

★★★ <第17回知的財産翻訳検定試験【第8回英文和訳】> ★★★

《2級》

【解答にあたっての注意】

1. \*\*\*START\*\*\*から\*\*\*END\*\*\*を和訳してください。
2. 課題文に段落番号がある場合、これを訳文に記載してください。
3. 課題は3題あります。それぞれの課題の指示に従い、3題すべて解答してください。
4. 指定用語がある問題については指示に従い和訳してください。

問1次の請求項を和訳してください。

\*\*\*START\*\*\*

1. A device for brushing teeth, the device comprising:  
a head for cleaning teeth, the head having a plurality of bristles protruding from a first surface of the head;  
a handle, constructed and arranged for holding and manipulating the device;  
and  
a flexible neck coupled between the head and the handle,  
wherein the flexible neck bends relative to the handle when an external pressure greater than a maximum predetermined pressure is exerted against the head, to prevent more than a maximum predetermined pressure from being exerted against the teeth by the head.
2. The device of claim 1, further comprising:  
a power switch located on the handle for activating and deactivating the device, the power switch having an "on" position and an "off" position;  
a power source connected to the power switch;  
and  
a vibrating mechanism connected to the power source.
3. The device of claim 2, further comprising:  
a pressure sensor in communication with the flexible neck and the vibrating mechanism,  
wherein the pressure sensor activates the vibrating mechanism when the external pressure exerted against the head is greater than a minimum predetermined pressure, and wherein the pressure sensor deactivates the vibrating mechanism when the external pressure exerted against the head is less than the minimum predetermined pressure.

\*\*\*END\*\*\*

指定用語

bristle: ブラシ毛

brush: ブラッシングする

問2. 次の従来技術を和訳してください。

\*\*\*START\*\*\*

As fully described in, for example, Japanese Unexamined Patent Application No. 2011-XXXXX, a secondary battery is a rechargeable battery. Secondary batteries may be used in portable electronic devices, e.g., cellular phones, notebooks, and camcorders. Secondary batteries may also be used to, e.g.,

drive electric vehicles or hybrid electric vehicles.

The secondary battery may have a structure in which an electrode assembly having a positive electrode, a negative electrode, and a separator that are wound to form a jelly roll structure. The electrode assembly may be installed in the secondary battery through an opening of a case thereof. The opening may be covered by a cap plate. A current collector may be electrically connected to an end of the electrode assembly and an electrode terminal in the cap plate. Thus, when an external terminal is connected to the electrode terminal of the cap plate, current generated by the electrode assembly may be supplied to the external terminal through the current collector and the cap plate.

The current collector may be welded to a corresponding electrode of the electrode assembly so as to create a current path and to support the jelly roll structure.

\*\*\*END\*\*\*

問3. 次の実施形態を和訳してください。  
参照文章は翻訳する必要はありませんが、翻訳の際の参考にしてください。

参考文章

The exemplary embodiments of the present invention provide a method and system for aligning graphite nanofibers in a thermal interface material to enhance the thermal interface material performance. The method includes preparing the graphite nanofibers in a herringbone configuration, and dispersing the graphite nanofibers in the herringbone configuration into the thermal interface material. The method further includes applying a magnetic field of sufficient intensity to align the graphite nanofibers in the thermal interface material. The system includes the graphite nanofibers configured in a herringbone configuration and a means for dispersing the graphite nanofibers in the herringbone configuration into the thermal interface material. The system further includes a means for applying a magnetic field of sufficient intensity to align the graphite nanofibers in the thermal interface material.

\*\*\*START\*\*\*

It is well established that the incorporation of certain types of carbon nanofibers into thermal interface material can impart thermal conductivity to such materials. Carbon nanofibers can be dispersed in thermal interface material by various well-known techniques. These techniques include, but are not limited to, melting, kneading and dispersive mixers to form an admixture that can be subsequently shaped to form a thermally conductive article.

Nanofibers are defined as fibers with diameters on the order of 100 nanometers. They can be produced by interfacial polymerization and electrospinning. Carbon nanofibers are graphitized fibers produced by catalytic synthesis around a catalytic core. The catalytic core around which graphite platelets are formed is, for exemplary purposes, called a metal seed or a catalytic metal seed, wherein the catalytic metal seed is a material having magnetic properties such as iron, cobalt, or nickel.

Other non-metal materials suitable for forming magnetically alignable graphite nanofibers are within the scope of the invention.

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Metal-core graphite nanofibers can be grown in numerous shapes around a catalytic metal seed. From the physical point of view, metal-core graphite nanofibers vary from 5 to 100 microns in length and are between 5 to 100 nm in diameter.

\*\*\*END\*\*\*

指定用語

thermal interface : 熱界面

electrospinning : 電解紡糸

catalytic core : 触媒性を有するコア

platelet : 板状晶

alignable : 配向可能な

metal seed : 金属シード