

BUILD YOURSELF DRAWINGS

SOLAR SMELTERS

INTERNATIONAL

LEGEND:

- 1. Outside Parabolic Half Shell, $X^2=4+P*Y$. Can be made out of concrete, bricks, with an interior reflective shell. Interior of shell can be electroplated aluminum (aluminum oxide), gold, or coated with Silver Mylar, or Aluminum Mylar (potato chip bags).
- 2. Curved Reflective Overhang Apex. Keeps rain off focal. Interior is reflective, and captures morning sunrise or afternoon sunset light, and redirects to crucible. Maximum at 45 degree tangent angle.
- 3. Focal Point. Intense Solar Energy. Melts anything.

- 4. Crucible. Holds metal, rocks, glass or any item to be processed by solar energy.
- 5. Material to be Smelted. Can be rock, glass, metal or other items like waste processing, or steam production.
- 6. Thermal Storage. Stores the heat from daytime for nighttime use. Cement mixed with thermal conducting metal.

- 7. Embedded Pipes. Captures heat to make steam, hot water or hot air. Hot air can be blown into a charcoal grill for combustion air for example.
- 8. Blower. Can be solar or wind powered, or electrically powered.
- 9. Underground Thermal Insulating Bricks. Can be cement mixed with recycled styrofoam. Insulates the above Thermal Storage area.
- 10. Foundation. Made of Insulating Bricks. Can be cement mixed with recycled styrofoam. Elevates the solar focal above the snow line. Helps to keep children and small animals out.

- 11. Glazing. Can be any kind of clear material, glass, salt, or Gelco (a special type of highly insulating transparent glass), or clear sand. Captures cloud and indirect light, and keeps Thermal Storage hot.
- 12. Curved Overhang. Interior is reflective. Keeps rain and snow off crucible.
- 13. Foundation for Tracking Heliostat. Reflective mirror beams light into parabolic. Serves also as wall for a water pond. Water pond is used to float heliostat.

- 15. Actuator. Can be a compressed air bag. Or hydraulics, or electric, or manual. Tilts heliostat to the desired angle to make sunlight horizontal.

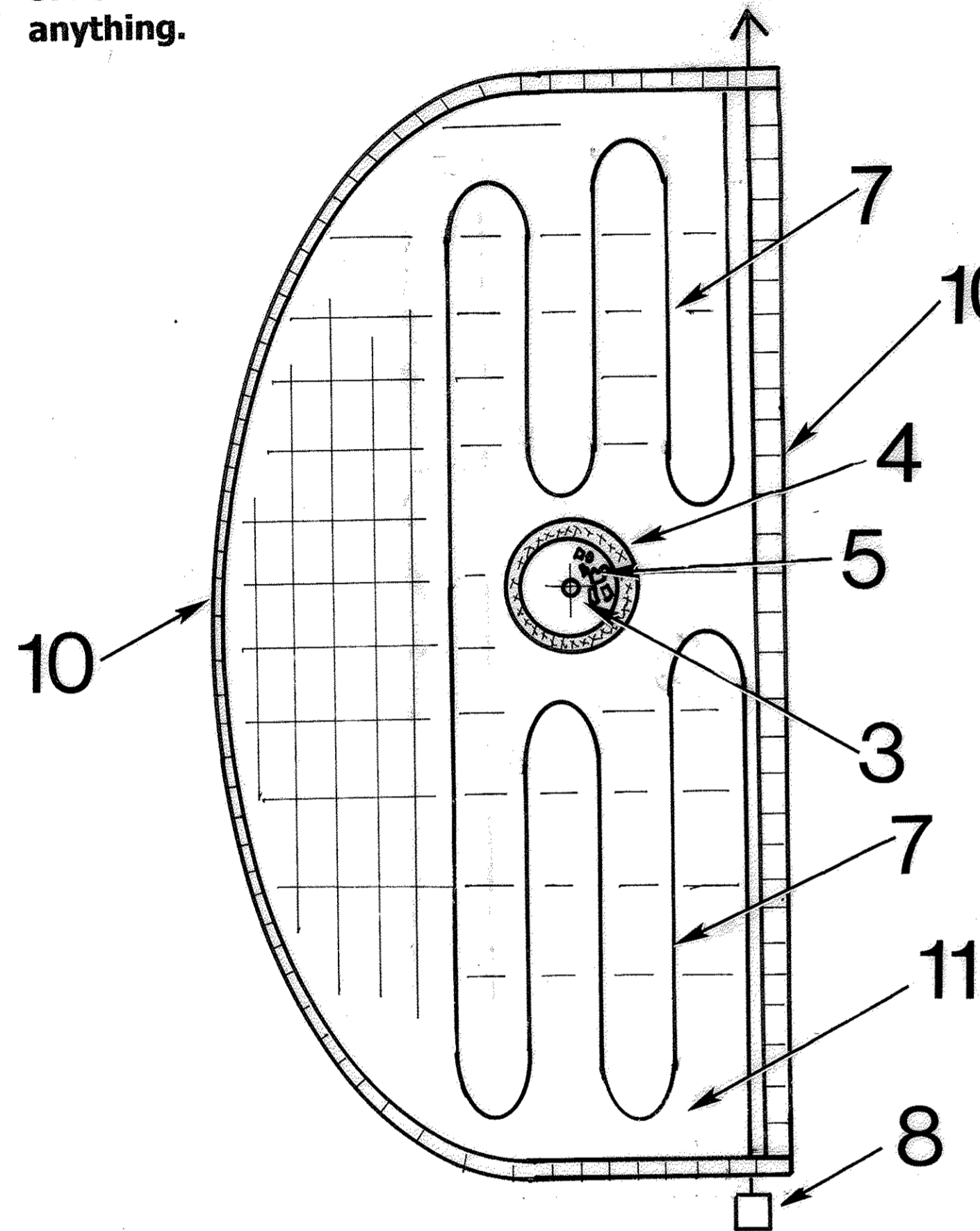


Fig. 5

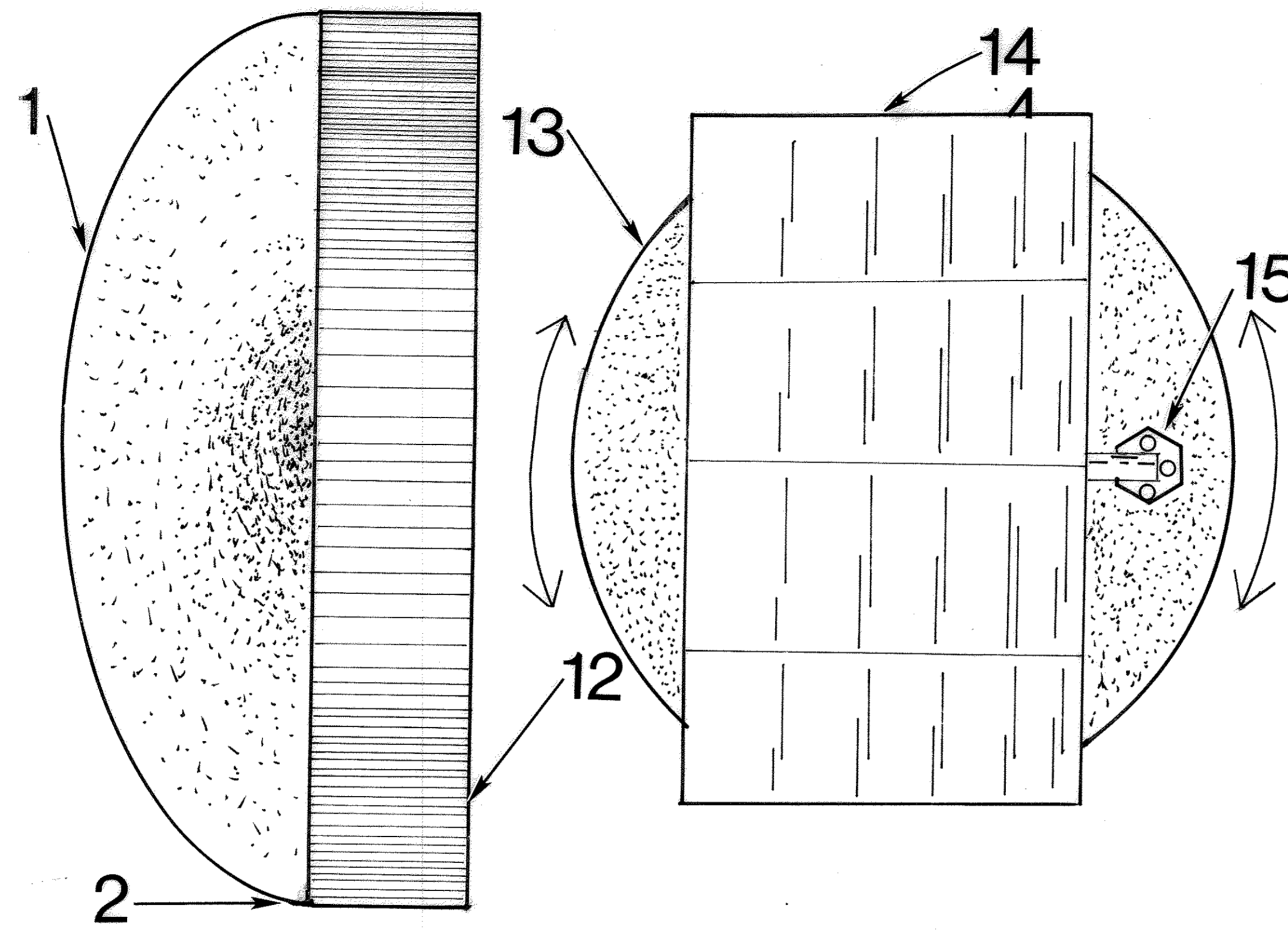


Fig. 2

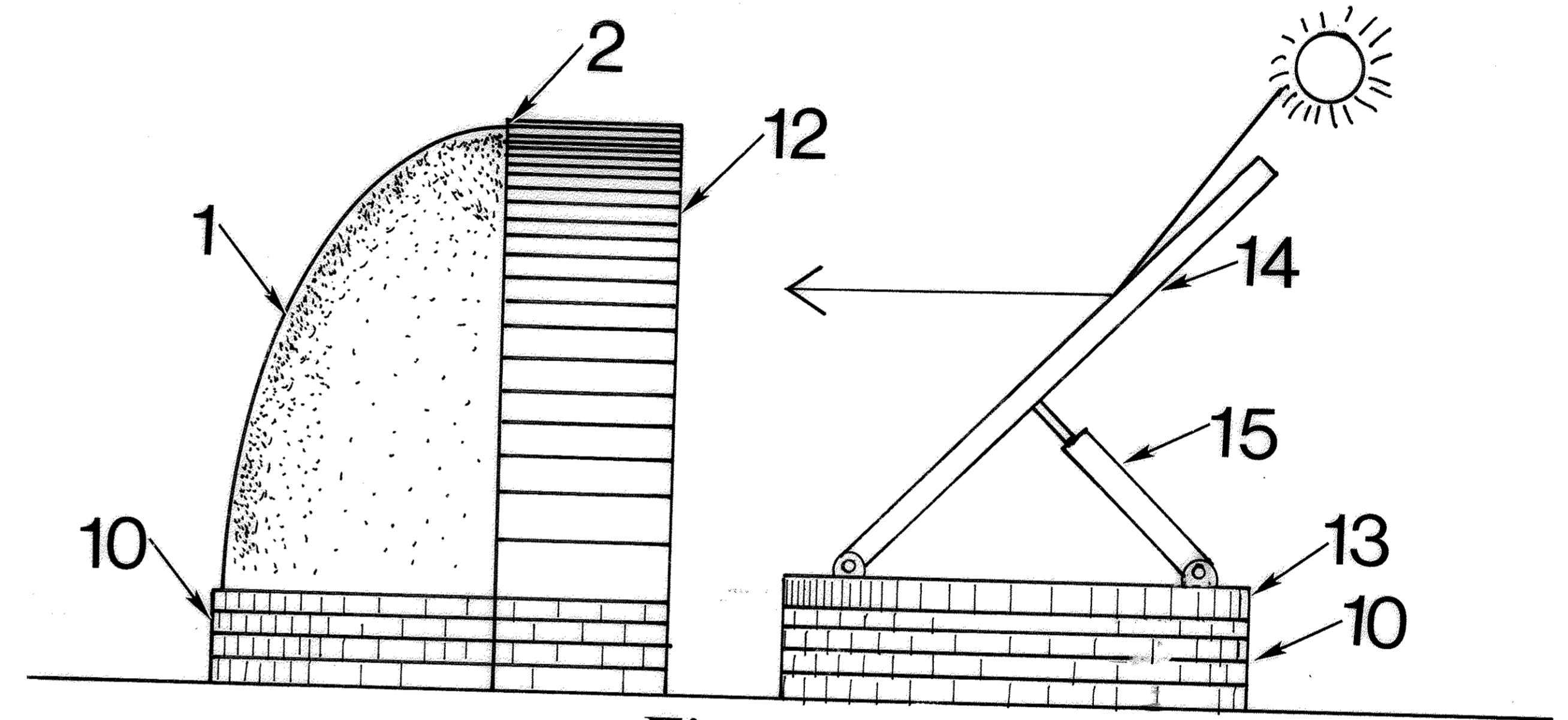


Fig. 1

DISCLAIMER: WARNING. THIS IS NOT A TOY. This invention creates temperatures in excess of 5000 degrees F, close to the surface of the sun. Experimental. Use at your own risk. Training is Required. Use Extreme Caution. Use of Personal Protection Equipment Highly Recommended. This device can cause injury and can kill you. Keep children and small animals away. The inventor, Solar Smelters International, Sunbustion will NOT be held liable for personal injury or death.

Members of Solar Smelters International may build for personal self-use and distribution within local village. For mass production license rights contact Solar Smelters International.

Patent Pending: 12/286583 11/10/2008, 12/459719 7/7/2009, 11/623312 12/5/2006 Other Patents Apply. 5113845, 5308187

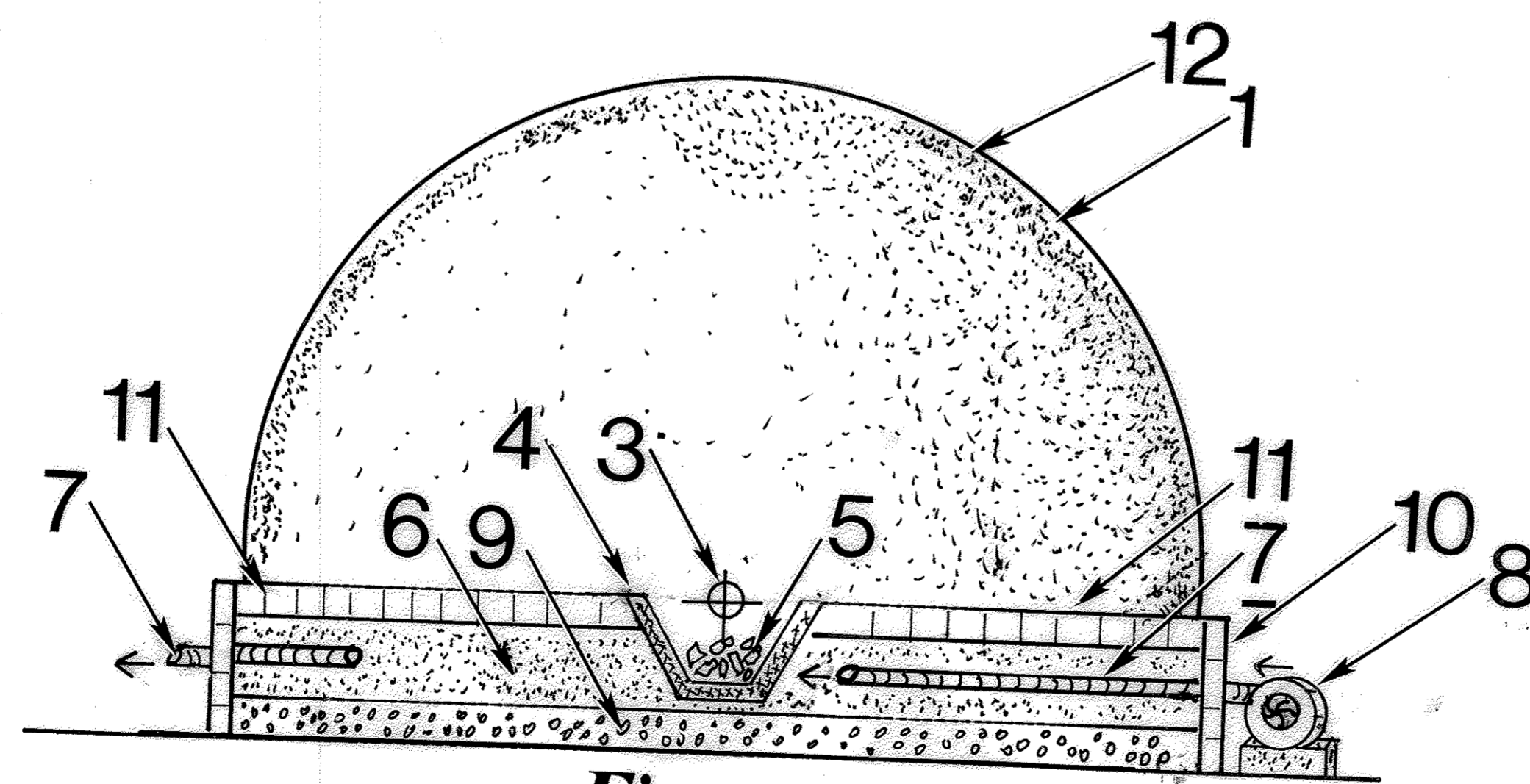


Fig. 4

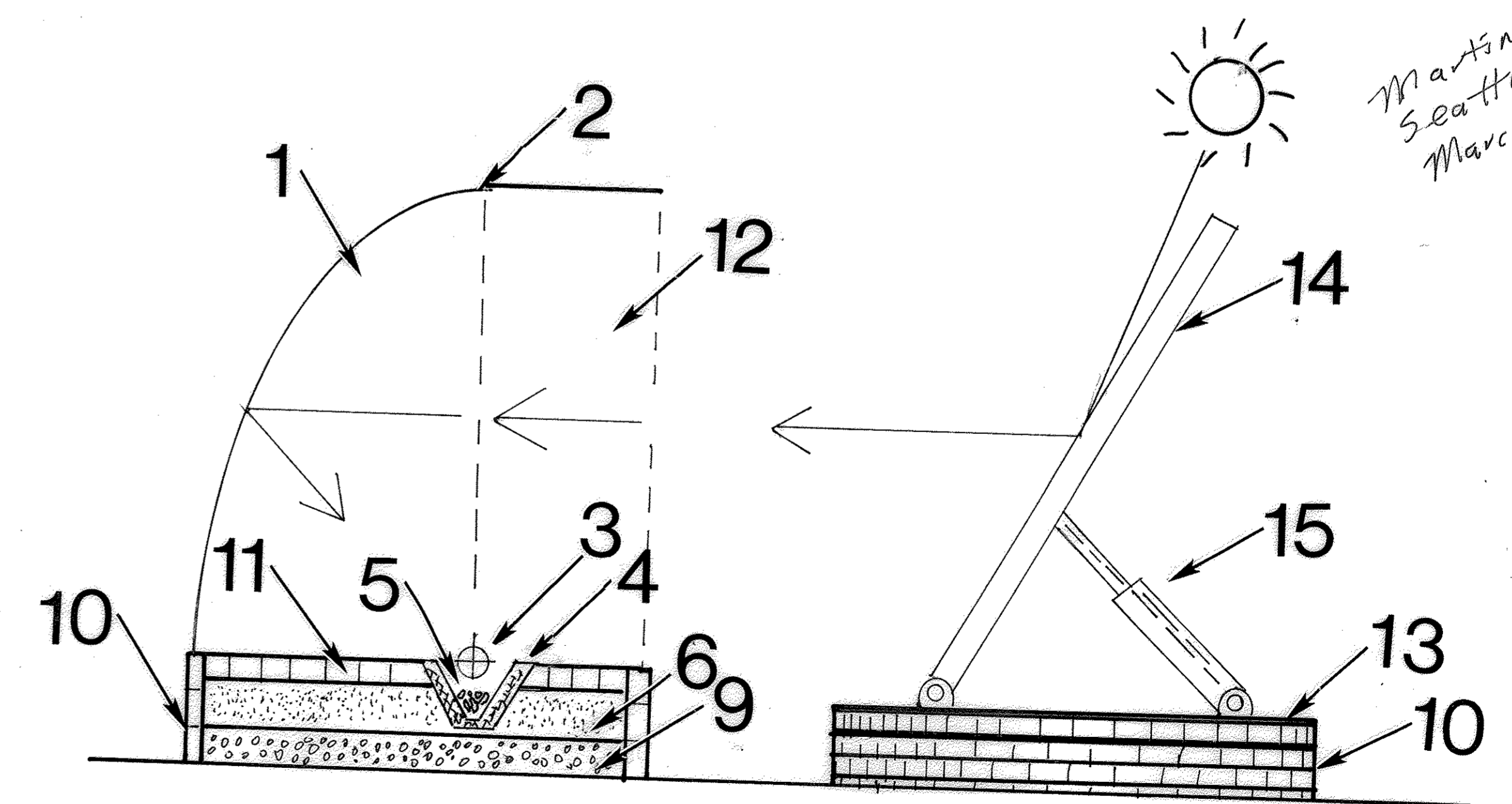


Fig. 3

Additional information can be accessed via www.solarsmeltersinternational.org

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