

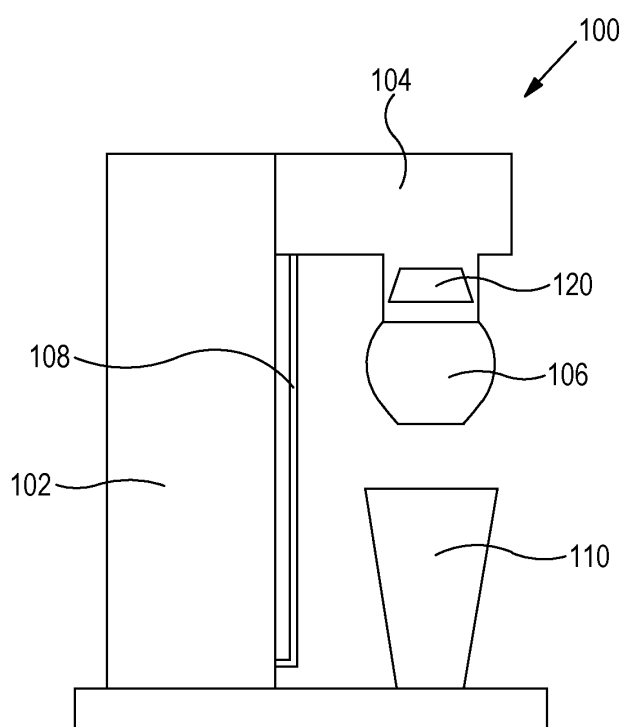


Fig. 1

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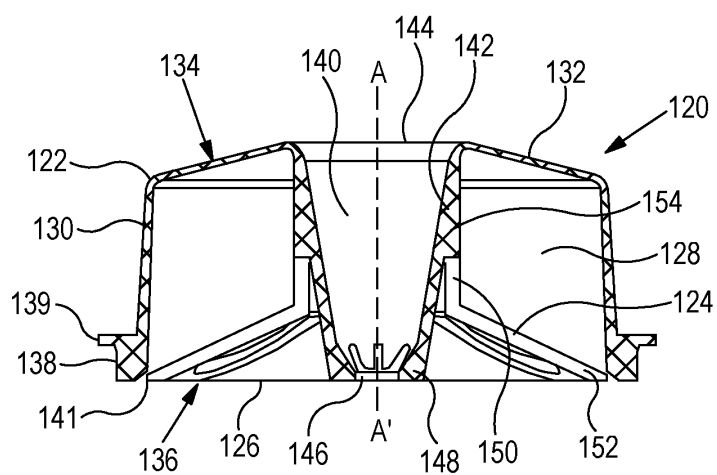


Fig. 2

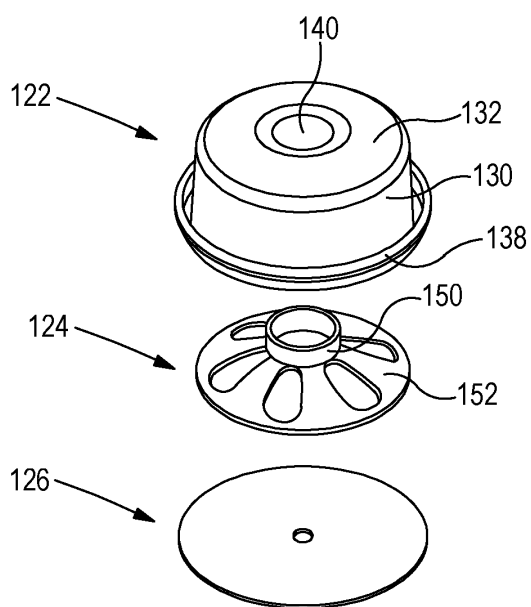


Fig. 3

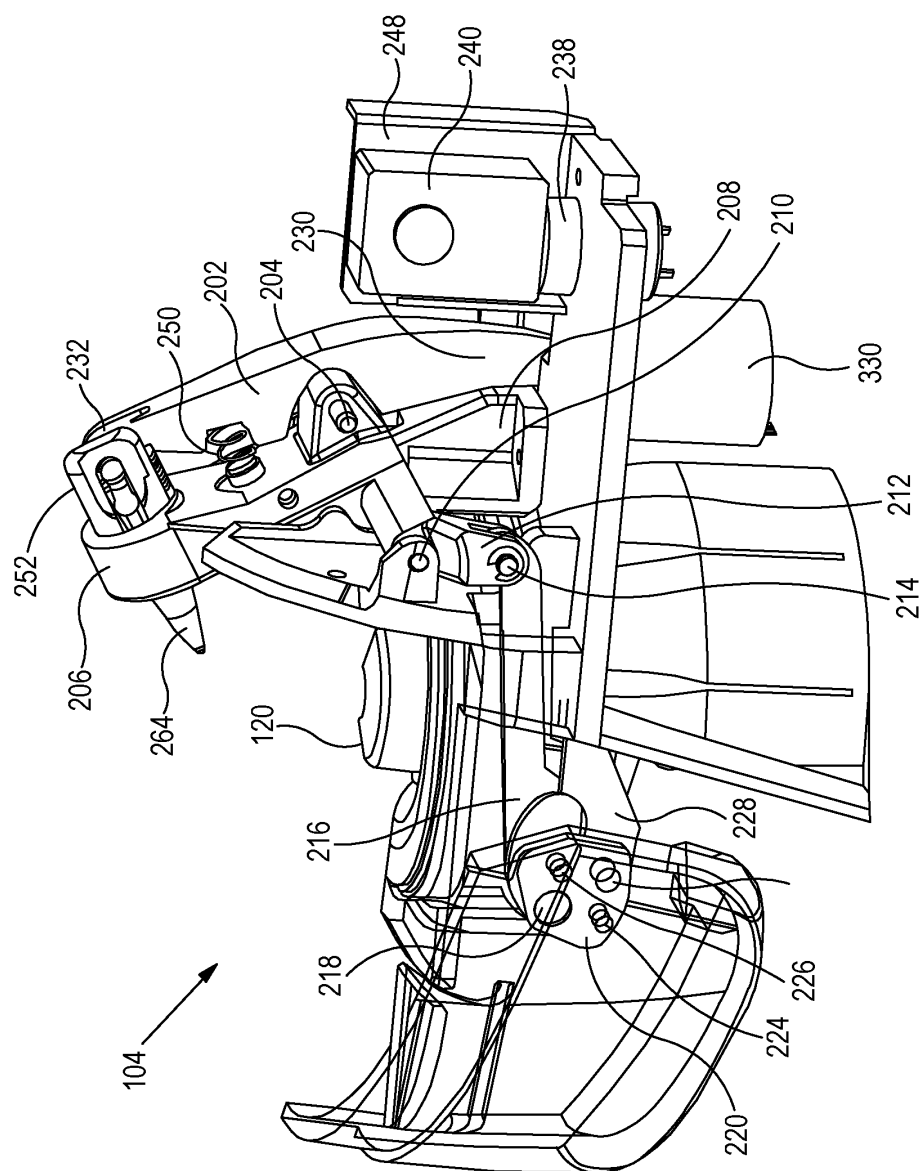


Fig. 4

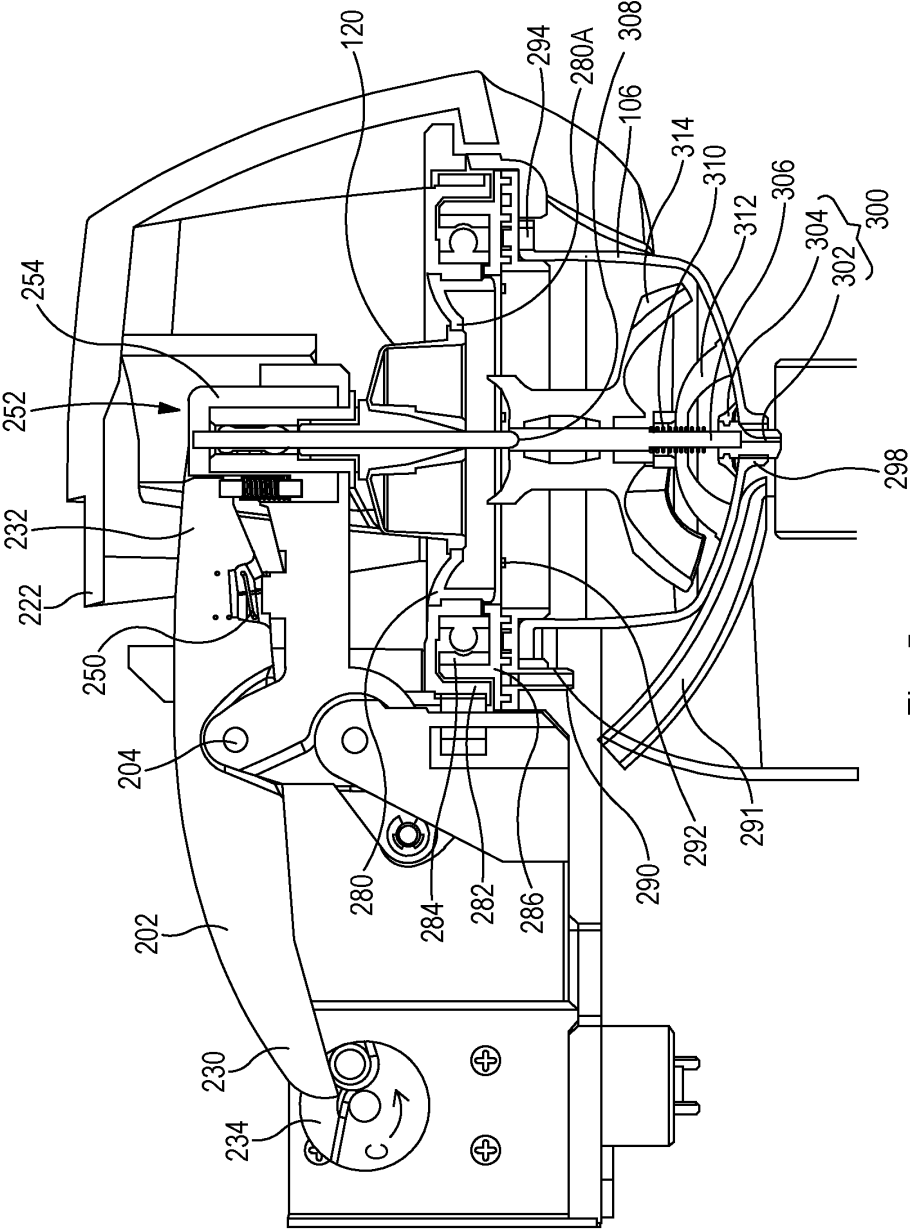


Fig. 5

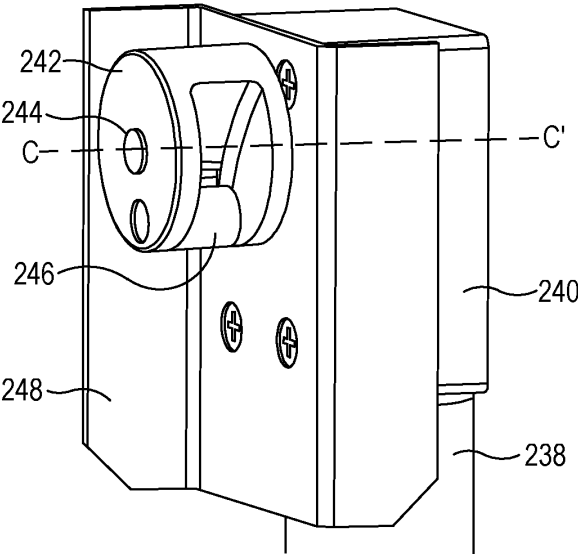


Fig. 6

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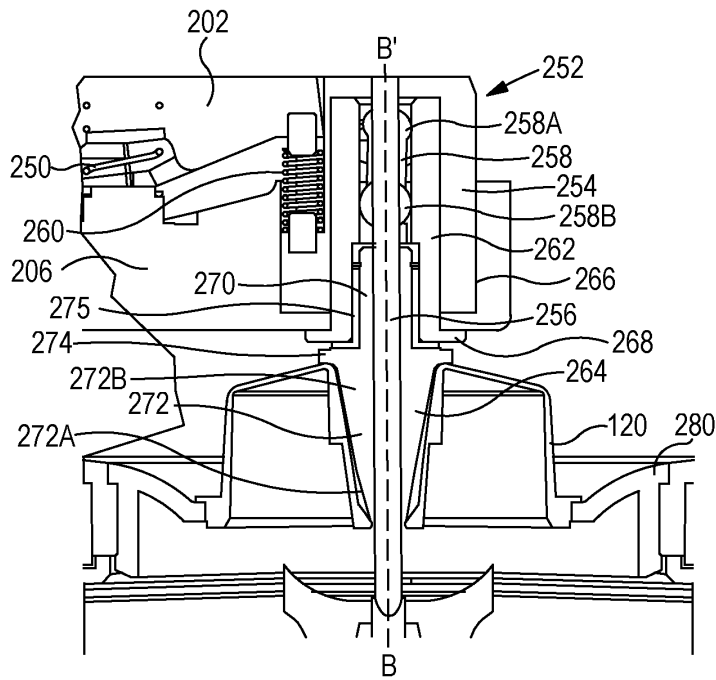


Fig. 7a

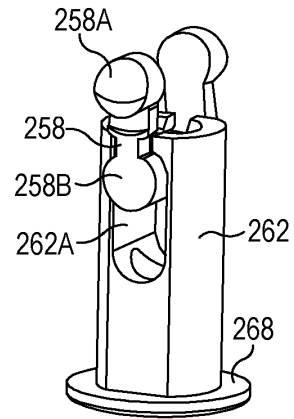


Fig. 7b

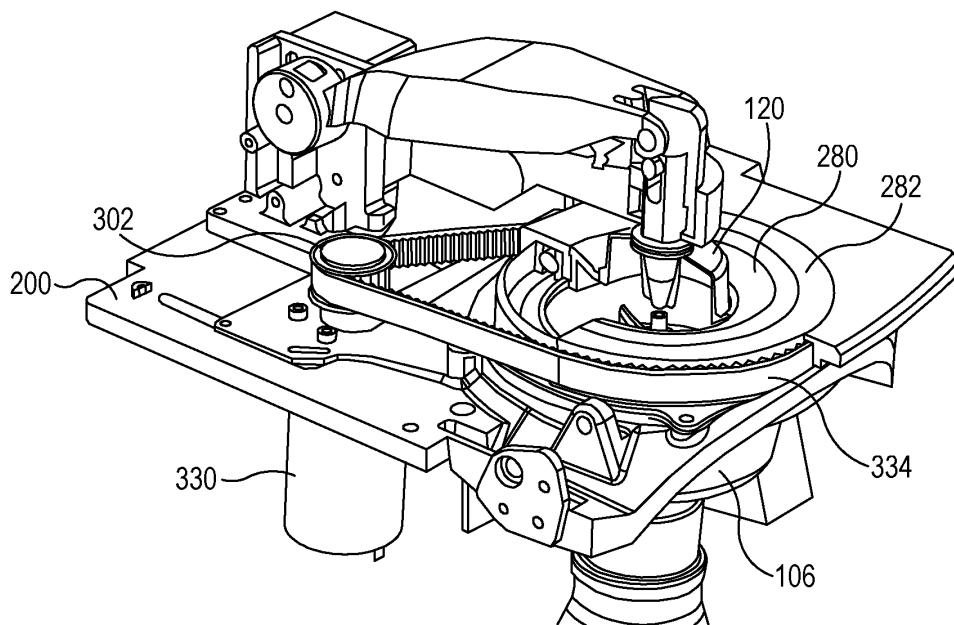
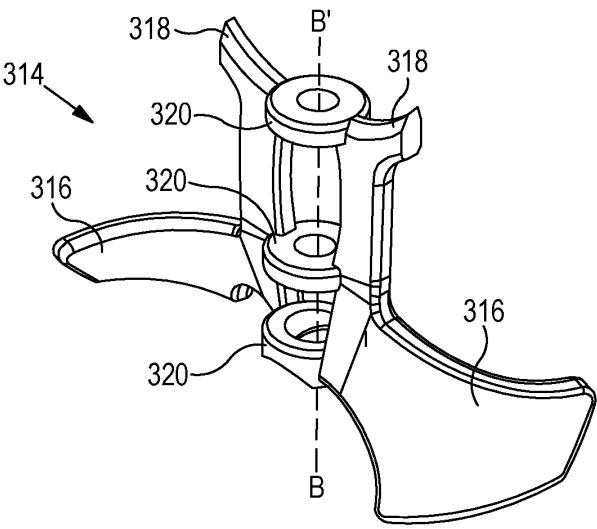
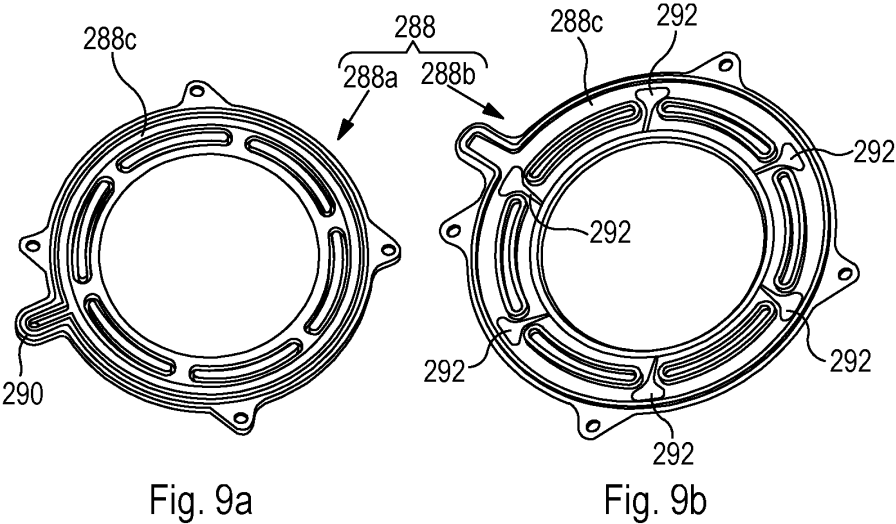
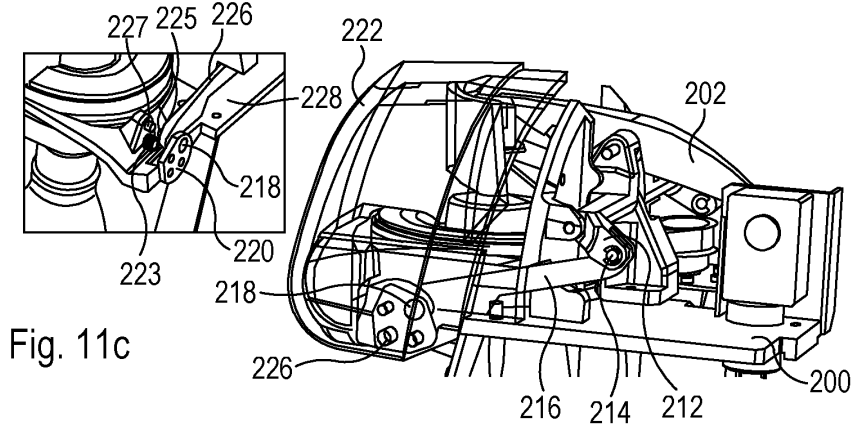
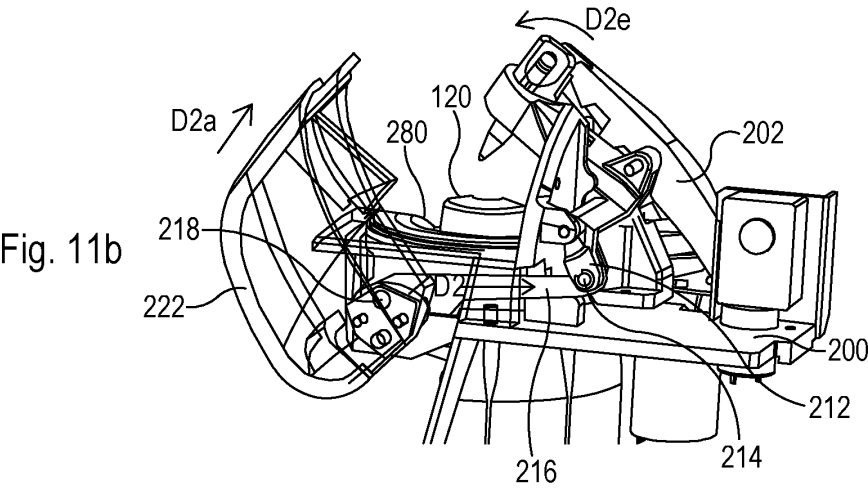
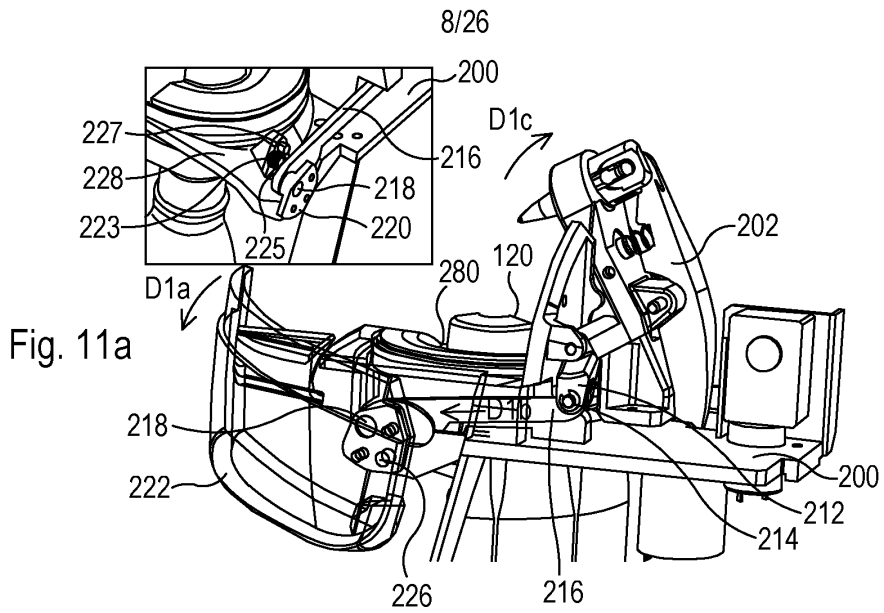
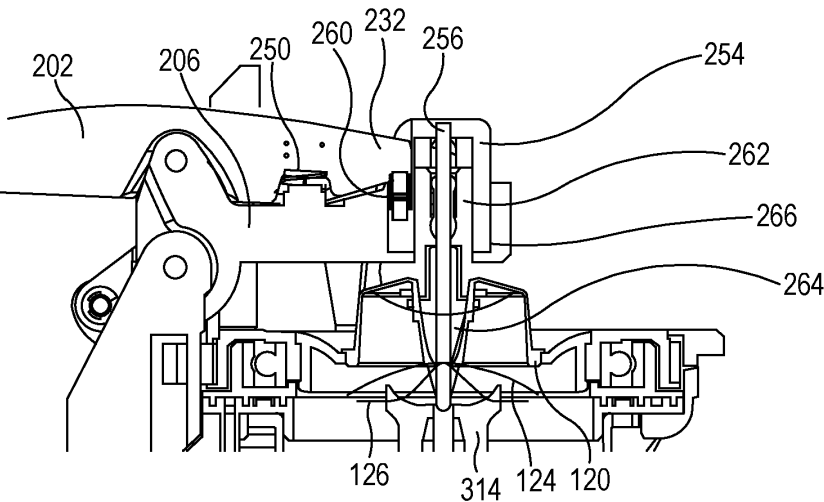
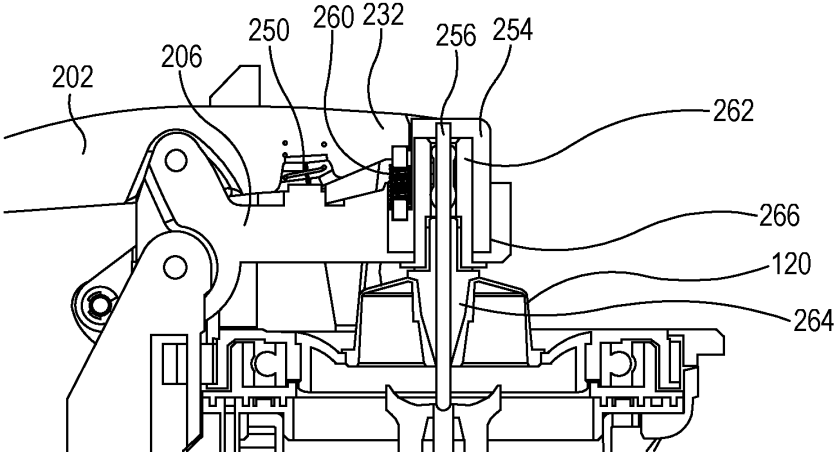
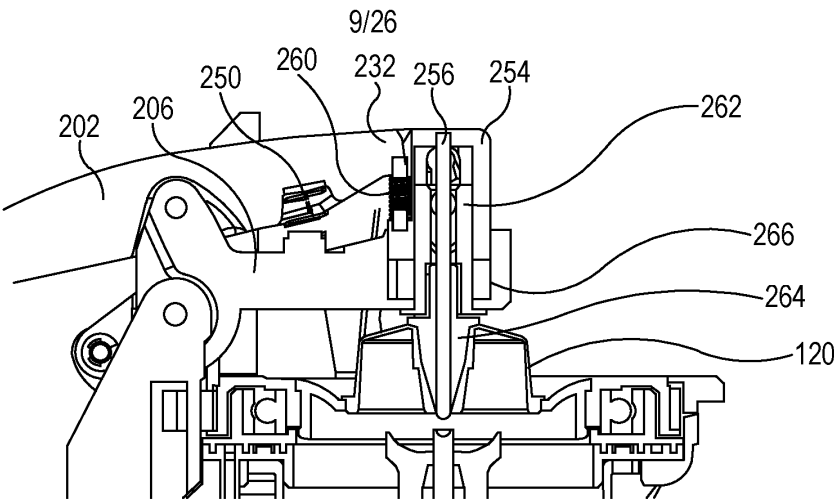


Fig. 8







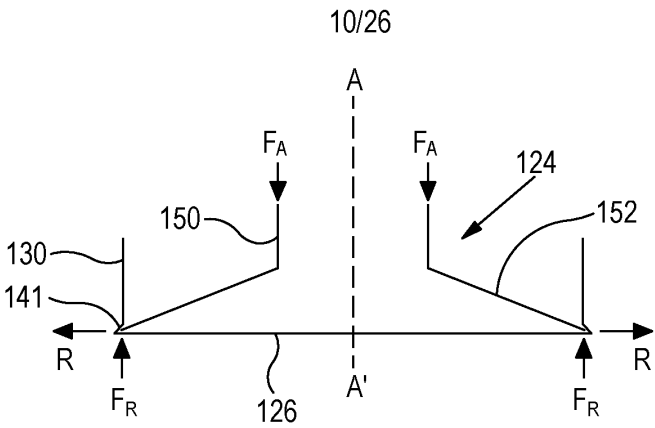


Fig. 13

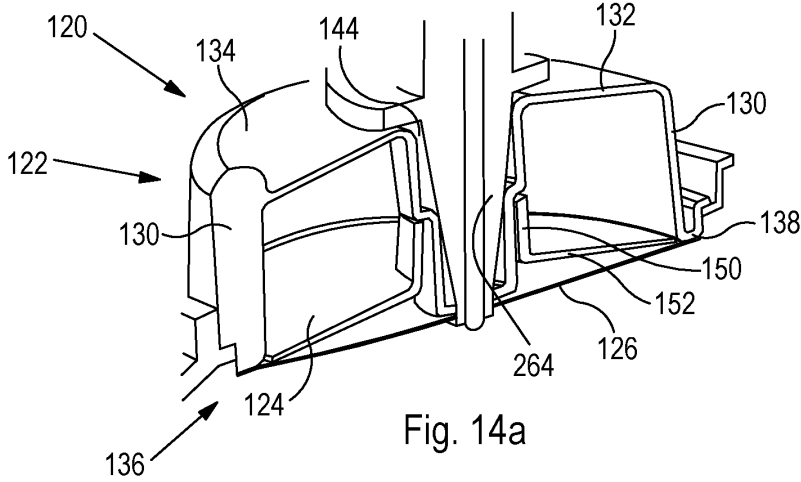


Fig. 14a

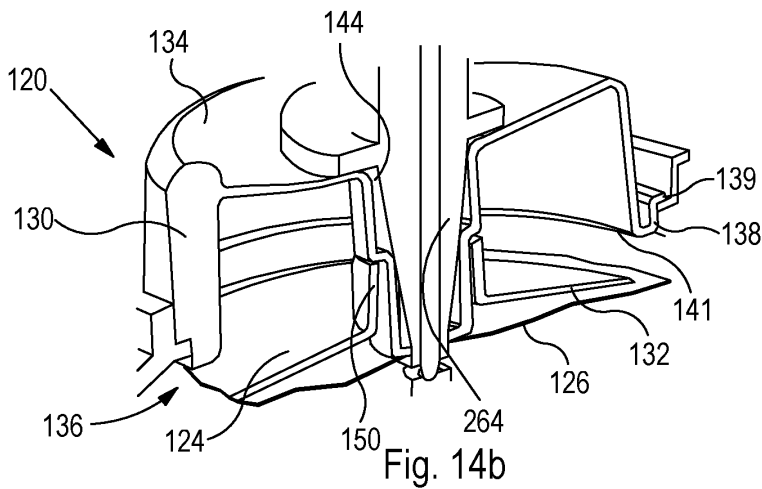


Fig. 14b

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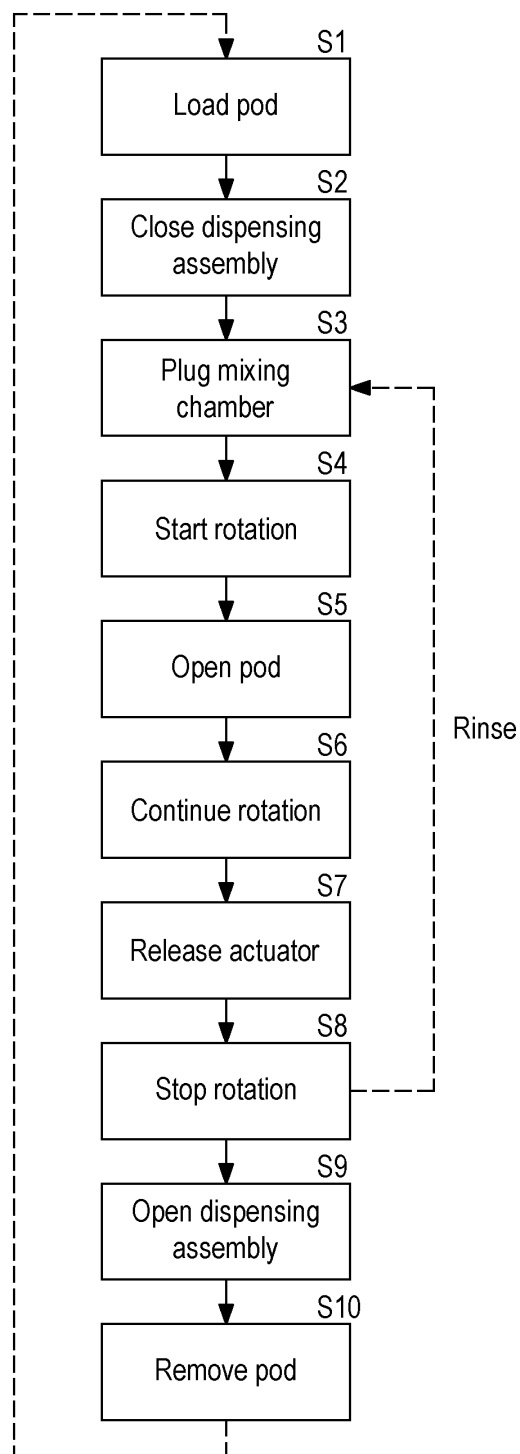


Fig. 15

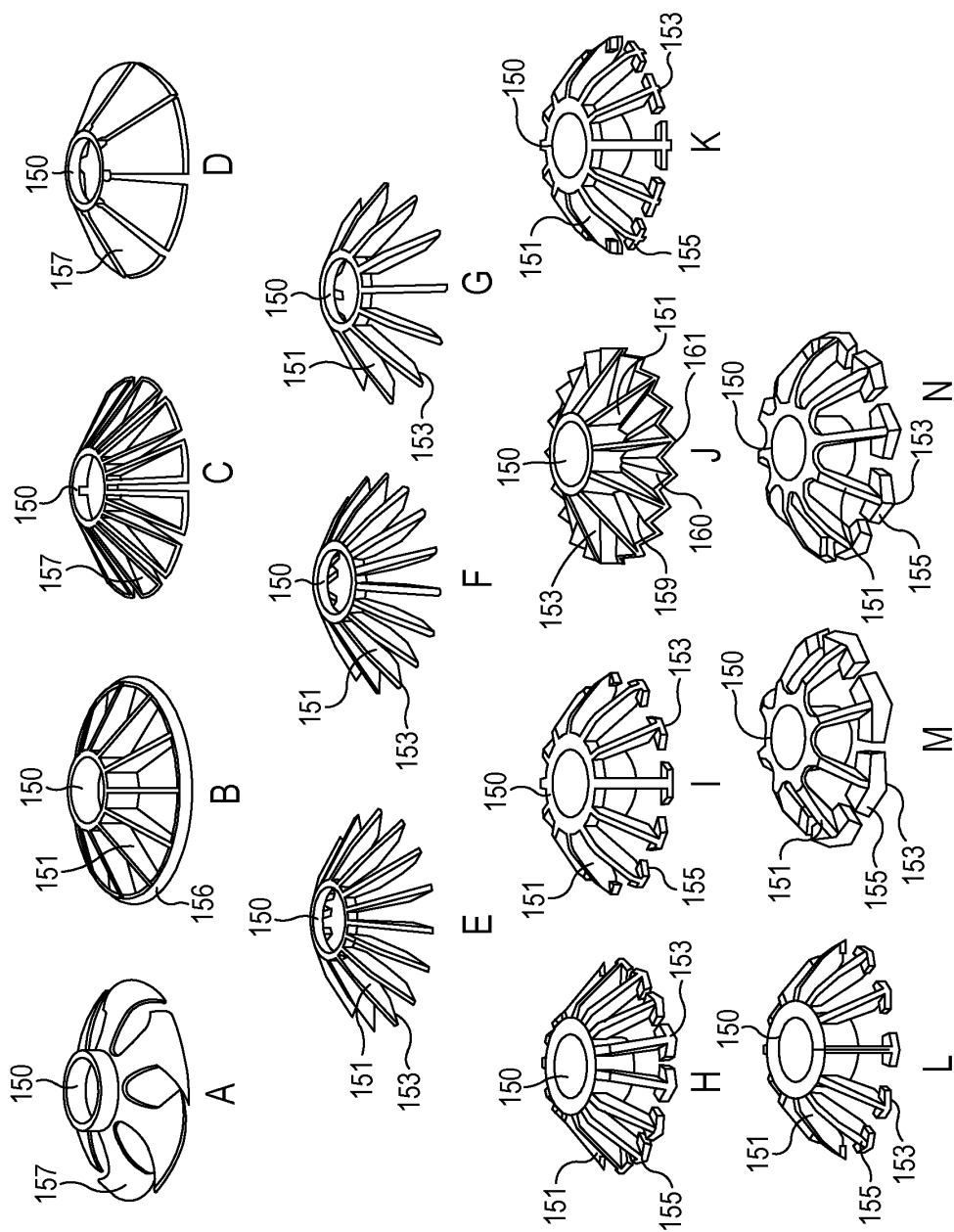


Fig. 16

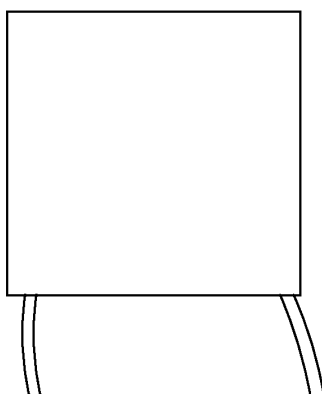


Fig. 17

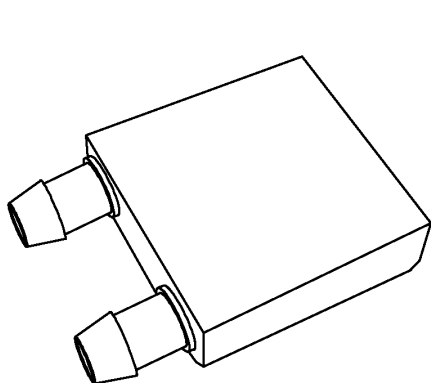


Fig. 18a

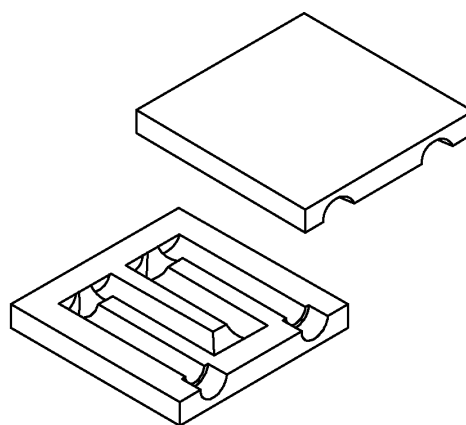


Fig. 18b

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cutaway view of a standard Chiller tank using a Peltier TE cooler

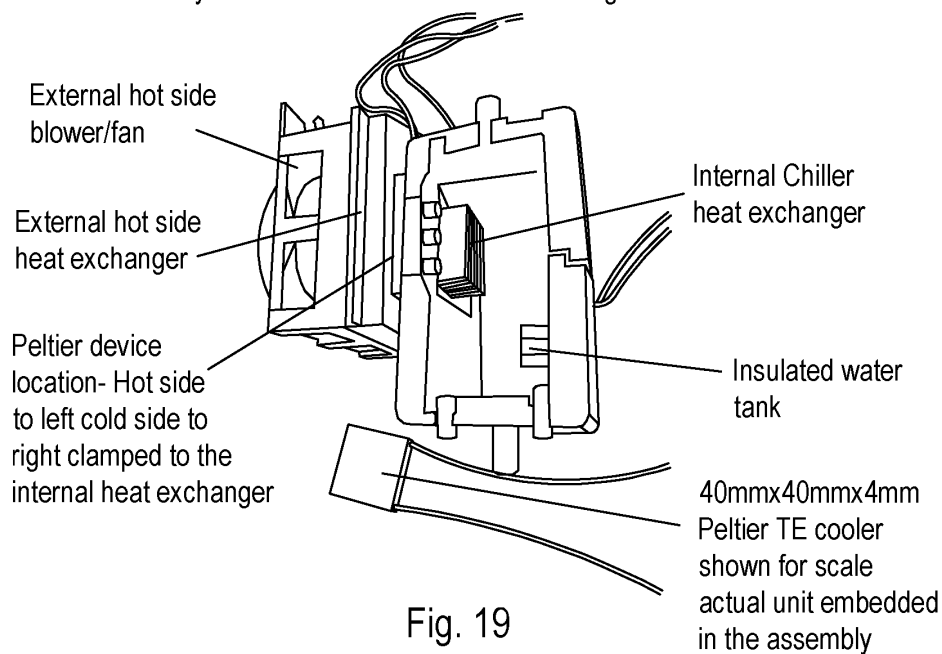


Fig. 19

Cutaway and complete standard Chiller tanks using a Peltier TE cooler

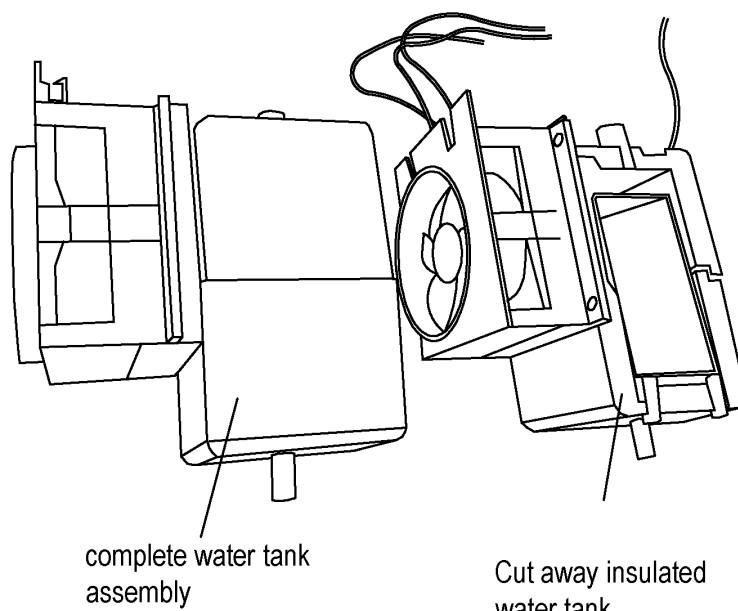


Fig. 20

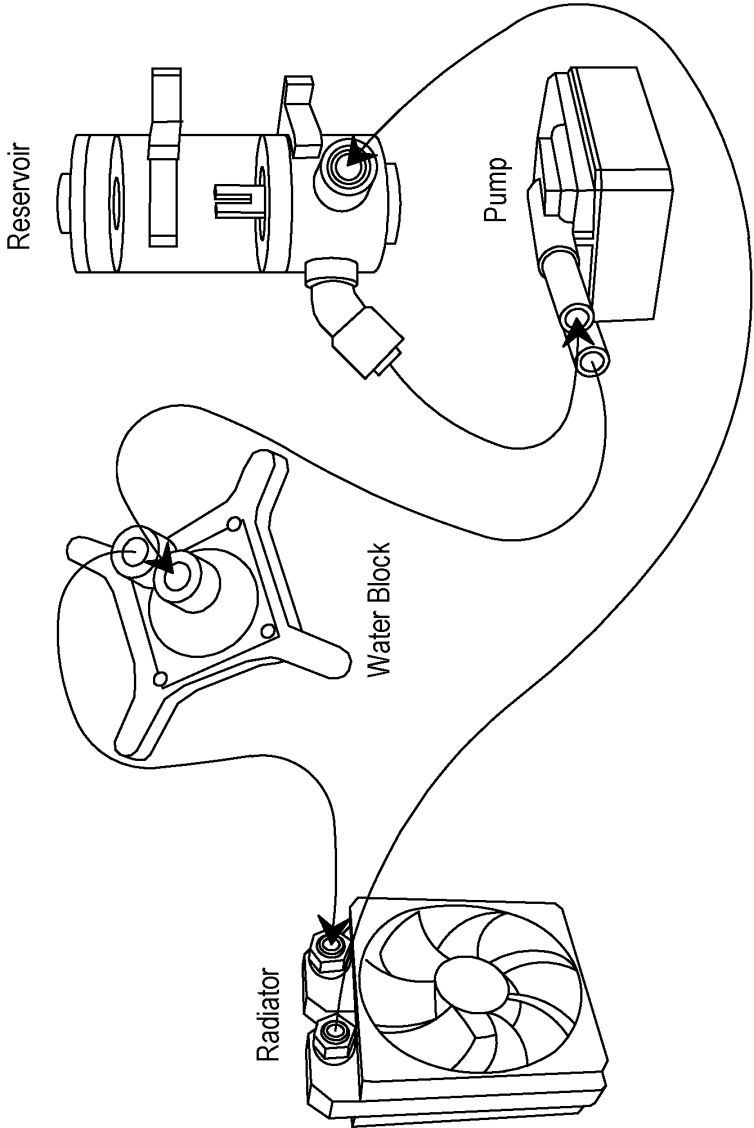


Fig. 21

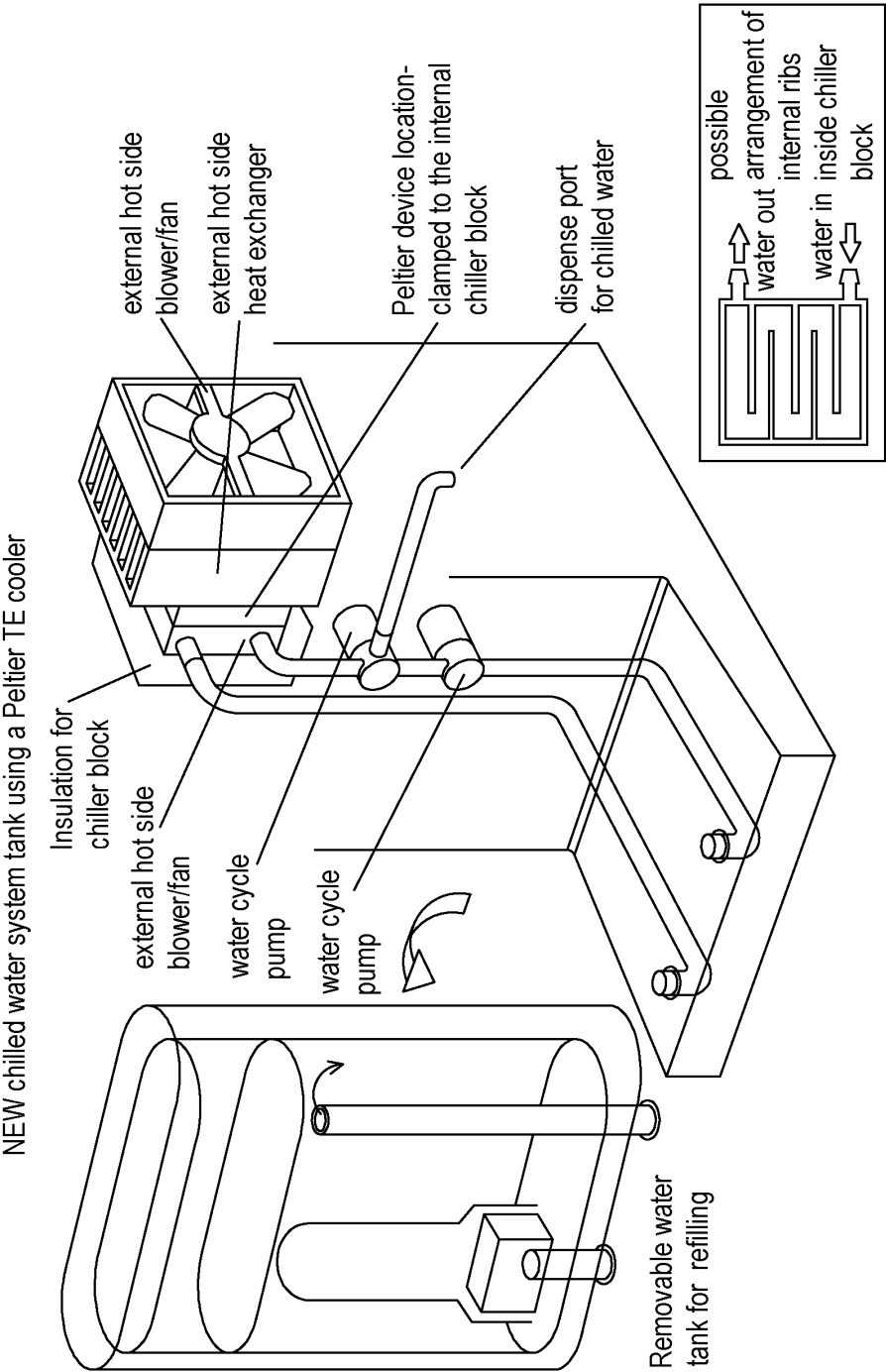


Fig. 22

NEW chilled water system tank using a Pelter TE cooler
assembled together - water flowing through filter
continuously as it cycles through the chiller block

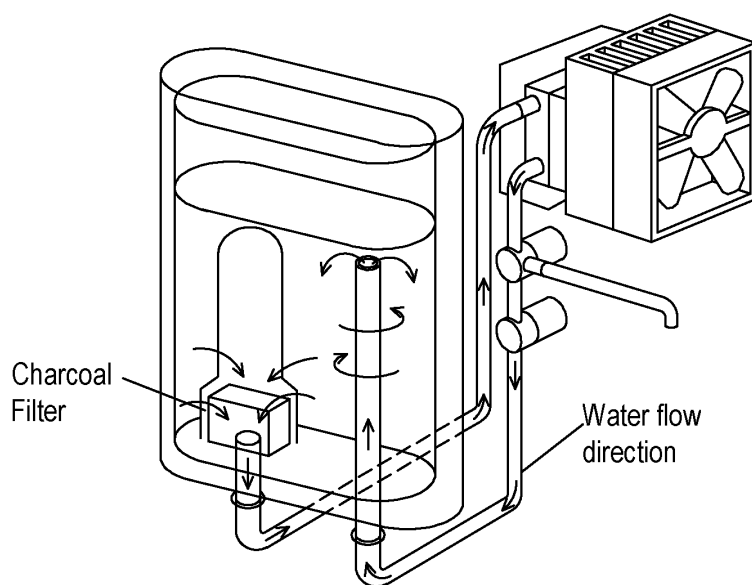


Fig. 23

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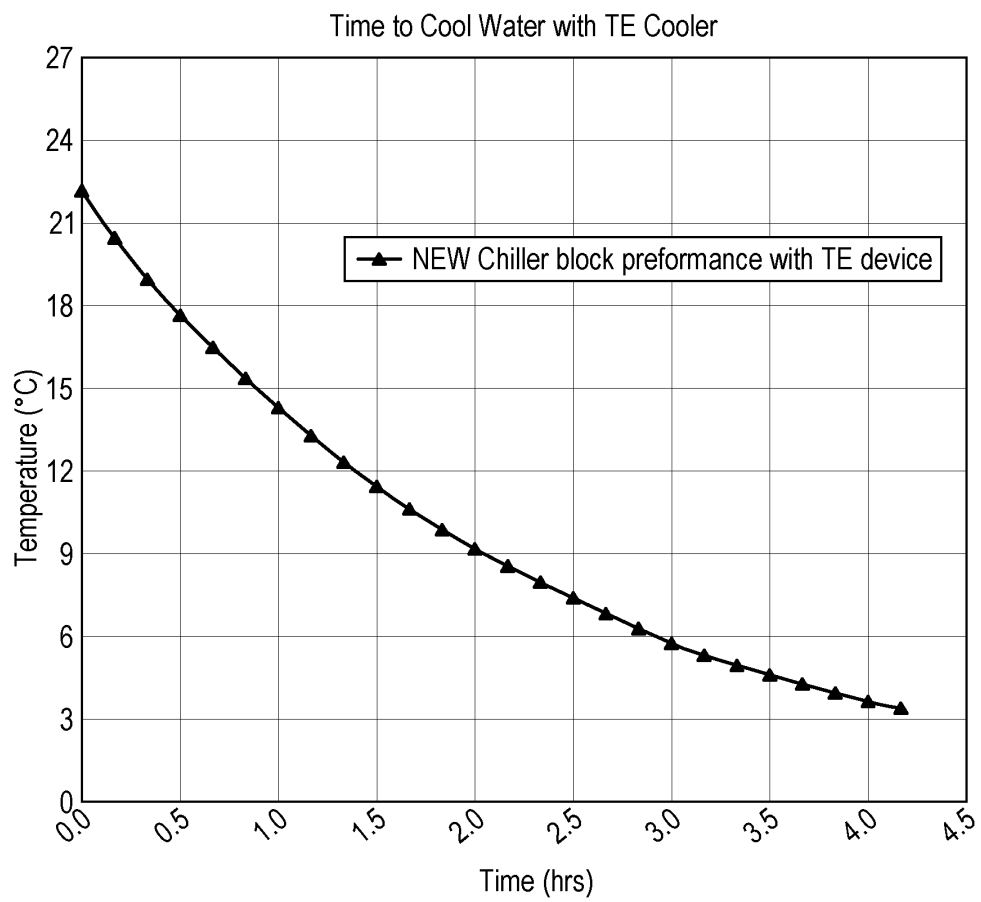


Fig. 24

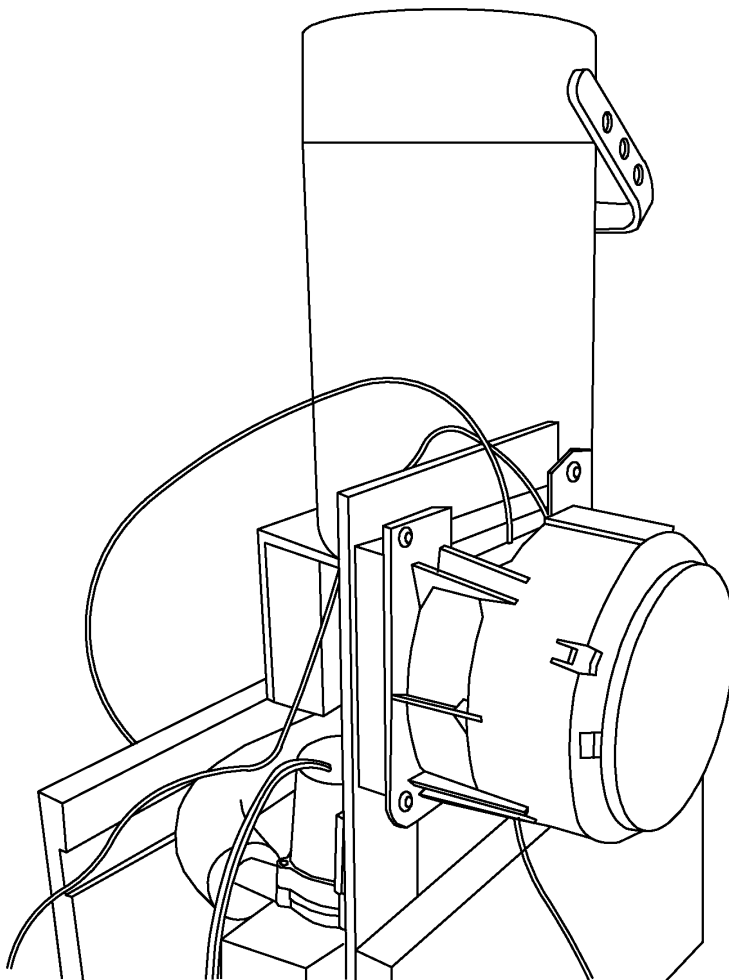


Fig. 25

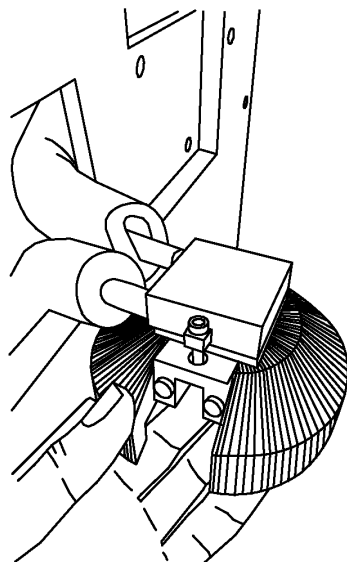


Fig. 26a

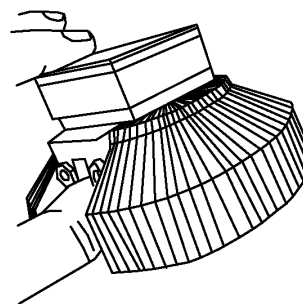


Fig. 26b

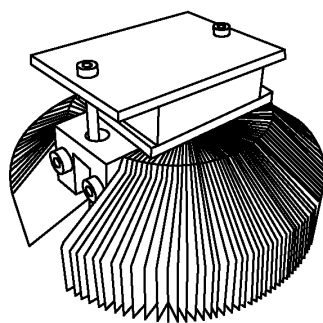


Fig. 26c

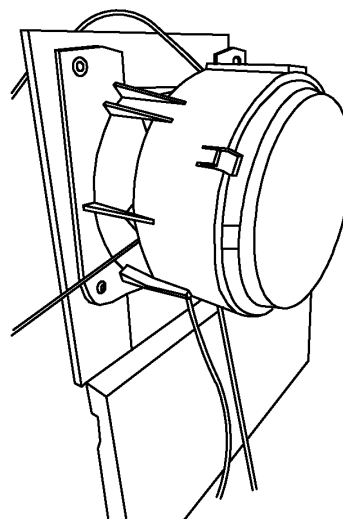


Fig. 26d

Mix and Dispense Process
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- Pod placed in "brew head"
of dispenser.

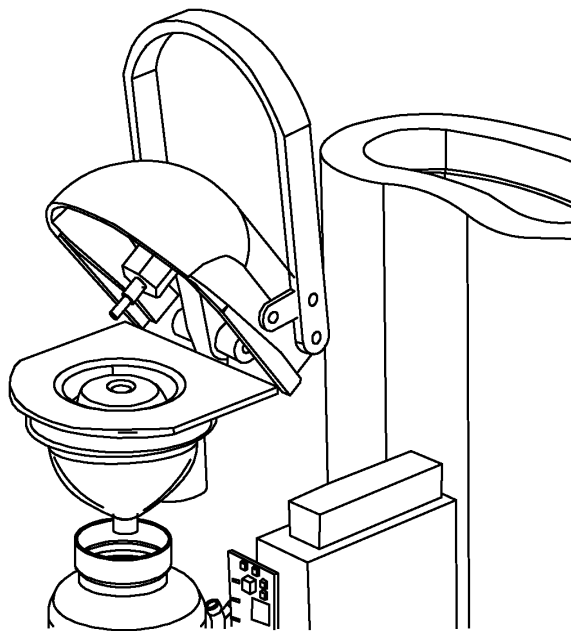
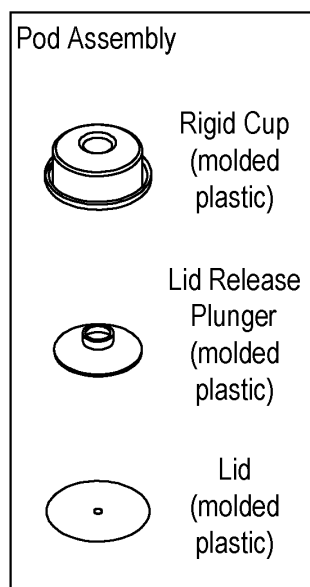


Fig. 27

Mix and Dispense Process

-Lid is closed, using
bail type handle.

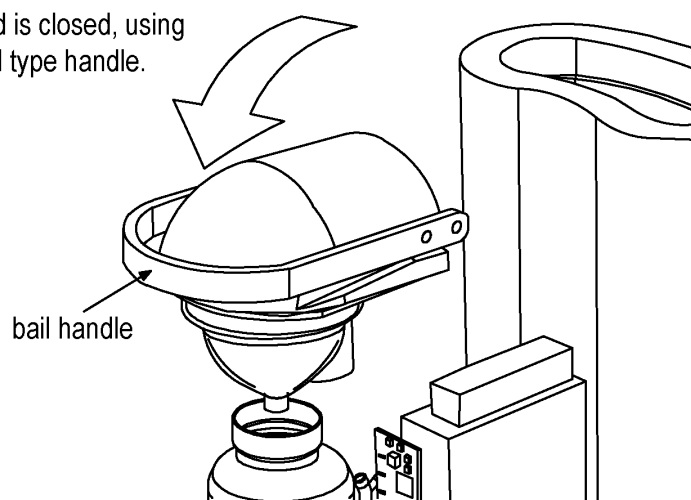


Fig. 28

Mix and Dispense Process

- Lid is closed, using bail type handle.
- Water nozzle passes through centre hole of pod.
- Motorized rotation of both pod and mixing chamber begins.
- Water enters through chamber through the nozzle and adheres to the walls of the mixing chamber via centrifugal force.

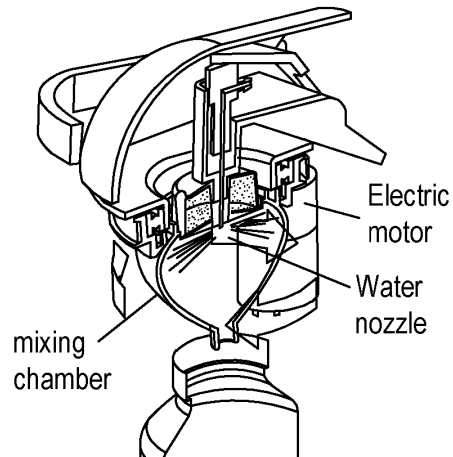


Fig. 29

Mix and Dispense Process

- Lid is closed further to a hard stop.
- Further closure of the lid releases a spring force in the nozzle assembly that creates sudden downward force on the centre of the cup portion of the pod.
- The force applied by the nozzle assembly flexes the lateral pod surfaces, causing the centre shaft of the pod to be driven downward, thereby driving downward the plunger, which will break film seal on the outer rim of the pod.
- Powdered contents are then released into the mixing chamber.
- Continued rotation of the pod and mixing chamber cause the powder to collect along the vertical inner walls of the chamber.

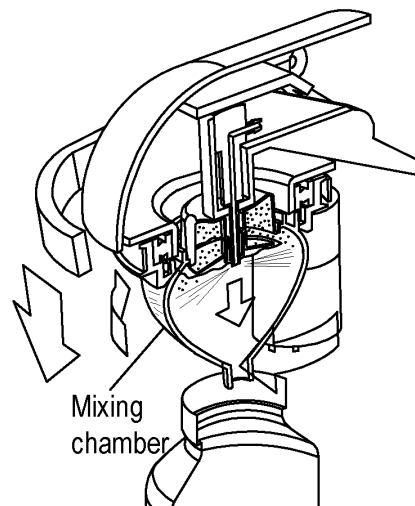


Fig. 30

Mix and Dispense Process

- Continued rotation of the pod and mixing chamber cause the powder to collect along the vertical inner walls of the chamber.
- Water spray is stopped.

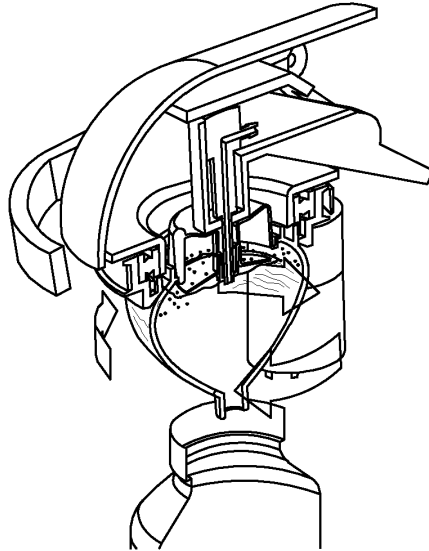


Fig. 31

Mix and Dispense Process

- Continued rotation sends powder material into suspension.

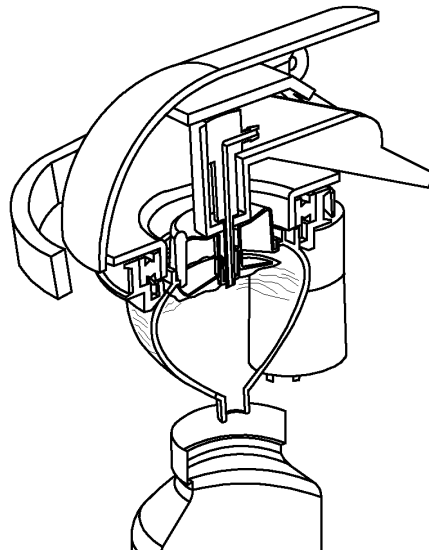


Fig. 32

Mix and Dispense Process

- Rotation of mixing chamber is periodically slowed, in order to create turbulence for better mixing outcome.

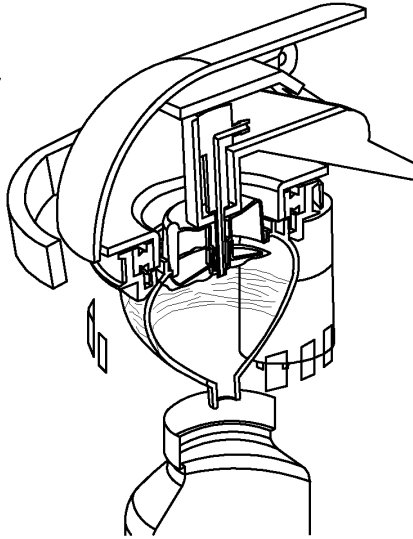


Fig. 33

Mix and Dispense Process

- Active rotation and slowing occurs several times. Allowing for more homogenous suspension of powdered contents.

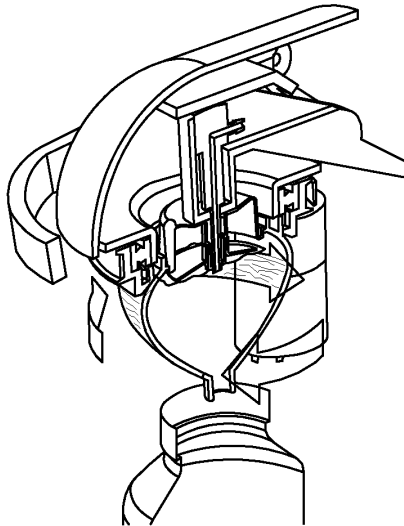


Fig. 34

Mix and Dispense Process

- Active rotation and slowing process occurs several times. Allowing for more homogenous suspension of powdered contents.

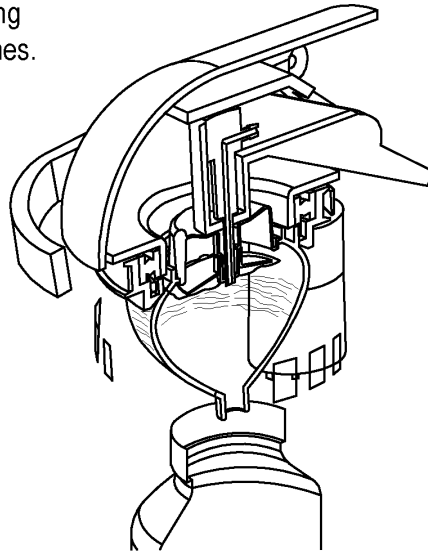


Fig. 35

Mix and Dispense Process

- Rotation of the pod and mixing chamber is ultimately stopped, allowing mixed contents to exit through the open bottom of the mixing chamber.

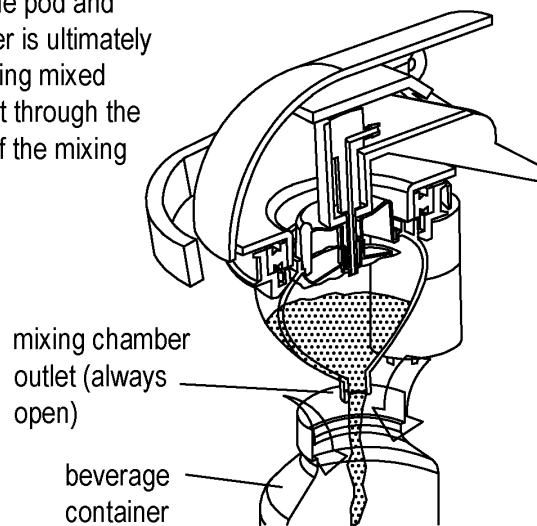


Fig. 36