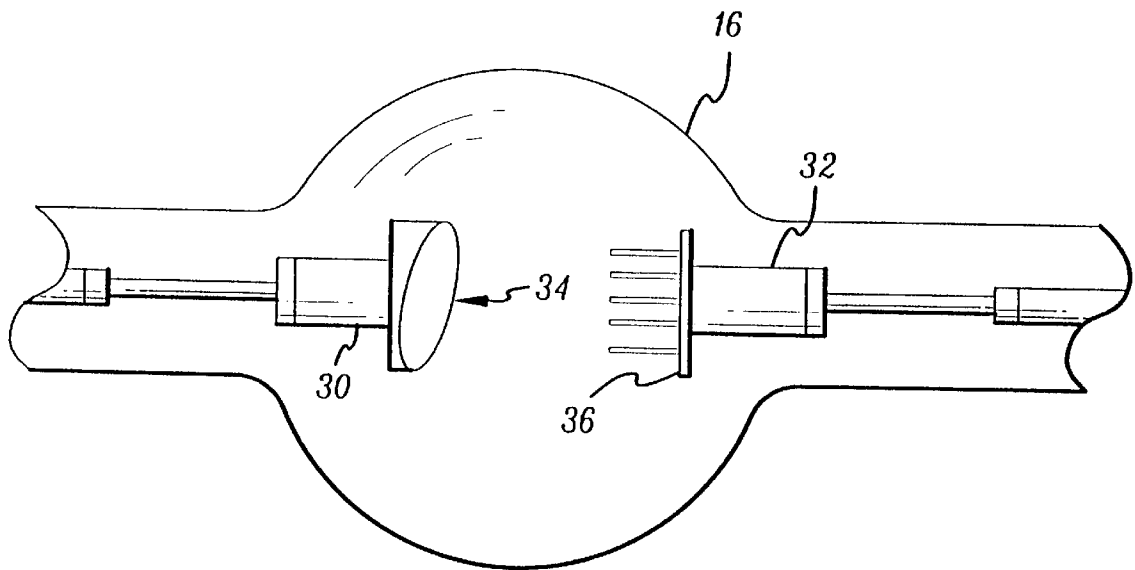


FIG. 5

## RESONANT FREQUENCY THERAPY DEVICE

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

This invention relates to surgical devices. More specifically, the present invention relates to radiative type surgical devices.

#### 2. Description of the Prior Art

Organisms are able to absorb or store energy which later may be converted into useful work, heat or re-radiated. In the event energy is absorbed faster than the subject may utilize it, or re-radiate it, excess energy builds up. When an organism is under the influence of an energy wave having frequency equal to the resonant frequency of the organism, the organism, or at least some resonant part of it, continues absorbing energy. At the point where too much energy is absorbed, the energy begins to cause failure in the structure absorbing the energy. At resonance, this process of structural failure occurs very quickly. This may easily be seen by exposing *Paramecium Caudatum* to the present device when operating at 1150 Hertz (Hz). The normally very motile organism literally stops motion while changes occur in the protoplasm until a point in the cell wall fails.

The energy associated with this process is described by the formula,  $E=h\nu$ , which is applicable to ultraviolet light, X-rays, and radiation on various molecules. "E" symbolizes energy content, "h." represents Planck's constant and "v" stands for the frequency in cycles per second.

Electromagnetic waves include visible light, heat, X-rays, radio waves and the like. These are all merely different frequencies of the electromagnetic spectrum, and as such have different properties. Each may be amplified, diminished, changed in frequency, radiated or even heterodyned. Heterodyning is the combining of two dissimilar waves to produce two new waves. One of the new waves is the sum of the two frequencies, the other new wave being the difference of the frequencies.

The use of audio, radio and light waves to treat diseased tissue is well known in the arts. Audio wave-type devices typically employ a piezoelectric ultrasonic generator driven by a radio frequency amplifier coupled to an ultrasonic lens of known focal length. The locus of cells to be destroyed is ascertained through known pulse-echo imaging techniques. Once the locus of target cells is fixed, the lens is focused on the target area and the intensity of the ultrasound is increased to a level sufficient to affect tissue destruction by thermal heating. An example of this technique is shown in U.S. Pat. No. 4,315,514, issued Feb. 16, 1992, to William Drews et al.

Radio wave-type cell destroying devices typically employ amplitude-modulating transmitters in series with an amplifier, tuner and antenna for training high power radio waves on a target area. As with the above device, the intensity of the radio waves increases to a level sufficient to affect tissue destruction by thermal heating.

Light wave-type cell destructive devices typically employ lasers, constructed by known means, which also are trained only a target locus of cells. The high intensity light waves deliver light energy of an intensity sufficient to affect destruction of the cells by a thermal heating.

Each of the above devices have been somewhat effective in destroying living cells, but, individually, are not fully compatible with the complex nature of living cell tissue. As a testament to this, some analytical tools have been developed which simultaneously apply different kinds of wave

energy. For example, in U.S. Pat. No. 5,402,782, issued Apr. 4, 1995, and U.S. Pat. No. 5,553,610, issued Sep. 10, 1996, both to Robert A. Lodder, similar devices are disclosed which simultaneously apply to a subject, a magnetic field, near-infrared radiation and an acoustic wave. Collection of the electrical, acoustical and near-infrared spectra provides much more comprehensive data that is more useful in the treatment of the subject.

Although multi-component wave generating devices have been used for analytical purposes, none are used for affecting cell destruction. Owing to the complex nature of biological cells, a need exists for a resonant frequency therapy device providing for the transmission of multiple wave energies.

None of the above references, taken alone or in combination, are seen as teaching or suggesting the presently claimed resonant frequency therapy device.

### SUMMARY OF THE INVENTION

The present invention overcomes the limitations of the above inventions by providing a resonant frequency therapy device which delivers a complex transmission of energy waves comprising audio, radio and light waves, possibly generating a fourth type of wave. The invention includes known components, namely an audio frequency oscillator, a radio frequency transmitter, a radio frequency amplifier, an antenna tuner, an antenna, tuned coaxial cables and an optional reverberation unit.

In consideration of the above, a first object of the invention is to provide a resonant frequency therapy device for destroying cell malignancies.

A second object of the invention is to provide a resonant frequency therapy device which may be constructed from inexpensive readily available materials.

A third object of the invention is to provide a resonant frequency therapy device which combines diverse wave energies and generates a composite energy wave which may be used to treat malignant cells.

A fourth object of the invention is to provide a resonant frequency therapy device which may break down microorganisms.

A fifth object of the invention is to provide a means of stimulating the circulating white blood cells into a state of hypermobility.

A sixth object of the invention is to provide a device that repels or drives insects from an area.

A seventh object of the invention is to provide improved elements and arrangements thereof in an apparatus, for the purposes described, which is inexpensive, dependable, and effective in accomplishing its intended purposes.

These and other objects of the present invention will become readily apparent upon further review of the following specification and drawings.

### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagrammatic view of the invention.

FIG. 2 is a diagrammatic view of an embodiment of an antenna used with the invention.

FIG. 3 is a diagrammatic view of an embodiment of an antenna used with the invention.

FIG. 4 is a diagrammatic view of an alternative embodiment of an antenna used with the invention.

FIG. 5 is a diagrammatic view of an alternative embodiment of an antenna used with the invention.