EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1917

DATE: AUGUST 1, 2026

PROJECT DP12937

The following classification changes will be effected by this Notice of Changes:

Action	**Subclass**	**Group(s)**
DEFINITIONS:		
Definitions Modified:	A61B	17/225
	B01J	SUBCLASS
	B81B	SUBCLASS
	G03B	42/06
	G06T	19/00
	H04R	SUBCLASS

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES
   - ☐ A. New, Modified or Deleted Group(s)
   - ☐ B. New, Modified or Deleted Warning(s)
   - ☐ C. New, Modified or Deleted Note(s)
   - ☐ D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS
   - ☒ A. New or Modified Definitions (Full definition template)
   - ☐ B. Modified or Deleted Definitions (Definitions Quick Fix)
3. ☐ REVISION CONCORDANCE LIST (RCL)
4. ☐ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. ☐ CHANGES TO THE CROSS-REFERENCE LIST (CRL)

2. A. DEFINITIONS (modified)

A61B 17/225

References

Informative references

Replace: The Informative references table with the revised table below.

Intracorporeal lithotripsy	A61B 17/2202
Mechanical waves not for extracorporeal lithotripsy	A61B 17/320068
Percussion massage using shock waves	A61H 23/008
Ultrasound therapy	A61N 7/00

B01J

References

Application-oriented references

Insert: The following two new rows into the Application-oriented table.

Auxiliary pretreatment of gases or vapours by ultrasound	B01D 51/08
Cleaning involving contact with liquid by sonic or ultrasonic vibrations	B08B 3/12

B81B

Definition statement

Replace: The Definition statement text with the revised text below.

Encompasses microstructures:

- Having an electro-mechanical function or a pure mechanical function coupled to an electrical processing circuit suitable for electro-mechanical applications (example of applications: sensors, switches, optical switches, microchannels or micromotors).
- Having a dimension in the range of several microns to a few nanometers and manufactured using a top-down process (shaping material, moulding or stamping).

Subject-matter belonging to B81B:

Documents which contain one of the following characteristics should be classified in B81B:

- A solution to a technical problem which is common to microstructures in general (e.g. avoiding stiction, hermetic encapsulation, fabricating structures with high aspect ratio).

Examples:

- Documents that deal with a structure which has no specific application, i.e. which can be used for several application, should be classified in B81B.
- Documents that deal with structures that solve a general problem but mention as an example a specific application should nevertheless be classified in B81B since the invention could also be applied to other applications.

Subject-matter excluded from B81B:

- Applications which describe pure biological or chemical material (DNA sensors or carbon nanotubes).
- Purely optical or electrical micro- or nanodevices like optical fibers, diodes or transistors.
- Specific systems like pressure sensors, accelerometers, switches, micromotors or microreactors without any unspecific aspect/structure which may be applicable to other systems.
- Structures for solving a problem which is specific to a kind of device like increasing the sensitivity of a pressure sensor.

Relationships with other classification places

Replace: The Relationships section text with the revised text below.

Limits with application classes (e.g. switches H01H1/0036):

- If the objective problem solved by the invention is related to improving physical features of the device, or realising a given function, then the document should be classified in the application classes. For example: membrane structure for improving the sensitivity of an acceleration sensor, structure for realising a bi-stable switch or structure for increasing the oscillation frequency of an RF switch.
- If the objective problem solved by the invention is related to fabricating a specific or a general structure, or to a structure for solving a general problem, i.e. a problem that is not specific to a given device, then the document should be classified in B81B. For example: structure for improving the rigidity of a beam.

Limits with microfluidic applications:

The following criteria applies for classifying a document on microfluidic technology in B81B:

- The document describes a general structure (channel, groove, hole, arrangement of microfluidic structures without specific purpose) for use in microfluidic devices.

The following documents are not to be classified in B81B:

- Documents that describe a microfluidic structure which has a specific purpose, where the structure solves a problem specific to the technical field contemplated. For example, a specific arrangement of channels for mixing given liquids (belongs to B01F33/30).

Limits with nanotechnologies (B82B):

Limit B81B vs B82B1/00:

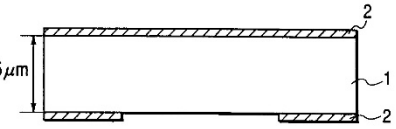
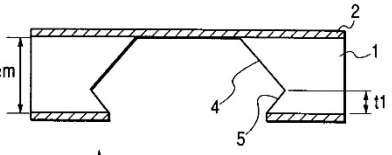
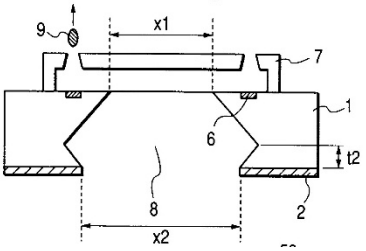
- Nanostructures having exclusively nanosized components are classified in B82B.
- Nanostructures forming part of a larger structure having at least one microsized component are classified in B81.

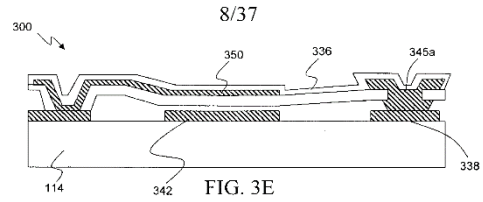
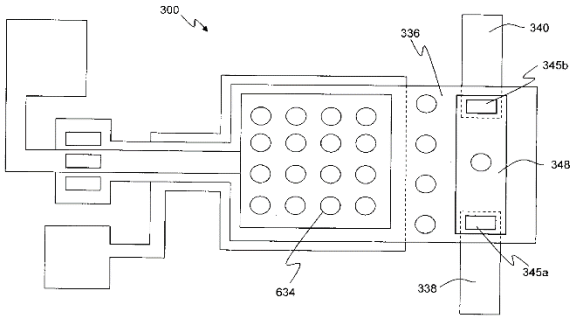
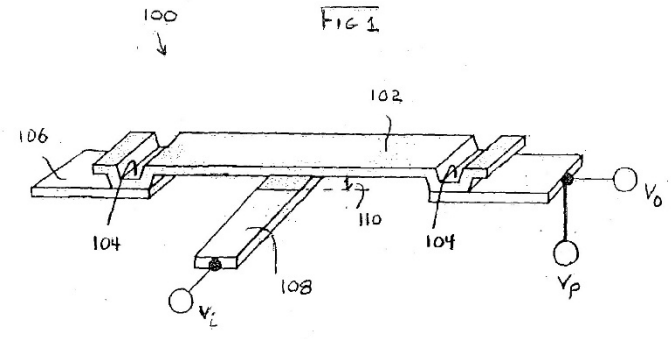
References

Informative references

Replace: The tables of the Informative references section with the revised versions below.

Actuators

Micromanipulators	B25J7/00
Ink jet, nozzles, production of nozzles, manufacturing processes, etching, dry etching or wet etching FIG. 2  FIG. 3  FIG. 4 	B41J2/1626, B41J2/1628, B41J2/1629
Micropumps	F04B19/006
Micropumps having electric drive having plate-like flexible members, e.g. diaphragms	F04B43/043
Mechanically-driven clocks or watches; Mechanical parts of clocks or watches in general, N.B.: processes for making gears (in particular for clocks) are classified in B81C99/0075+	G04B
Switches making use of micromechanics; Apparatus or processes for their manufacturing, e.g. anisotropic etching (for electrostatic relays H01H59/0009 or for relays in general H01H50/005)	H01H1/0036

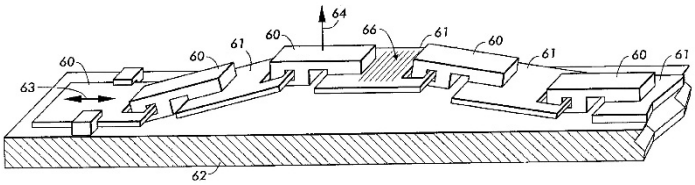
 FIG. 3E  FIG. 3A	
Electrostatic relays; Electro-adhesion relays; Making use of micromechanics	H01H59/0009
Electrostatic motors	H02N1/002
Electric motors using thermal effect	H02N10/00
Electric machines using piezoelectric effect	H02N2/00
Networks comprising electromechanical or electro-acoustic devices; Electromechanical resonators; Details of microelectro-mechanical resonators; Driving or detection means or comb electrodes 	H03H9/02244, H03H9/2405, H03H9/2447
Electrostatic transducers using semiconductor materials	H04R19/005

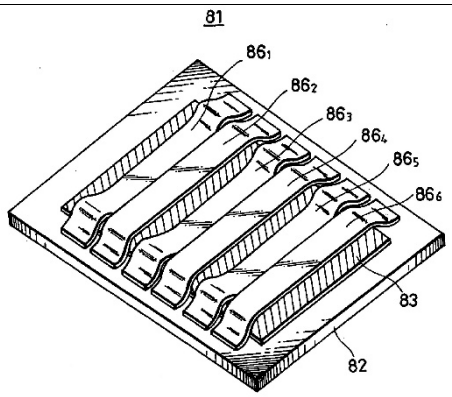
Piezoelectric devices (includes sensors using a piezoelectric element); Electro active polymer [EAP] actuated artificial muscles	H10N30/00

Sensors

Gyroscopes; Turn-sensitive devices using gyroscopic effect, e.g. using gas or using electron beam; Turn-sensitive devices with vibrating masses, e.g. tuning fork, the vibrating mass being an essentially two-dimensional body which undergoes a deformation or translation vibration in a micromechanical structure	G01C19/5719
Measuring volume flow or mass flow	G01F1/6845
Mechanical vibration measuring devices and ultrasonic, sonic or infrasonic wave measuring devices	G01H
IR sensor	G01J5/00
Transmitting or indicating the displacement of flexible diaphragms	G01L9/0041
Accelerometers; Measuring acceleration; Measuring deceleration; Measuring shock, i.e. sudden change of acceleration	G01P15/00
Arrangements or instruments for measuring magnetic variables (flux or magnetic sensors)	G01R33/00

Optical devices

Optical switches: optical devices or arrangements using movable or deformable optical elements for controlling the intensity, colour, phase, polarisation or direction of light, e.g. switching, gating or modulating, the reflecting element being a micromechanical device, e.g. a MEMS mirror or DMD. The reflecting element being moved or deformed by electrostatic means:  by means of one or more diffracting elements:	G02B26/0833, G02B26/0841, G02B26/0808

 N.B: optical devices or arrangements using movable or deformable optical elements for controlling the intensity, colour, phase, polarisation or direction of light are classified in subgroups of G02B26/08. In particular, MEMS micromirrors and optical devices using them for changing the direction of light are treated in G02B26/0833 and its subgroups.	

Microfluidic and chemical analysis devices or processes

Microneedles (devices for taking blood samples by percutaneous method)	A61B5/1411
Microneedles (devices for introducing media into the body), N.B.: manufacturing methods (other than plastic moulding) for making raised tips (in particular microneedles) are classified in B81C1/00111. Methods for coating the needles with an active material for therapeutic purposes is not classified in B81.	A61M37/0015
Inorganic membrane manufacture (micropores)	B01D67/0039
Micromixers	B01F33/30
Microreactors, e.g. miniaturised or microfabricated reactors	B01J19/0093
Containers for the purpose of retaining a material to be analysed with fluid transport, e.g. multi-compartment structures by integrated microfluidic structures, i.e. dimensions of channels and chambers are such that surface tension forces are important, e.g. lab-on-a-chip	B01L3/5027
Measuring or testing processes involving nucleic acids (DNA analysis)	C12Q1/68

Manufacture of fluid circuit elements; Manufacture of assemblages of such elements as integrated circuits (microvalves)	F15C5/00
Investigating or analysing materials by the use of electric, electro-chemical or magnetic means; Electrophoresis for analysis in microdevices	G01N27/447

Memories

Recording or reproducing by means directly associated with the tip of a microscopic electrical probe as used in scanning tunneling microscopy [STM] or atomic force microscopy [AFM] for inducing physical or electrical perturbations in a recording medium	G11B9/14
Digital stores characterised by the use of particular electric or magnetic storage elements; Storage elements therefor, using electric elements, using ferroelectric elements (using multibit ferroelectric storage elements G11C11/5657)	G11C11/22
Digital stores characterised by movement of mechanical parts to effect storage, e.g. using balls; Storage elements therefor (storing by actuating contacts G11C11/48), e.g. RAM with mechanical structure	G11C23/00
Magnets or magnetic bodies characterised by the magnetic materials therefor; Selection of materials for their magnetic properties; Bidimensional, e.g. nanoscale period nanomagnet arrays	H01F1/009
Read-only memory structures including field-effect components	H10B20/00

Micromanipulators

Micromanipulators, N.B.: documents which comply with the following criteria are to be classified in B81: The micromanipulator is specific to the manipulation and assembling of micro- or nanoparts for MEMS or NEMS. The device solves the problem of surface forces being higher than the gravitational force The document describes the structure and manufacturing process of the micromanipulator. Methods for controlling the micromanipulator are to be classified in B25J7/00 only.	B25J7/00

Chemistry, nanoparticles, nanowires

Other nanoparticles	C01B13/00, C01B17/00, C01C, C01F
Coated nanoparticles for use as pigments and/or fillers	C01G, C09C
Hyperbranched macromolecules	C08G83/005
Nanowires: electrolytic coating by surface reaction, i.e. forming conversion layers	C25D11/00
Single crystal growth methods of nanorods and nanowires (deposition)	C30B
Semi-conductor nanoparticles	C30B
Semi-conductor nanowires/nanotubes/whiskers	H10D62/118
Nanowires as semiconductor heterojunction of materials of different groups	H10D62/82
Manufacturing method for silicon nanowires/nanotubes/whiskers	H10P95/00
Nanowires as interconnects for ICs	H10W20/01

Testing and monitoring

Measuring probes, probe needles, cantilever beams, "bump" contacts; Replaceable spring-loaded probe pins, N.B: plugs, sockets or clips are in G01R1/0408, testing of connections in G01R31/66, contacting IC's for test purposes when probe design is not the essential feature in G01R31/2886, using radiation beam as probe in G01R31/302, end pieces for wires terminating in a probe in H01R11/18	G01R1/06711
Details of semiconductor or other solid-state devices, marks applied to semiconductor devices (or parts), e.g. registration marks, test patterns (alignment structures, wafer maps), using circuits for characterising or monitoring manufacturing processes, e.g. whole test die, wafers filled with test structures, on-board-devices incorporated on each die, process/product control monitors or PCM, devices in scribe-line/kerv, drop-in devices	H10W46/00

Apparatus for lithography

Photomechanical, e.g. photolithographic, production of textured or patterned surfaces, e.g. printing surfaces; Materials therefor, e.g. comprising photoresists; Apparatus specially adapted therefor; Apparatus for microlithography	G03F7/00

Others

Injection moulding (for example for microneedles)	B29C45/00
Imprinting and embossing machines	B29C59/00
Control arrangements or circuits, of interest only in connection with visual indicators other than cathode-ray tubes (no fixed position being assigned to or needed to be assigned to the individual characters or partial characters), by control of light from an independent source; Control circuit for an array of optical MEMS, for example for avoiding stiction	G09G3/34
Apparatus or processes specially adapted for manufacturing or assembling transformers, inductances, reactors or choke coils, for applying magnetic films to substrates (covering metals, or materials with metals, in general C23C; Manufacturing record carriers G11B5/84), for applying nanostructures, e.g. by molecular beam epitaxy [MBE]	H01F41/30
Variable MEMS capacitors	H01G5/16

Special rules of classification

Replace: The Special rules text with the revised text below.

The classification scheme in B81B comprises two kinds of classification codes:

- The codes B81B1/00 - B81B7/00 are the main groups which are defining technical problems solved by the teaching of the classified documents.
- The indexing codes B81B2201/00 - B81B2207/99 and B81C2201/00 - B81C2900/02 are defining technical features of the invention.

Accordingly, the classifier should try to adhere to the following rules:

- Each document to be classified in B81B should be allocated only one main group corresponding to the objective technical problem solved by the invention, unless the content of the document describes more than one

invention. In case the classification does not contain a group corresponding to the technical problem, the classifier should allocate either a residual group (see below), or in exceptional cases, when appropriate, several groups that in conjunction describe the technical problem.

- As the invention may comprise several essential technical features, a document classified in B81B may be allocated more than one indexing code. The indexing codes which are allocated should be relevant to the invention.
- Furthermore, the indexing codes must only be allocated to documents which are receiving a main group.

Residual groups:

The classification in B81B contains so-called residual groups. For example:

B81B7/0077: Other packages not provided for in groups B81B7/0035 - B81B7/0074

When classifying a document which doesn't correspond to any subgroup (for example B81B7/0035 - B81B7/0074), the document must be classified in the residual group, if present, and not in the main group. In the present example, the documents should be classified in B81B7/0077 and not in B81B7/0032.

The classifier must stick to this policy: no new document should be classified in a main group if a residual group is present.

The reason for these residual groups is to provide the search examiner with the certainty that all documents in the groups have been classified or reclassified. If a residual group is not present, but subgroups are, the examiner has no certainty that the documents from the main group have been reclassified when creating the subgroups.

When doing the search, the presence of the residual group indicates that all documents in the residual group have been classified taking into account the subgroups of the same level. Documents in the group of higher level, which have been split up into the sub-groups, may not have been classified taking into account the sub-groups.

Therefore, at search stage, the examiner must keep in mind that he must verify if documents are present in the main group, since these documents have not been reclassified.

The classification structure in B81:

The classification in B81, based on IPC8, makes the difference between structures and processes. In many cases, the underlying problems, which form the basis for the technical definition of a group, are solved either with a structural solution, or with a manufacturing process. Therefore, some group descriptors are duplicated in B81B (structures) and in B81C (processes).

The criteria for deciding if a document is to be classified in the structures or in the process is the following:

If the solution to the technical problem is a structure, then the document should be classified in B81B.

If the solution to the technical problem is a method, then the document belongs to B81C.

Example:

B81B3/0002: arrangements for avoiding sticking of the flexible or moving parts

and

B81C1/00912: treatments or methods for avoiding stiction of flexible or moving parts of MEMS

If, for example, a document describes a process using supercritical CO_2 for avoiding stiction, then it should be classified in B81C1/00928.

If the document describes a bump for avoiding stiction of a cantilever, then it should be classified in B81B3/001.

Exceptions:

B81B3/0005 contains also the processes for making anti-stiction coatings.

Glossary of terms

Replace: The Glossary of terms tables so the entire section appears as follows.

Many technical terms in MEMS technology are defined in the SEMI norm SEMI MS3-0307. In the following sections, some technical expressions are given an additional explanation in the meaning of the classification scheme.

Summary of static of elastic structures:

Defined by their geometry

extending structures	pillar, column or tip
depressed structures	cavity, groove or hole
suspended structures	bridge, cantilever, diaphragm, see-saw or comb structure

Defined by their function

extending structures	anchor or rib
depressed structures	channel or nozzle

suspended structures	flexure membrane, spring torsion hinge or proof mass

Rotating elements

rotating elements	gears, rack and pinion or hinge

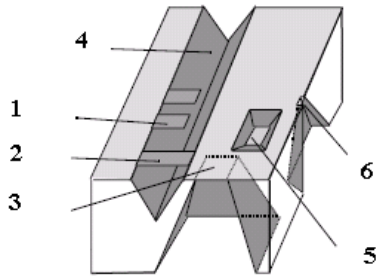
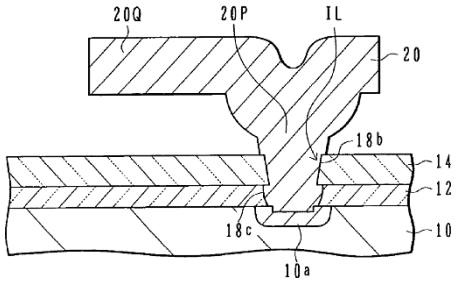


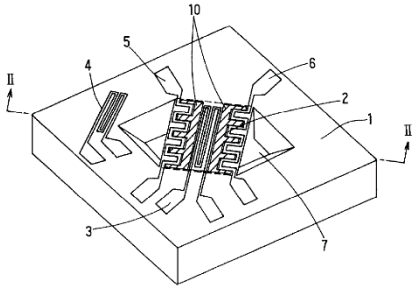
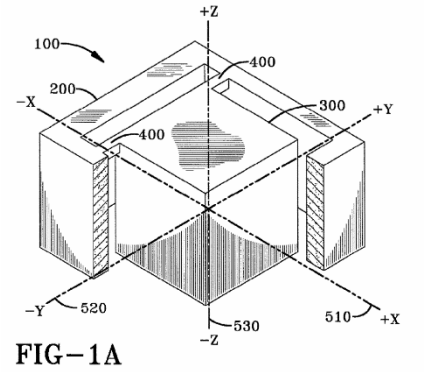
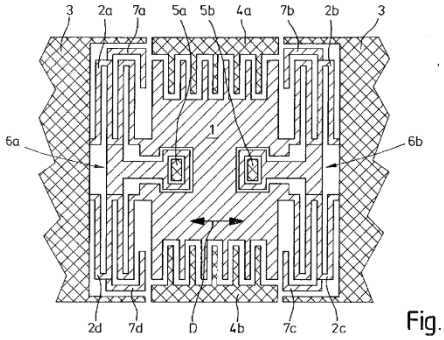
Figure 1: Basic structures

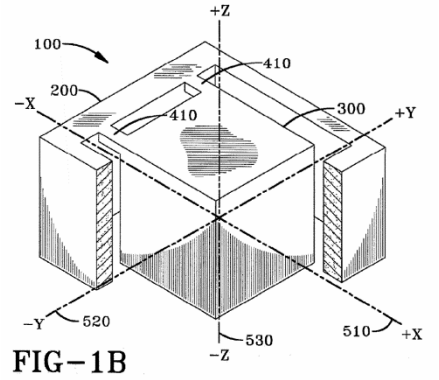
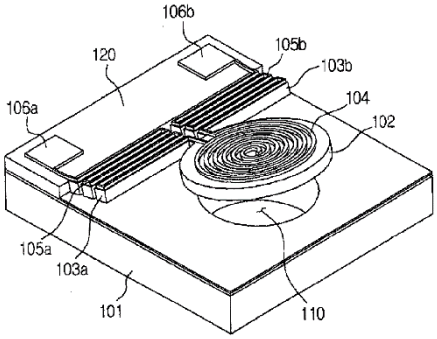
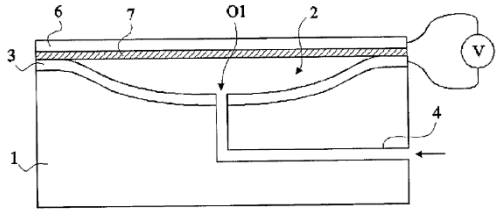
1) Cantilever 2) Bridge 3) Diaphragm 4) V-Groove 5) Well/Cavity

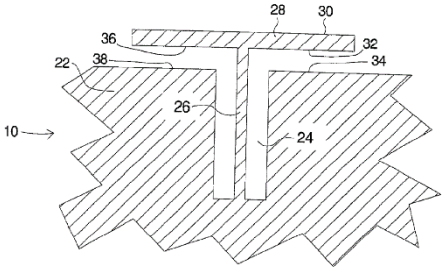
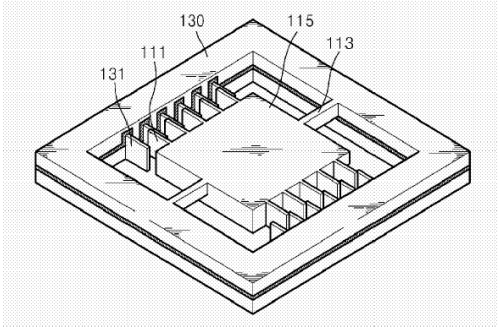
6) Hole/Nozzle, [1]

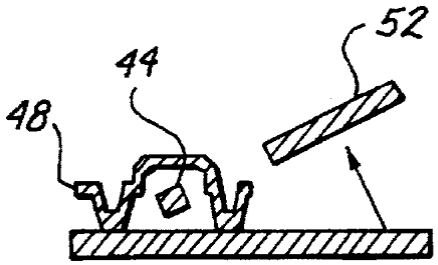
pillar/column	tall vertical structure, usually narrow in proportion to its height, which is usually used as a support structure, anti-adhesion structure or a structure for thermal exchange
tip	tips are small pointed or rounded structures often used for scanning probe microscopy probes [SPM] - like atomic force microscope [AFM], but also for data storage (Millipede), electron tunnelling tip (used in sensors) or microneedles
bump	also used in relation to structures for reducing adhesion
functional layers	used mostly as protective coatings. They can protect structures against chemical or mechanical corrosion that can release particles into the protected cavity. Special coatings are used also to prevent adhesion of movable structures or to reduce the stress. Metallic layers covering polymer sealing are used to make them hermetic, but can be used also to compensate the RF-interferences.
anchor	structures connecting the suspended movable parts to the substrate. They can affect the resonant frequency and the reliability of the device.

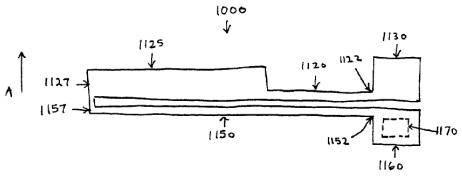
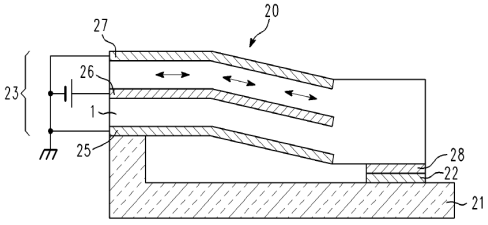
	 Figure 2: Anchor
rib	stiffening ribs are used to improve the stiffness of suspended structures. Improving the stiffness to mass ratio, they can have impact on resonant frequency and efficiency of the devices.
cavity	in bulk micromachining, cavity is used to make the movement of a suspended element possible. It can be used also for the protection of movable structures in packaging, for thermal insulation or as a container for fluids (see Figure 1). The synonyms are chamber, hollow or well.
groove	a typical example is a V-Groove (see Figure 1), which can be formed in 100 - Si substrate by KOH etching. Sometimes the groove in 111 - Si substrate is called channel or trench to distinguish them, but we consider channel to be a function-oriented definition. Grooves are usually used in microfluidic applications, but can also be used for precise positioning of optical fibres or controlled weakening of structures holding a device prior to its separation by breaking.
hole	aperture passing through anything, a perforation or opening
channel	tube or tubular passage, natural or artificial, usually for liquids or fluids
nozzle	spout, mouthpiece, projecting aperture or a short terminal pipe from which a jet of gas or liquid may issue or be discharged (see Figure 1)
bridge	structure, erected or suspended over a surface, depression or an obstruction, connecting two or more extremities, including structures with supports deformable in torsion (see Figure 4), flexion or supported by springs (see Figure 5)

	 Figure 3: Bridge (flow sensor)  FIG−1A Figure 4: Bridge with torsion hinges (accelerometer)  Fig. Figure 5: Bridge with springs (inertial sensor). Application: thermal insulation for flow sensors, infrared sensors or bolometers. According to this definition, most of the accelerometers, gyroscopes and micromirrors are bridges.
cantilever	structure which projects beyond a supporting column on a wall and is counterbalanced and/or supported at only one end. Cantilevers are also called flexures, suspension or cantilever beams and suspension springs if their structure is more complicated. These elements usually store and release mechanical energy by deformation resulting in vibration. A proof mass can be attached to one extremity of a cantilever. If there is a cantilever on both sides of a supported structure (proof mass or a micromirror), this structure is called a bridge.

	 FIG−1B Figure 6: Cantilever/flexure with proof mass (accelerometer)  Figure 7: Cantilever (microvalve). Application: switches, resonators, chemical and biological sensors, accelerometers.
diaphragm	layer covering a hole or a cavity, fixed to a frame all along its periphery, separating two environments. This separation can be hermetic or not, permanent or temporal and its opening can be controllable. Diaphragms can be perforated or have a seismic mass attached to it.  Figure 8: Diaphragm (micropump). Applications: pressure sensors, microphones, ultrasonic resonators, valves, accelerometers, thermal insulation.
see-saw	suspended structures supported by a flexible element which main axis is usually perpendicular to the substrate plane. These structures can be used as a support for micromirrors, switches, gyroscopes and resonators.

	 Figure 9: See-saw
comb structure, comb drive	structure with a pair of comb-shaped electrodes. This shape increases the total capacitor surface. Comb structures are used for actuation or sensing. When voltage is applied, the combs are attracted to each-other. They are often attached to a deformable element that pulls them back to the initial position because they cannot develop a repulsive force.  Figure 10: Comb structure
flexure	or flexure beam. It is a structural element that carries load primarily in bending. Deformation comprises bending about an axis normal to the beam's axis. This allows the structures to move along the perpendicular axis to the substrate (see Figure 6).
membrane	thin layer separating two environments allowing selective mass transport control, like chemical or physical filtering or separation of substances. Membrane is often used as synonym to diaphragm.
spring	suitably shaped structure that can return to its original shape after a deformation (see Figure 5)
torsion hinge	also called deformation hinge or a torsion beam. It is an element that deforms by twisting about an axis parallel to the beam's axis. This allows the structures to rotate around the axis parallel to the substrate (see Figure 4).

proof mass	also called seismic mass, it is a structural element usually connected to a deformable element. The mass of this element defines the resonant frequency, sensitivity and precision of the system. In some cases, holes or grooves are made on the proof mass to control or eliminate damping (see Figure 6).
gears	toothed wheel designed to transmit torque to another gear or toothed component
rack and pinion	structure used to transform rotation to translation movement
hinge	movable joint or mechanism providing for the turning of two movable parts  Figure 11: Hinge
interconnects	electrically conducting element for transmitting a signal from one point to another one. Interconnects that may be formed on, in or through the substrate or any element formed on the substrate (e.g. lid of a package). A via is a particular form of an interconnect.
electrodes	electrically conducting element through which an electric current enters or leaves a substance (or a vacuum) whose electrical characteristics are being measured, used or manipulated. Also, terminal points in electrical components.
thermal actuators	movement generated by the difference in thermal expansion of two of more elements (generally beams), each element having at least one anchoring point to the substrate. A typical thermal actuator is formed out of two parallel beams (one cold beam and one thermal beam) attached at one end to the substrate and having one connecting point at the other end. When the temperature of the thermal beam becomes higher than the temperature of the cold beam, the difference of thermal expansion generates a deflection at the connecting point.

	 FIG. 1 Figure 12: Thermal beam Search and Classification Notes. Thermal actuators are also found in H01H.
bimorph and unimorph actuators	a bimorph is a cantilever that consists of two active layers. These layers produce a displacement via thermal activation (a temperature change causes one layer to expand more than the other). Electrical activation as in a piezoelectric bimorph (electric field(s) cause one layer to extend and the other layer to contract). A piezoelectric unimorph has one active (i.e. piezoelectric) layer and one inactive (i.e. non-piezoelectric) layer. For example, in the following figure, in response to application of a voltage to the first movable electrode 25, the second movable electrode 26, and the third movable electrode 27, the piezoelectric thin film 1 extends/contracts and the movable section 23 is driven toward the substrate 21.  Figure 13: Bimorph actuator

G03B 42/06

References

Informative references

Replace: The Informative references table with the revised table below.

Diagnosis testing using ultrasonic, sonic or infrasonic waves	A61B 8/00

Measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves	G01H

G06T 19/00

References

Delete: The entire Limiting references section.

Informative references

Replace: The Informative references table with the revised table below.

2D cosmetic or hairstyle simulations	G06T 11/60
Video games	A63F 13/00
Visualisation of the interior of objects by transmitting ultrasonic or sonic waves through the object	G01N 29/00
CAD-CAM [computer-aided design and manufacturing]	G05B 19/4097
Generation of 3D objects with NC-machines	G05B 19/4099
Interaction techniques for graphical user interfaces, e.g. interaction with windows, icons or menus	G06F 3/048
Computer-aided design [CAD]	G06F 30/00
Digital computing or data processing equipment or methods, specially adapted for text processing	G06F 40/10
Transformation of image signals corresponding to virtual viewpoints	H04N 13/111

H04R

Definition statement

Replace: The Definition statement text with the revised text below.

- Loudspeakers, microphones, acoustic transducers therefor producing acoustic waves or variations of electric current or voltage or gramophone pick-ups;
- Arrangements actuated by variations of electric current or voltage for cutting grooves in records;
- Circuits for the above-mentioned loudspeakers, microphones, acoustic transducers, gramophone pick-ups or arrangements;
- Monitoring or testing of the above-mentioned loudspeakers, microphones, acoustic transducers, gramophone pick-ups, arrangements or circuits therefor.

References

Informative references

Replace: The text of the second row so that the entire table appears as follows.

Generating mechanical vibrations in general	B06B
Measurement of mechanical vibrations or ultrasonic, sonic or infrasonic waves	G01H
Transducers in recording or reproducing heads	G11B
Transducers in motors	H02K, H02N
Transmission systems employing ultrasonic, sonic or infrasonic waves	H04B 11/00

Special rules of classification

Replace: The Special rules section text with the revised text below.

- Classification of invention information and additional information is obligatory.
- Further detail not provided for in any of the main groups is provided for in the subgroups of indexing code groups H04R 2201/00 - H04R 2231/00, H04R 2307/00 and H04R 2400/00 - H04R 2499/00. These indexing code

groups should be used in combination with CPC main trunk symbols to classify information highly relevant to the invention only. Classification is obligatory as indicated for each of the indexing groups concerned.

- Of indexing code groups H04R 2201/00 - H04R 2231/00, H04R 2307/00 and H04R 2400/00 - H04R 2499/00, and of indexing code groups H04R 2201/02, H04R 2201/10 and H04R 2201/40, only the subgroups should be used for classification.
- Further detail not provided for in any of the main groups is provided for in the subgroups of indexing code groups H04S 2400/00 and H04S 2420/00 below. Classification is obligatory.
- Modifications to the transducer itself (e.g. a Helmholtz resonator attached to a through-hole in the magnetic circuit or zeolytes attached to the frame), in order to modify the frequency response, are to be classified in the appropriate place for the type of transducer (H04R 9/00 - H04R 23/00) as invention information in combination with H04R 1/22 as additional information.

Glossary of terms

Replace: The Glossary of terms table with the revised table below.

acoustic, sound	covers the technical field dealing with ultrasonic, sonic or infrasonic waves
deaf aid	hearing aid
loudspeaker	transducer mounted in a casing for producing sound
microphone	transducer mounted in a casing for collecting sound

microstructural device	1. micromechanical devices comprising movable, flexible or deformable elements; 2. three-dimensional structures without movable, flexible or deformable elements, comprising microformations designed to accomplish an essential structural function for interacting with their environment, as opposed to purely electronic or chemical functions, regardless of whether the structures are combined with microelectronic devices or formed from specific materials.
microstructural system	1. systems of cooperating microstructural devices; 2. microelectro-mechanical or microopto-mechanical systems, which combine on a common substrate the specific features of microstructural devices and electrical or optical components, e.g. for controlling, analysing or signalling the functioning of microstructural devices.
stereophonic system	two- or more channel system, e.g. quadraphonic, ambisonic or similar system
transducer	a device that converts an electrical signal to an acoustic signal with a frequency which is determined by the frequency of the electrical signal applied to the transducer or vice versa