CPC  COOPERATIVE PATENT CLASSIFICATION

A  HUMAN NECESSITIES

HEALTH; AMUSEMENT

A61  MEDICAL OR VETERINARY SCIENCE; HYGIENE

A61N  ELECTROTHERAPY; MAGNETOTHERAPY; RADIATION THERAPY; ULTRASOUND THERAPY (measurement of bioelectric currents A61B; surgical instruments, devices or methods for transferring non-mechanical forms of energy to or from the body A61B 18/00; anaesthetic apparatus in general A61M; incandescent lamps H01K; infrared radiators for heating H05B)

NOTE
In this subclass, the following term is used with the meaning indicated: In this subclass, the following term is used with the meaning indicated:
• “therapy” implies that the treatment, when it aims at destroying sick or abnormal cells, is performed within the limits of healthy cell life, the destruction thereof being undesired, contrary to that which takes place with instruments, devices or methods covered by group A61B 18/00.

WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
   - A61N 1/34 covered by A61N 1/36021, A61N 1/36071
   - A61N 2/04 covered by A61N 2/02
   - A61N 2/08 covered by A61N 2/06
   - A61N 2/10 covered by A61N 2/06
   - A61N 5/073 covered by A61N 5/06, A61N 2005/073
   - A61N 5/08 covered by A61N 5/06

2. {In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.}
Applying static electricity (applying ionised gases or vapours A61N 1/44)

Screening or neutralising undesirable influences from {or using,} atmospheric or terrestrial radiation or fields {(using atmospheric electricity or earth currents H05F 3/00)}

Applying electric currents by contact electrodes

Continuous direct currents

[For promoting a biological process]

[Electro-medical belts]

Electro-medical brushes, combs, massage devices

[Arrangements where at least part of the apparatus is introduced into the body]

Alternating or intermittent currents {(applying electric fields by inductive or capacitive coupling A61N 1/40: microwave apparatus A61N 5/022)}

[Electro-medical belts]

[Electro-medical brushes, combs, massage devices]

[Interference currents, i.e. treatment by several devices]

Electromedical belts {, e.g. neck chains, armbands}

Electromedical belts {, e.g. neck chains, armbands}

[Constructional details (electrodes for external use A61N 1/0428)]

[Apparatus for applying thermoelectric currents]

[Apparatus for iontophoresis, i.e. transfer of media in ionic state by an electromotoric force into the body], or cataphoresis

[Constructional details (electrodes for external use A61N 1/0428)]

[Apparatus for promoting growth of cells, e.g. bone cells]

[For enhancing the absorption properties of tissue, e.g. by electroporation]

[For improving the appearance of the skin, e.g. facial toning or wrinkle treatment]

For stimulation

Cancer treatment, e.g. tumour

[For improving the appearance of the skin, e.g. facial toning or wrinkle treatment]

[For promoting a biological process]

Cochlear stimulation

Cancer treatment, e.g. tumour

For treating a mental or cerebral condition

[For aversion therapy]

[Control systems]

[Specified by the stimulation parameters]

[Of the outer, middle or inner ear]

Cochlear stimulation

Leading-off electric charges, e.g. by earthing

Carrying-off electrostatic charges, in general H05F 3/00)

Screening or neutralising undesirable influences from [or using,] atmospheric or terrestrial radiation or fields {(using atmospheric electricity or earth currents H05F 3/00)
Implantable neurostimulators for of the eye
of grafted tissue, e.g. skeletal muscle
for correcting spinal deformities, e.g. scoliosis
of the eye
Implantable neurostimulators for stimulating central or peripheral nerve system
(adapted for vagal stimulation (A61N 1/3614 takes precedence))
(adapted for stimulating afferent nerves)
(adapted for a particular treatment)
Spinal stimulation
Epilepsy
Movement disorders, e.g. tremor or Parkinson disease (stimulating motor muscle A61N 1/36003)
Pain
Headache or migraine
Inducing or controlling sleep or relaxation (non-implantable stimulator A61M 21/00)
Cognitive or psychiatric applications, e.g. dementia or Alzheimer's disease
Eating disorders or obesity
Addiction or withdrawal from substance abuse such as alcohol or drugs
Mental training
Mood disorders, e.g. depression, anxiety or panic disorder
Phantom sensations, e.g. tinnitus
Neuro-rehabilitation; Repair or reorganisation of neural tissue, e.g. after stroke
Sexual dysfunction (stimulating genital organs A61N 1/36007)
Respiration control (stimulating respiratory organs A61N 1/36011)
Cardiac control, e.g. by vagal stimulation (stimulating the heart A61N 1/362)
for treating hypertension
Production of neurotransmitters; Modulation of genes expression
Details of circuitry or electric components
Control systems
using patient feedback
using physiological parameters
with automatic adjustment
based on impedance measurement
for improving safety
specified by the stimulation parameters
Intensity
Voltage (A61N 1/3616 takes precedence)
Current (A61N 1/3616 takes precedence)
Voltage density or current density
[Sub-threshold or non-excitatory signals (non-excitatory signals to the heart A61N 1/3628)]
(Timing, e.g. stimulation onset)
(Frequency)
(Pulse width or duty cycle)
(Burst or pulse train parameters)
(Direction of the electrical field, e.g. with sleeve around stimulating electrode)
(Selection of the electrode configuration)
(using modulation techniques)
(Amplitude modulation)
(Frequency modulation)
Heart stimulators (heart defibrillators A61N 1/39)
for treating or preventing abnormally high heart rate
(comprising two or more electrodes co-operating with different heart regions)
(occurring in the atrium, i.e. atrial tachycardia)
(External stimulators)
(for treating a mechanical deficiency of the heart, e.g. congestive heart failure or cardiomyopathy)
(using sub-threshold or non-excitatory signals)
(in combination with non-electric therapy)
controlled by a physiological parameter, e.g. heart potential ([evoked response A61N 1/371])
(controlled by gradient or slope of the heart potential)
(controlled by a physiological quantity other than heart potential, e.g. blood pressure (controlled by two or more physical parameters A61N 1/36585))
(the parameter being derived from measurement of an electrical impedance)
(the parameter being measured by means of ultrasound)
(controlled by body position or posture)
(controlled by body motion, e.g. acceleration)
(controlled by body or blood temperature)
(controlled by chemical substances in blood)
(controlled by blood pressure)
(controlled by blood flow rate, e.g. blood velocity or cardiac output)
(controlled by mechanical motion of the heart wall, e.g. measured by an accelerometer or microphone)
(controlled by two or more physical parameters)
(controlled by the heart rate variability)
implantation of stimulators
Arrangements in connection with the stimulators

Microstimulators, e.g. implantable

Circuits for electromagnetic coupling

Shape or location of the implanted or external antenna

Aspects of the external programmer

providing test stimulations

User interfaces, e.g. input or presentation means

Details of algorithms or data aspects of communication system, e.g. handshaking, transmitting specific data or segmenting data

Pacemaker or defibrillator security, e.g. to prevent or inhibit programming alterations by hackers or unauthorised individuals

Alerting the patient

Changing the program; Upgrading firmware

characterised by the modulation technique

(characterised by means for reducing power consumption during telemetry)

(characterised by communication with experts in remote locations using a network)

Communication to several implantable medical devices within one patient

Means for testing medical devices within the package prior to implantation

Constructional arrangements, e.g. casings

Pacemakers

Brain implants

Intravascular implants

Anchoring of the implants, e.g. fixation

Details of casing-lead connections

Feedthroughs

Casings with electrodes thereon, e.g. leadless stimulators

Packaging of the components within the casing

Electrical supply

producing a voltage above the power source level

generated by biological activity or substance, e.g. body movement

from an external energy source

for producing shock effects

Devices for inducing an abnormal cardiac function, e.g. fibrillation

Heart defibrillators

External heart defibrillators [EHD]

in combination with cardiopulmonary resuscitation [CPR] therapy

User protection from shock

characterised by the form of the shockwave

Output circuitry therefor, e.g. switches

characterised by shock pathway, e.g. by electrode configuration

Monitoring; Protecting

Protecting, e.g. back-up systems

Monitoring output parameters

(for threshold determination)

for treating atrial fibrillation

Implantable devices for applying electric shocks to the heart, e.g. for cardioversion

in combination with another heart therapy

Pacing therapy

Pain reduction therapy

Constructional arrangements, e.g. casings

Power supply (A61N 1/375 takes precedence)

High voltage charging circuitry

characterised by the timing or triggering of the shock

User interfaces for automatic external defibrillators
A61N

1/40 . Applying electric fields by inductive or capacitive coupling (microwave apparatus A61N 5/00); [Applying radio-frequency signals]
1/403 . (for thermotherapy, e.g. hyperthermia)
1/406 . [using implantable thermoseeds or injected particles for localized hyperthermia (preparations of seeds and particles A61K 41/0052)]
1/44 . Applying ionised fluids (ion generators H01J 37/00)
1/445 . [Hydro-electric baths]
2/00 Magnetotherapy
2/002 . [in combination with another treatment]
2/004 . (specially adapted for a specific therapy)
2/006 . [for magnetic stimulation of nerve tissue]
2/008 . [for pain treatment or analgesia]
2/02 . using magnetic fields produced by coils, including single turn loops or electromagnets (A61N 2/12 takes precedence)
2/06 . using magnetic fields produced by permanent magnets (A61N 2/12 takes precedence)
2/12 . using variable magnetic fields obtained by mechanical movement

5/00 Radiation therapy (ultrasound therapy A61N 7/00; devices or apparatus applicable to both therapy and diagnosis A61B 6/00)

2005/002 . [Cooling systems]
2005/005 . [for cooling the radiator]
2005/007 . [for cooling the patient]
5/01 . Devices for producing movement of radiation source during therapy ((A61N 5/1077 takes precedence)
5/02 . using microwaves
5/022 . [Apparatus adapted for a specific treatment]
5/025 . [Warming the body, e.g. hyperthermia treatment]
2005/027 . [using a phased array]
5/04 . Radiators for near-field treatment
5/045 . [specially adapted for treatment inside the body]
5/06 . using light
5/0601 . [Apparatus for use inside the body]
2005/0602 . [for treatment of blood vessels]
5/0603 . [for treatment of body cavities]
2005/0604 . [Lungs and/or airways]
2005/0605 . [Ear]
2005/0606 . [MOUTH]
2005/0607 . [Nose]
2005/0608 . [Rectum]
2005/0609 . [Stomach and/or esophagus]
2005/061 . [Bladder and/or urethra]
2005/0611 . [Vagina]
2005/0612 . [using probes penetrating tissue; interstitial probes]
5/0613 . [Apparatus adapted for a specific treatment]
5/0614 . [Tanning]
2005/0615 . [using UV light sources having a specific spectrum]
5/0616 . [Skin treatment other than tanning]
5/0617 . [Hair treatment]
5/0618 . [Psychological treatment]
5/0619 . [Acupuncture]
2005/062 . [Photodynamic therapy, i.e. excitation of an agent]
5/0621 . [Hyperbilirubinemia, jaundice treatment]
5/0622 . [Optical stimulation for exciting neural tissue]
5/0624 . [for eliminating microbes, germs, bacteria on or in the body]
5/0625 . [Warming the body, e.g. hyperthermia treatment]
2005/0626 . [Monitoring, verifying, controlling systems and methods]
2005/0627 . [Dose monitoring systems and methods]
2005/0628 . [including a radiation sensor]
2005/0629 . [Sequential activation of light sources]
2005/063 . [comprising light transmitting means, e.g. optical fibres]
2005/0631 . [using crystals]
2005/0632 . [Constructional aspects of the apparatus]
2005/0633 . [Arrangements for lifting or hinging the frame which supports the light sources]
2005/0634 . [Mechanisms that allow a space saving storage of the apparatus]
2005/0635 . [characterised by the body area to be irradiated]
2005/0636 . [Irradiating the whole body]
2005/0637 . . . . . . [in a horizontal position]
2005/0638 . . . . . . [with a specially adapted support surface]
2005/0639 . . . . . . [with additional sources directed at, e.g. the face or the feet]
2005/064 . . . . . . [in a vertical position]
2005/0641 . . . . . . [with rotation of the patient]
2005/0642 . . . . . . [Irradiating part of the body at a certain distance]
2005/0643 . . . . . . [Applicators, probes irradiating specific body areas in close proximity]
2005/0644 . . . . . . [Handheld applicators]
2005/0645 . . . . . . [Applicators worn by the patient]
2005/0647 . . . . . . [the applicator adapted to be worn on the head]
2005/0648 . . . . . . [the light being directed to the eyes]
2005/0649 . . . . . . [using suction to fix the applicator to the tissue]
2005/065 . . . . . . [Light sources therefor]
2005/0651 . . . . . . [Diodes]
2005/0652 . . . . . . [Arrays of diodes]
2005/0653 . . . . . . [Organic light emitting diodes]
2005/0654 . . . . . . [Lamps]
2005/0655 . . . . . . [Tubes]
2005/0656 . . . . . . [Chemical light sources]
2005/0657 . . . . . . [Natural light sources, e.g. captured sunlight]
2005/0658 . . . . . . [characterised by the wavelength of light used]
2005/0659 . . . . . . [infrared]
2005/066 . . . . . . [far infrared]
2005/0661 . . . . . . [ultraviolet]
2005/0662 . . . . . . [Visible light]
2005/0663 . . . . . . [Coloured light]
2005/0664 . . . . . . [Details]
2005/0665 . . . . . . [Reflectors]
2005/0666 . . . . . . [for redirecting light to the treatment area]
2005/0667 . . . . . . [Filters]
2005/0668 . . . . . . [Apparatus adapted for operation in a moist environment, e.g. bath or shower]
5/067 . . . . . . [using laser light]
2005/073 . . . . . . [using polarised light]
X-ray therapy; Gamma-ray therapy; Particle-irradiation therapy (A61N 5/01 takes precedence)

with movement of the radiation head during application of radiation, e.g. for intensity modulated arc therapy or IMAT

Monitoring, verifying, controlling systems and methods

(for verifying the position of the patient with respect to the radiation beam)

using a laser alignment system

using positron emission tomography [PET] single photon emission computer tomography [SPECT] imaging

using a portal imaging system

using magnetic resonance imaging [MRI]

by projecting a visible image of the treatment field

monitoring flexing of the patient support or the radiation treatment apparatus

for adjusting radiation treatment in response to monitoring

Beam adjustment

in real time, i.e. during treatment

Gating the beam as a function of a physiological signal

Target adjustment, e.g. moving the patient support

in real time, i.e. during treatment

for verifying the dose delivered by the treatment plan

taking into account movement of the target

Details of the control system, e.g. user interfaces

for testing, calibrating, or quality assurance of the radiation treatment apparatus

using a dummy object placed in the radiation field, e.g. phantom

Beam delivery systems

Fixed beam systems

Sharing a beam by multiple treatment stations

Rotating beam systems with a specific mechanical construction, e.g. gastric

having multiple beam rotation axes

Robot arm beam systems

for delivering multiple intersecting beams at the same time, e.g. gamma knives

characterised by the type of particles applied to the patient

Ions; Protons

generated by laser radiation

Electrons

Neutrons

Kilovoltage or orthovoltage range photons

Details
[Shielding, protecting against radiation]

[Elements inserted into the radiation path within the system, e.g. filters or wedges]

[Elements inserted into the radiation path placed on the patient, e.g. bags, bolus, compensators]

[Means for immobilizing the patient]

[Enhancing the effect of the particle by an injected agent or implanted device]

7/00 Ultrasound therapy (lithotripsy A61B 17/22, A61B 17/225; massage using supersonic vibration A61H 23/00 ; using ultrasound for introducing media into the body A61M 37/0092)

[Applications of ultrasound therapy]

[Destruction of fat cells]

[Fracture healing]

[Wound healing]

[Neural system treatment]

[Stimulation of nerve tissue]

[Destruction of nerve tissue]

[Skin treatment]

[using microbubbles]

[intra-cavitary]

[interstitial]

[using the same transducer for therapy and imaging]

[Beam shaping elements]

[Lenses]

[Concave transducers]

[Reflectors]

[using multiple frequencies]

[with multiple treatment transducers]

[Scanning transducers]

[Beam steering]

[with moving parts, e.g. transducers, lenses, reflectors]

[by modifying an excitation signal]

7/02 Localised ultrasound hyperthermia (hyperthermia in general A61F 7/00)

[intracavitary]

[interstitial]

[with multiple foci created simultaneously]