

Figure 1

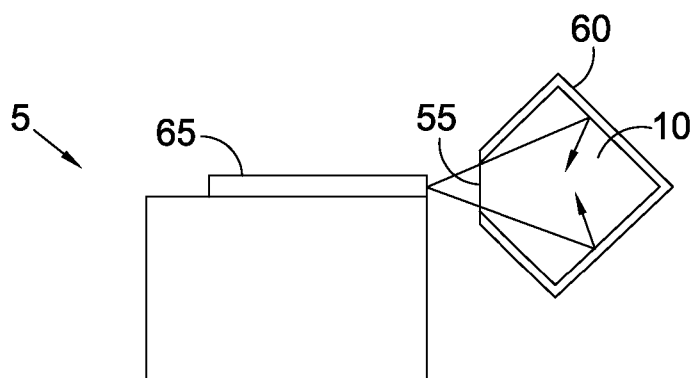


Figure 2

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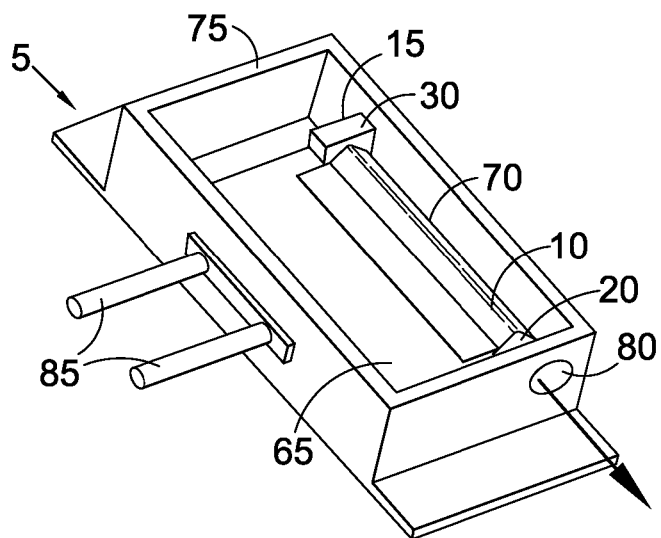


Figure 3

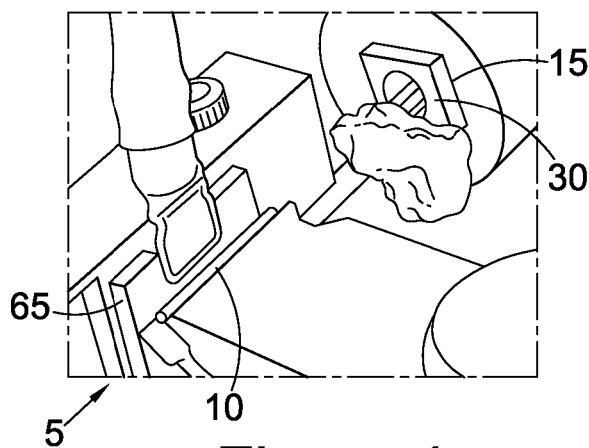


Figure 4

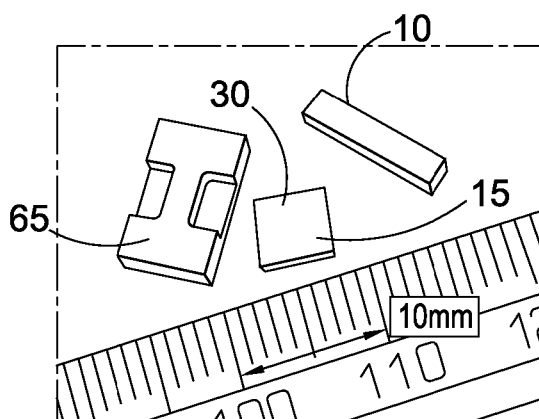


Figure 5

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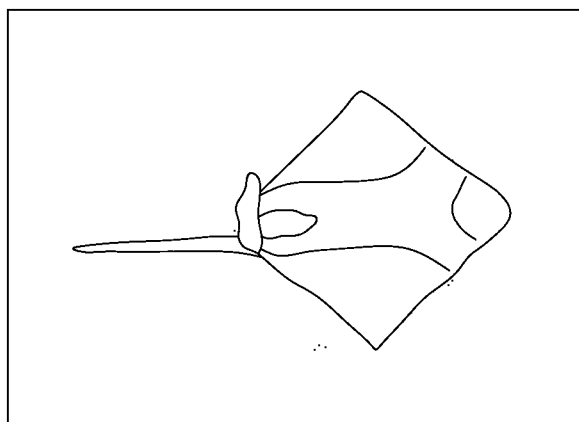


Figure 6a

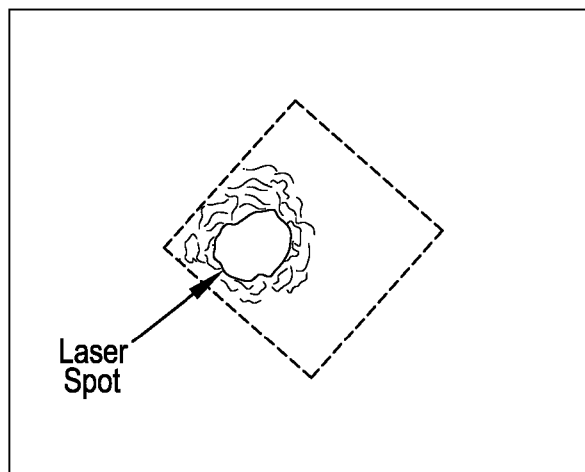


Figure 6b

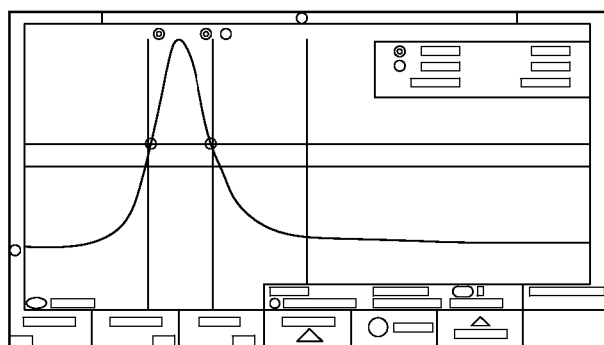


Figure 6c

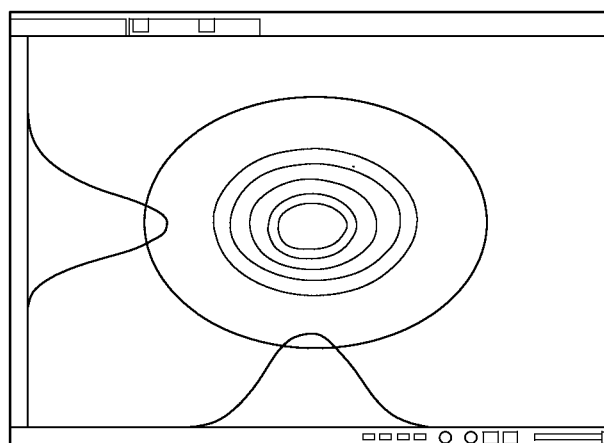


Figure 6d

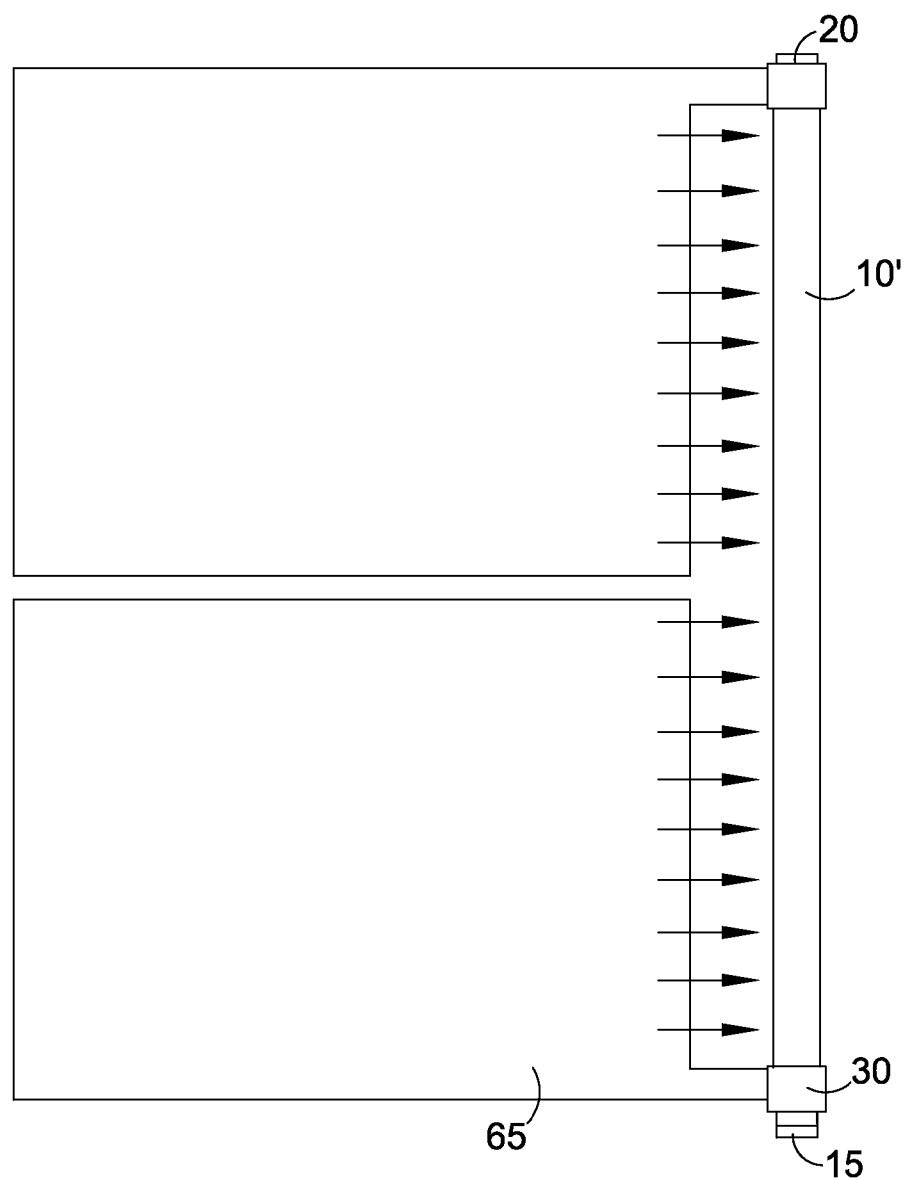


Figure 7

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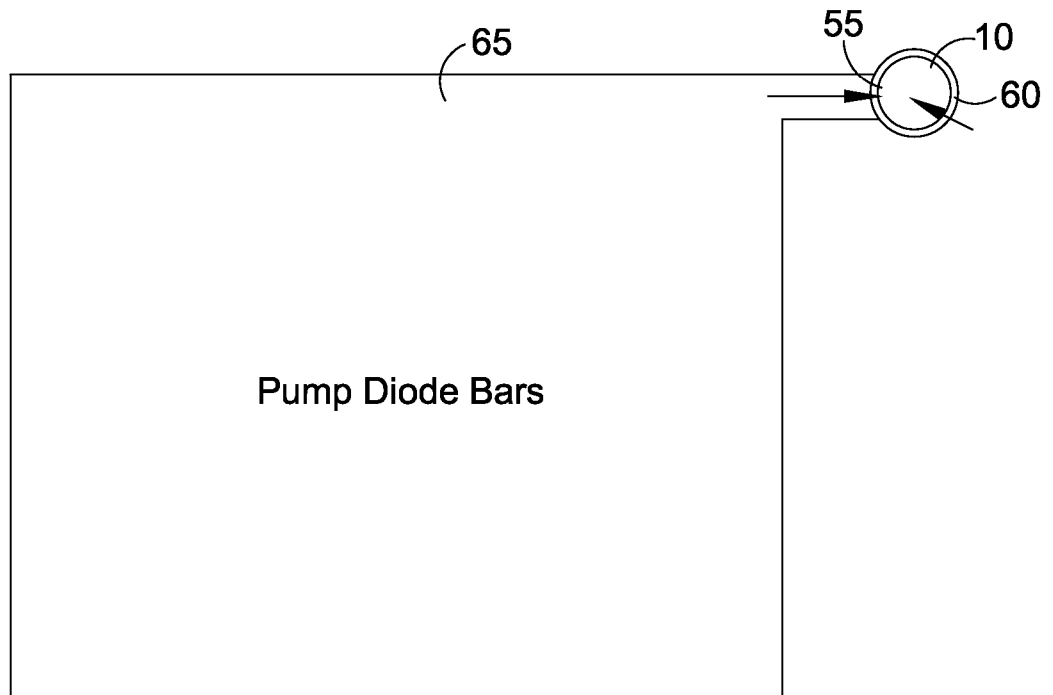


Figure 8

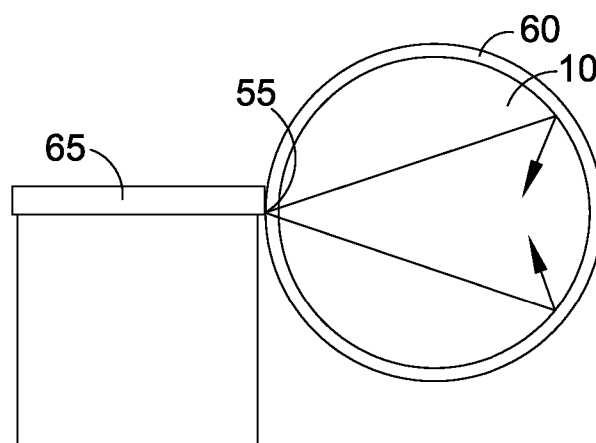


Figure 9

We Claim:

1. A side pumped laser (5) comprising:
 - an elongated gain medium (10) provided between an output coupler (20) and a counter reflector (15); and
 - a pump source (65) configured to provide radiation to the gain medium (10) along a side (40) or long axis of the gain medium (10); wherein
 - the laser (5) is configured such that radiation from the pump source (65) is directly incident on the gain medium (10); and
 - the pump source (65) is provided proximate, adjacent or in contact with the gain medium (10).
2. A side pumped laser (5) according to claim 1, wherein radiation from the pump source (65) is incident on the gain medium (10) without passing through other optical components.
3. A side pumped laser (5) according to claim 1 or claim 2, wherein the pump source (65) is provided facing, adjacent or in contact with a flat input surface (55) of the gain medium (10) such that the input surface (55) receives the radiation from the pump source (65).
4. A side pumped laser (5) according to any preceding claim, wherein the gain medium (10) has a cross section that would be a quadrilateral but for the flat input surface (55) of the gain medium (10) that is provided instead of an edge, corner or apex of the gain medium (10).
5. A side pumped laser (5) according to any preceding claim, wherein the laser (5) is configured such that light received from the pump source (65) by the gain medium (10) is diverging and non-focussed.
6. A side pumped laser (5) according to any preceding claim, wherein the gain medium (10) comprises a square sectioned rod.
7. A side pumped laser (5) according to any preceding claim, wherein an input surface (55) of the gain medium (10) comprises a commuted, flattened, formed or removed edge, corner or apex of the gain medium (10).

8. A side pumped laser (5) according to any preceding claim, wherein the gain medium (10) is coated with a reflective and/or thermally conductive coating (60).
9. A side pumped laser (5) according to any preceding claim, wherein the pump radiation is matched to a volume of a single TEM00 mode.
10. A side pumped laser (5) according to any preceding claim, wherein the doping of the gain medium (10) is adapted to tailor a beam spot size to at least one dimension of the gain medium and/or to control the power density of the beam.
11. A side pumped laser (5) according to any preceding claim, wherein the laser comprises a passive Q-switch (30).
12. A side pumped laser (5) according to any preceding claim, wherein the largest dimension of the gain medium (10) and/or the Q-switch (30) and/or the pump source (65) and/or a housing or container (75) in which at least some components of the laser (5) is received is less than 5cm.
13. An apparatus or system comprising a side pumped laser (5) according to any of the preceding claims.
14. The apparatus or system of claim 13, wherein the apparatus or system comprises or is comprised in a sensor, a laser designator or a rangefinder.
15. A method of producing a side pumped laser (5) according to any of claims 1 to 12, the method comprising providing the pump source (65) of the laser (5) in contact with, adjacent or proximate a long side of the gain medium (10).
16. A side pumped laser (5) substantially as shown in the drawings and/or described in the description.

Dated this the 14th day of April, 2015