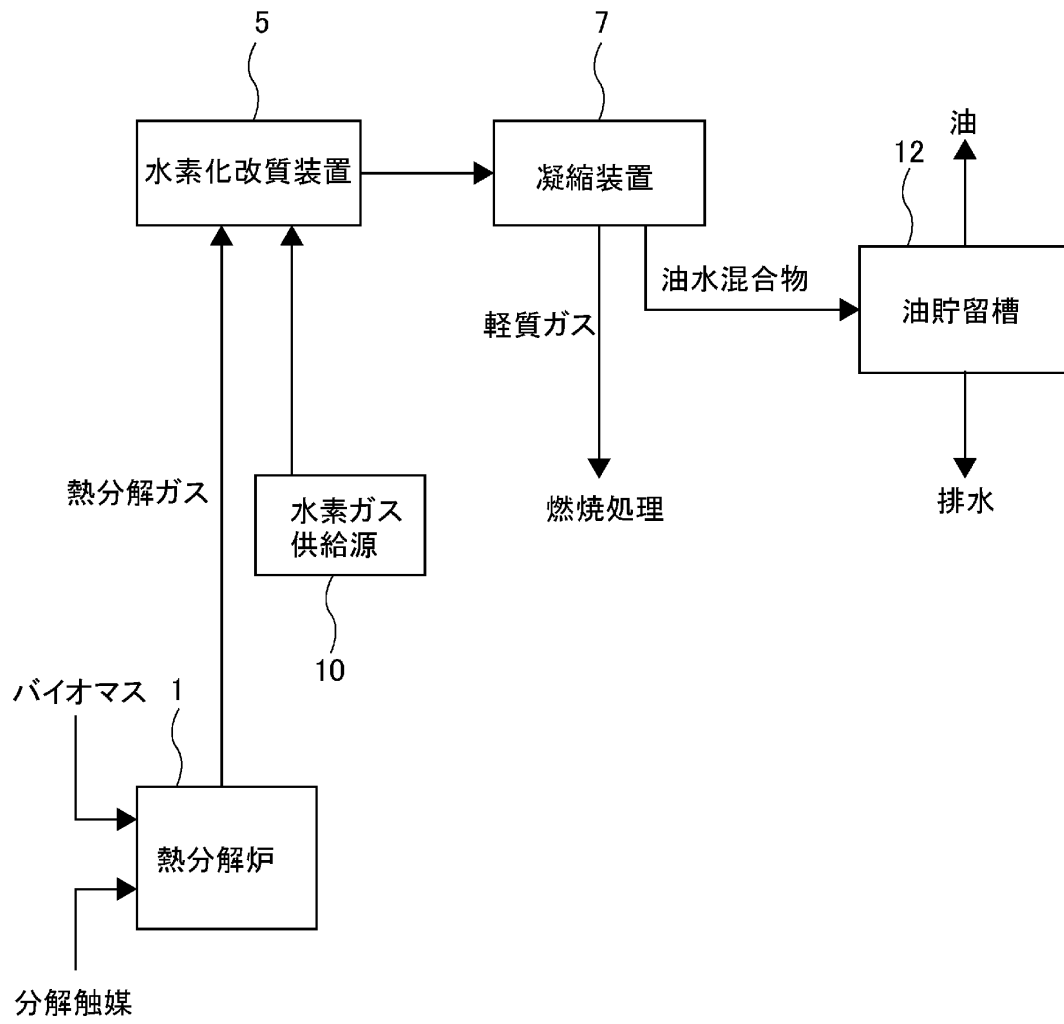
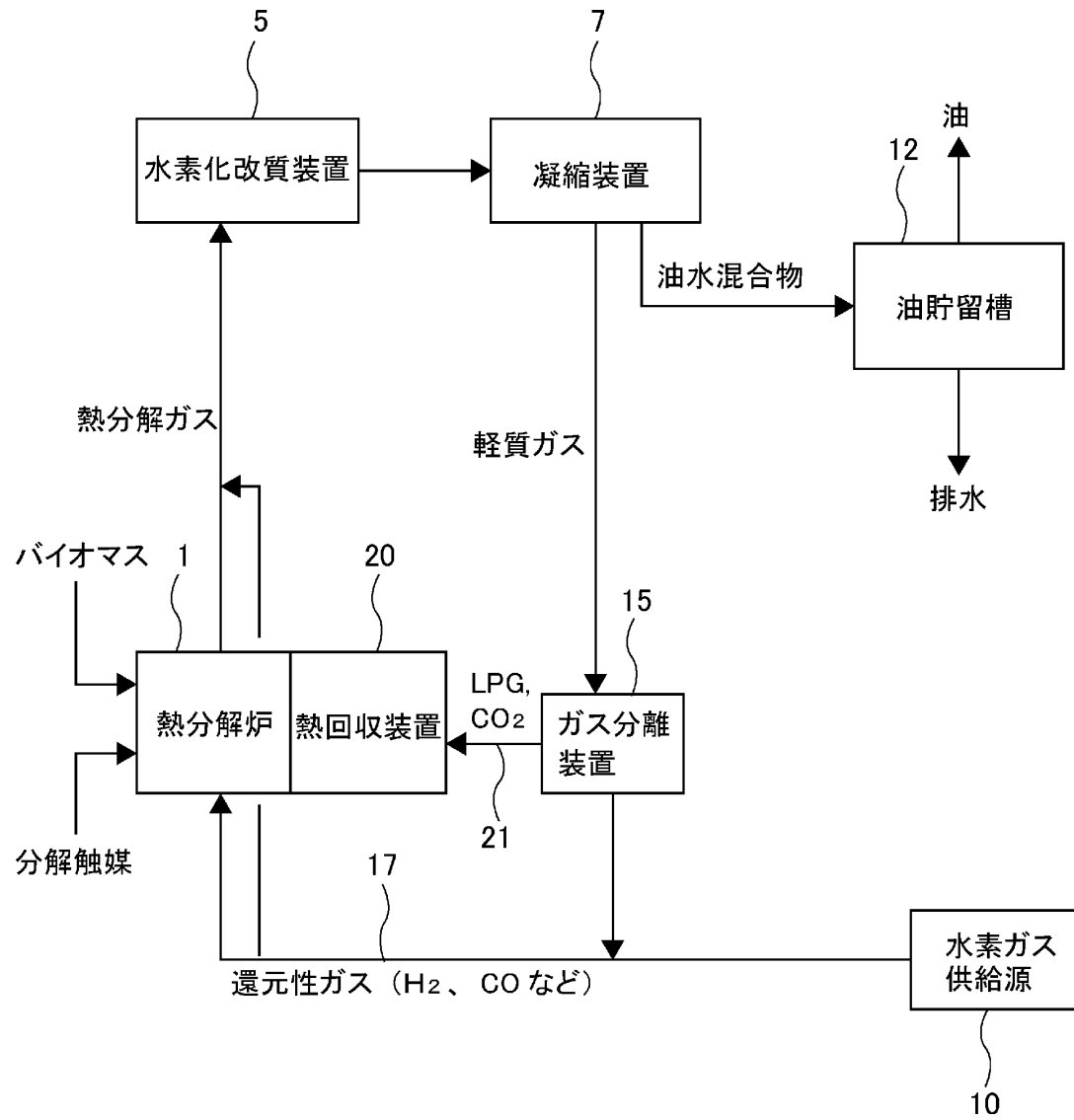


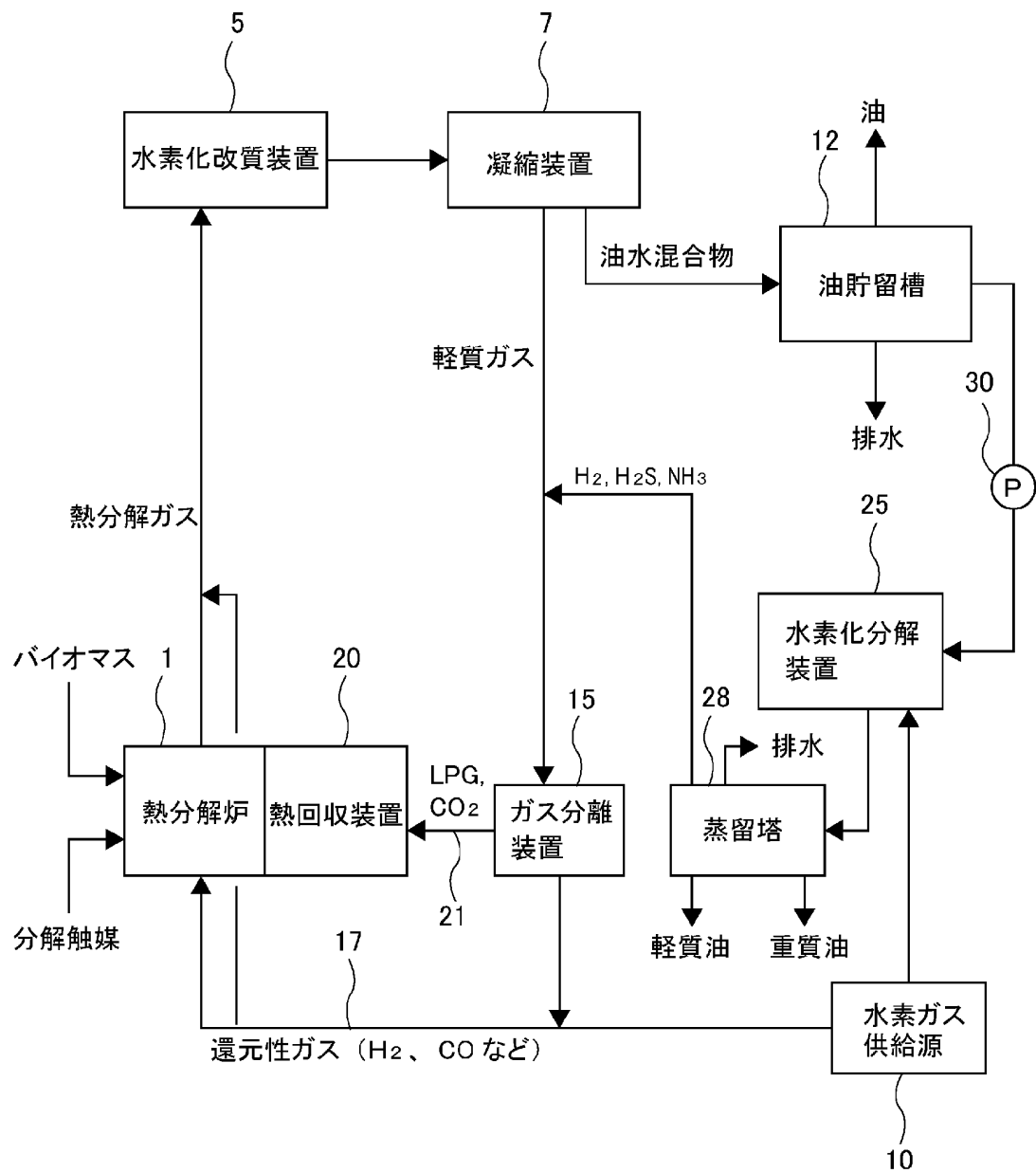
[図1]



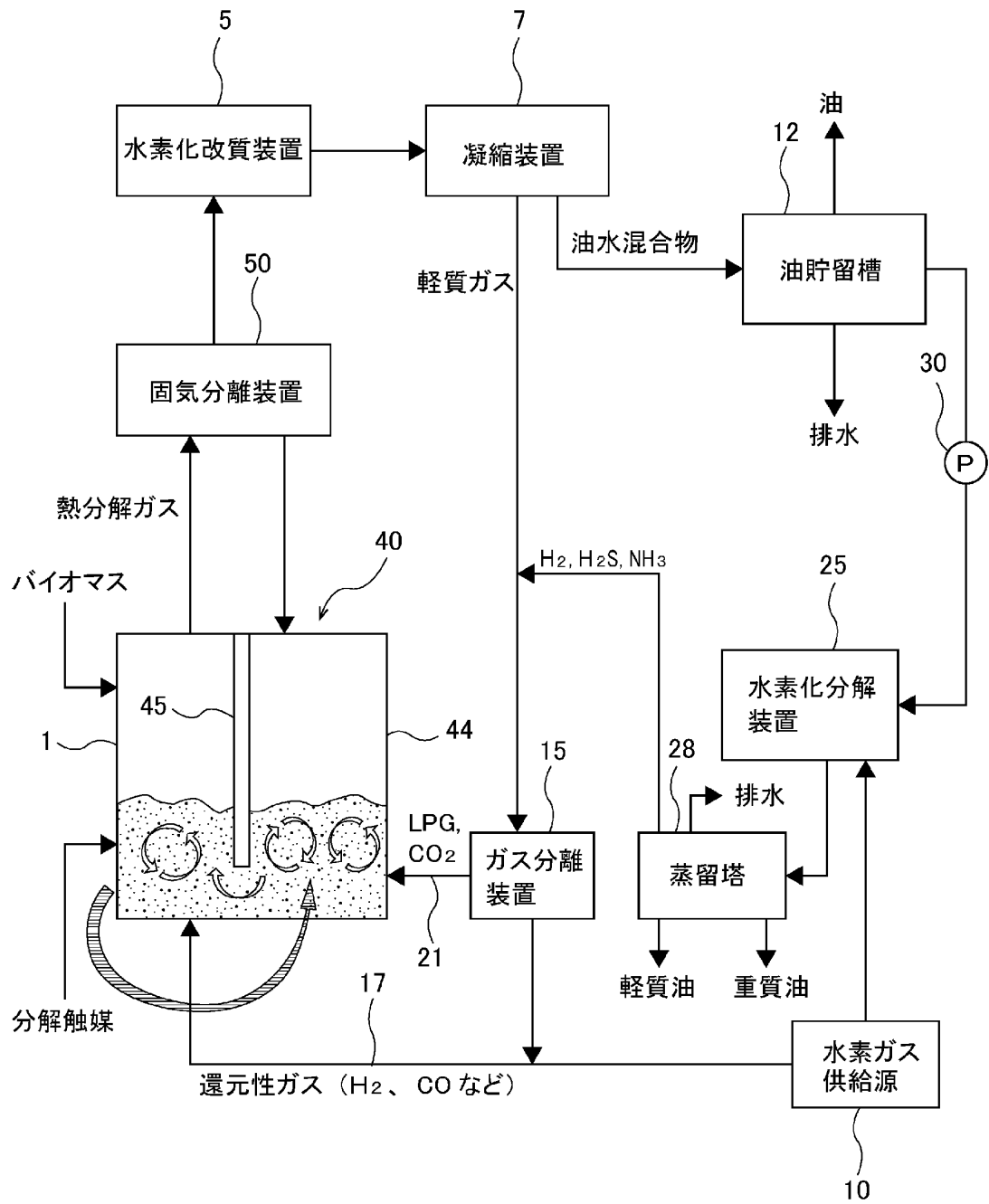
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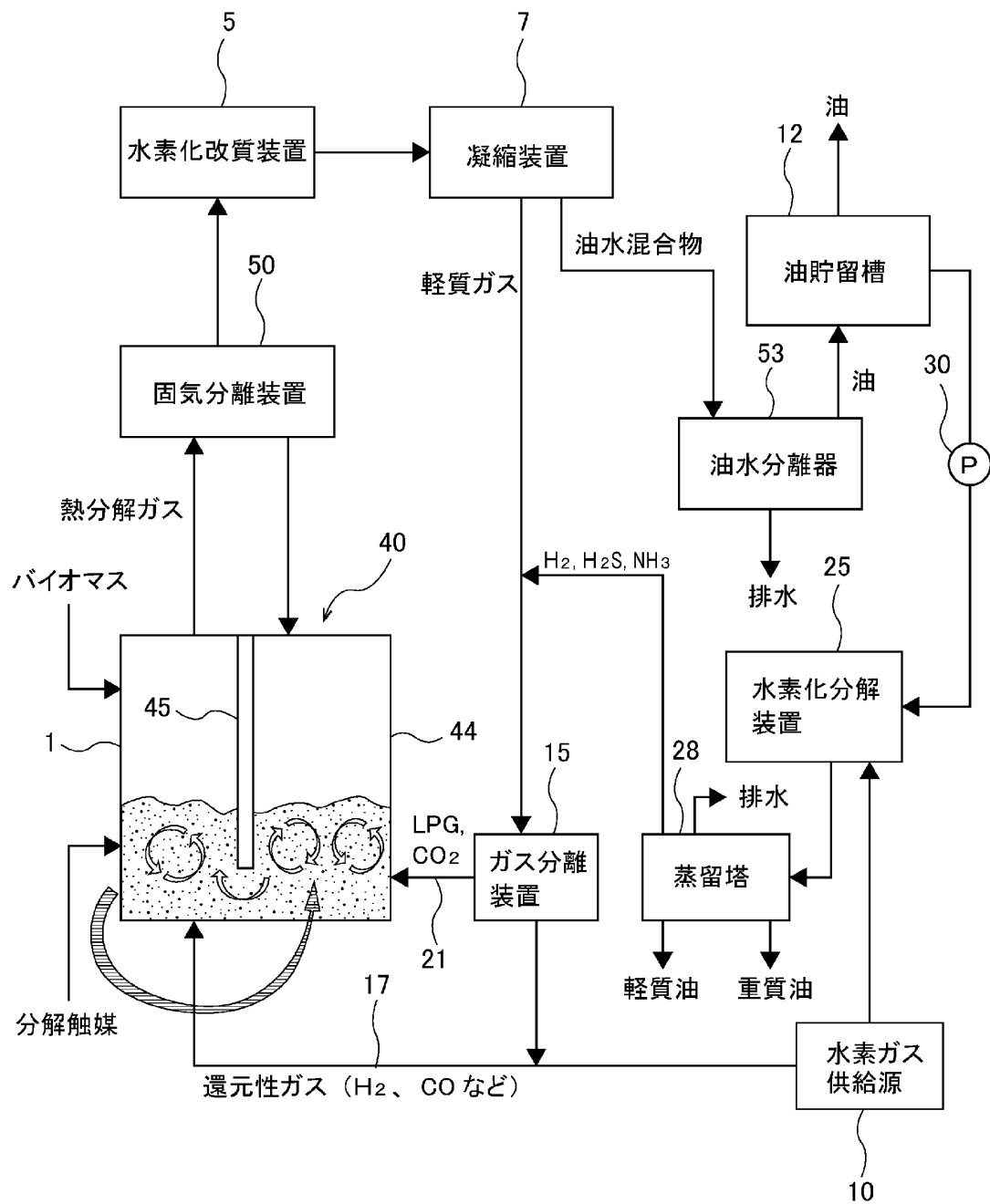
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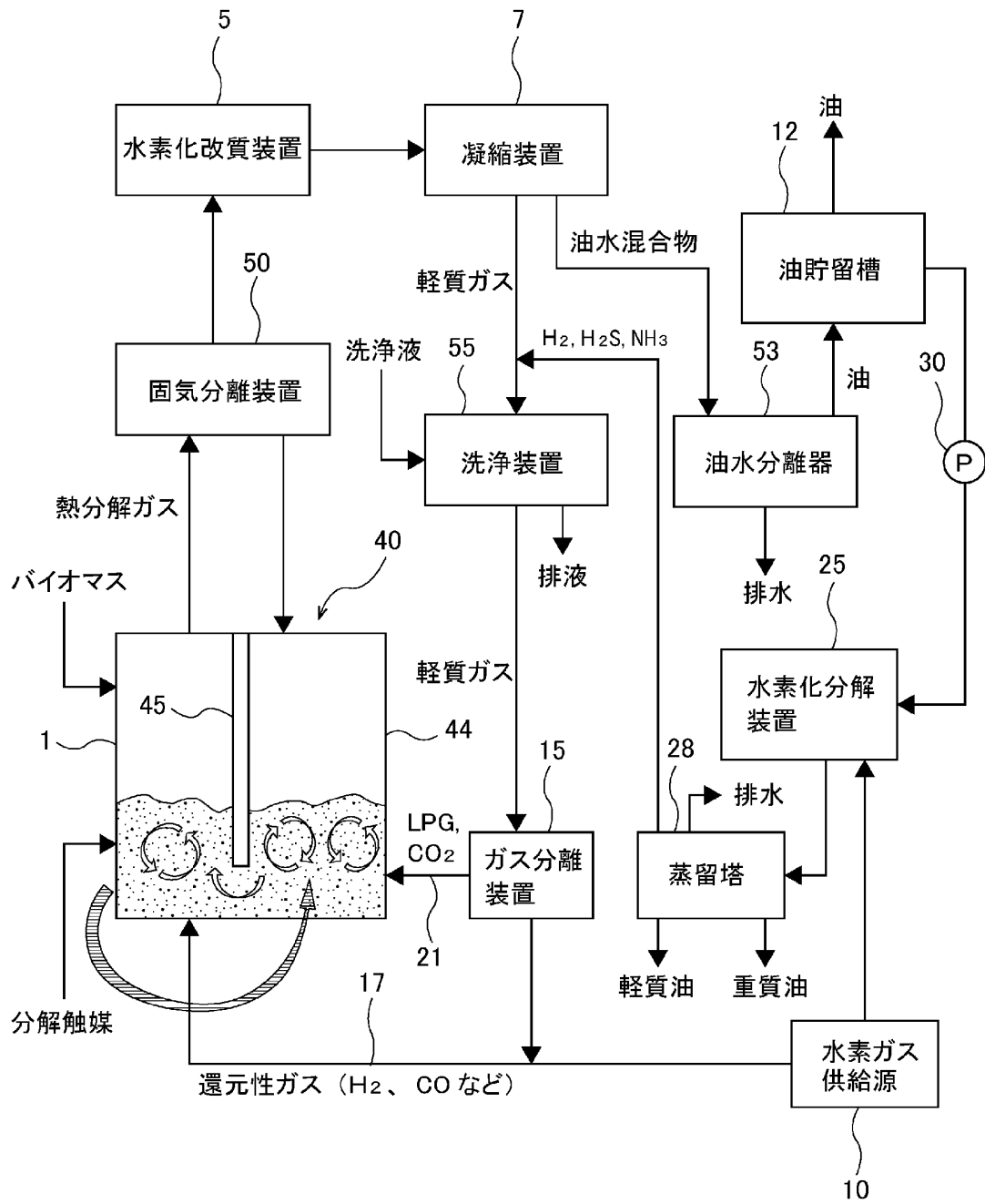
[図4]



[図5]



[図6]



The schematic diagram illustrates a process for producing hydrogenated oil from biomass. The main components and their functions are as follows:

- Biomass Gasification Unit (1):** Receives **バイオマス** (biomass) and **分解触媒** (catalyst). It produces **熱分解ガス** (pyrolysis gas), which is sent to the solid gas separation unit.
- Solid Gas Separation Unit (50):** Separates the pyrolysis gas into **軽質ガス** (light gas) and **重質ガス** (heavy gas).
- Gas Separation Unit (15):** Processes the light gas to produce **LPG, CO₂** (21) and **還元性ガス (H₂, CO など)** (reducing gas).
- Hydrogen Gas Supply Source (10):** Provides additional **還元性ガス (H₂, CO など)** to the gasification unit.
- Water Gas Shift Unit (5):** Converts the reducing gas into **水素化改質装置** (hydrogenation reforming unit).
- Oil Scrubber (60):** Removes impurities like **H₂, H₂S, NH₃** from the gas stream.
- Alkali Water Scrubber (56):** Treats the gas with **アルカリ水** (alkali water).
- Oil-Water Separator (30):** Separates the gas stream into **油** (oil) and **軽質油** (light oil).
- Oil Storage Tank (12):** Stores the produced **油**.
- Distillation Tower (28):** Further processes the light oil into **軽質油** and **重質油** (heavy oil).
- Hydrogen Decomposition Unit (25):** Produces **排水** (wastewater) from the heavy oil.

The entire process is controlled by a central system (7) that manages the flow of materials between the various units.