

≪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. 解答語数に特に制限はありません。適切な個所で改行してください。
3. 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。
4. 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。

問1

下記の英文は、ある米国特許明細書における実施例の説明の記載からその一部を抜粋したものです。添付された図面を参照して全文を日本語に翻訳してください。

START

DETAILED DESCRIPTION OF THE EMBODIMENTS

Embodiments of the present invention are described below. It is, however, expressly noted that the present invention is not limited to these embodiments, but rather the intention is that modifications that are apparent to the person skilled in the art and equivalents thereof are also included.

FIG. 1 illustrates an embodiment of the invention of a non-walled portable beverage holder 1 in an exploded downward view. The beverage holder 1 may include a middle piece 3 and a bottom piece 4, which are non-releasably coupled together to form a single unit. According to optional embodiments, a top piece 2 is configured to be releasably attachable to the middle

piece 3, while the middle piece 3 and bottom piece 4 are non-releasably attached together, such as through molding or fusion. Thus, the middle piece 3 and bottom piece 4 without the top piece 2 can function as a beverage holder by itself as a single unit.

According to other embodiments, the top piece 2 is non-releasably attached to the top of the middle piece 3. In such embodiments, the top piece 2 and middle piece 3 may include complementary means for releasably attaching to each other using a series of downwardly projecting tabs 5 present on the bottom side of top piece 2 for inserting into slots 6 present on the topside of the middle piece.

END

問2

下記の英文は、ある米国特許明細書における背景技術の記述から抜粋したものです。全文を日本語に翻訳してください。

START

BACKGROUND

This invention generally relates to systems and methods for remotely detecting a volcanic plume using radiofrequency (RF) signals that have traversed the plume and that are subsequently received. In particular, this invention relates to systems and methods for remotely detecting a volcanic plume embedded in clouds using satellite-transmitted RF signals.

As used herein, the term "volcanic plume" means a cloud of volcanic ash and the term "volcanic gases" means gases given off by active

volcanoes. Dispersed volcanic gases disposed outside the volume occupied by a volcanic ash cloud are not included as part of the "volcanic plume."

Volcanic ash can pose a hazard to flying jet aircraft, threaten the health of people and livestock, damage electronics and machinery, and interrupt power generation and telecommunications. Volcanic ash comprises tiny jagged particles of rock and natural glass blasted into the air by a volcano. Wind can carry ash thousands of miles, affecting far greater areas than other volcano hazards.

Volcanic plumes present two problems for aircraft:

(a) engine shutdown due to ash; and (b) aircraft damage and/or crew and passenger injury due to ash and corrosive gases. Volcanic ash particles are extremely abrasive. They are jagged particles of rock and glass that can cause rapid wear to the internal workings of jet engines.

More importantly, high temperatures in some parts of jet engines can melt the ash; it then re-solidifies on cooler parts of the engine, forming a layer that blocks airflow, and interferes with moving parts, and eventually shuts down the engine.

END

問3

下記は、brazing alloy（ろう付け合金）に関する米国特許明細書の請求項の一部を抜粋したものです。これを日本語に翻訳してください。P, Znなどの元素記号はそのまま訳文中に残しても構いません。

START

1. A brazing alloy in the form of a wire, rod or preform, comprising, in weight percent: 3-7.5% P, 0.1-1.9% Zn, 5-18% Ag, 0-80% Au, 0-10% Sn, 0-5% Ni, and the balance copper in an amount of at least 21.7%.

2. A method of torch brazing, comprising:

forming a wire or rod from an alloy comprising, in weight percent: 3-7.5% P, 0.6-1.9% Zn, 5-18% Ag, 0-80% Au, 0-10% Sn, 0-5% Ni, and the balance copper in an amount of at least 21.7%;

placing a tip of the wire or rod in contact with a surface of a joint formed by first and second base metals, wherein the first base metal is a ferrous alloy, nickel, or a nickel alloy, and wherein the second base metal is a ferrous alloy, nickel, a nickel alloy, gold, a gold alloy, silver, a silver alloy, copper, or a copper alloy; and

heating the joint surface using a torch flame and contacting the tip of the wire or rod to the heated joint surface to melt and flow the alloy onto the joint surface and into the joint under capillary action.

3. The method of claim 2, wherein the alloy consists essentially of, in weight percent: 3-7.5% P, 0.6-1.9% Zn, 5-18% Ag, 0-80% Au, 0-10% Sn, 0-5% Ni, and the balance copper in an amount of at least 21.7%.

END**

【2級 問1 図面】

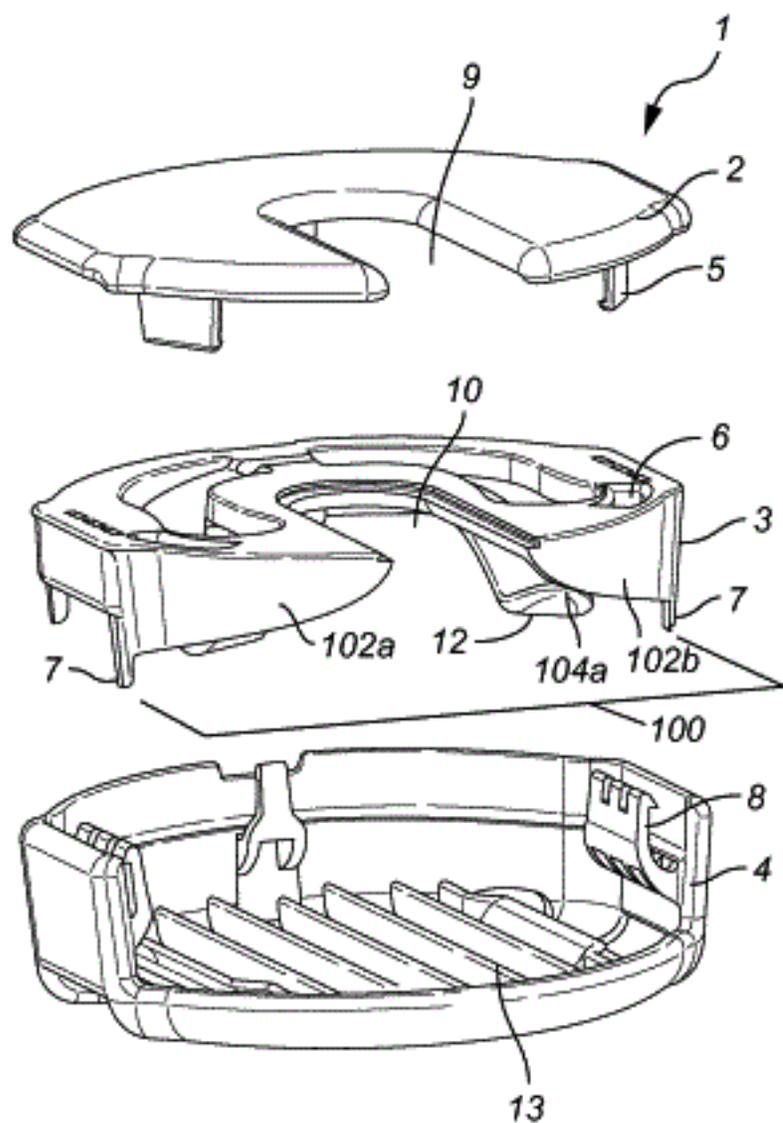


Fig. 1