

(A) Feed a metal plate on a workbench forward to extend beyond a shearing edge of the workbench, such that a first surface disposed at the bottom of the metal plate is contacted with the workbench, and a part of the metal plate is protruded and extended beyond the shearing edge of the workbench.

((B) Locate a punching head at a first position at the top of the shearing edge of the workbench, and maintain a working space between the punching head and the workbench, wherein the punching head includes a plurality of unit blade portions arranged in a row parallel to the shearing edge of the workbench.

(C) Apply a shearing force to the workbench by the punching head.

(D) Apply a force to bend the metal plate along the direction of applying force by the punching head, and form a plurality of spot-shaped cavities arranged in a row on a second surface of the metal plate by an action of the unit blade portions towards the punching head.

(E) Bear the shearing force on the first surface on the metal plate to form a linear groove along the shearing edge of the workbench.

(F) Deform the metal plate by the shearing force, interconnect the spot-shaped cavities arranged in a row on the second surface with the linear groove on the first surface, and form a plurality of micro-holes at the intersection of the interconnection.

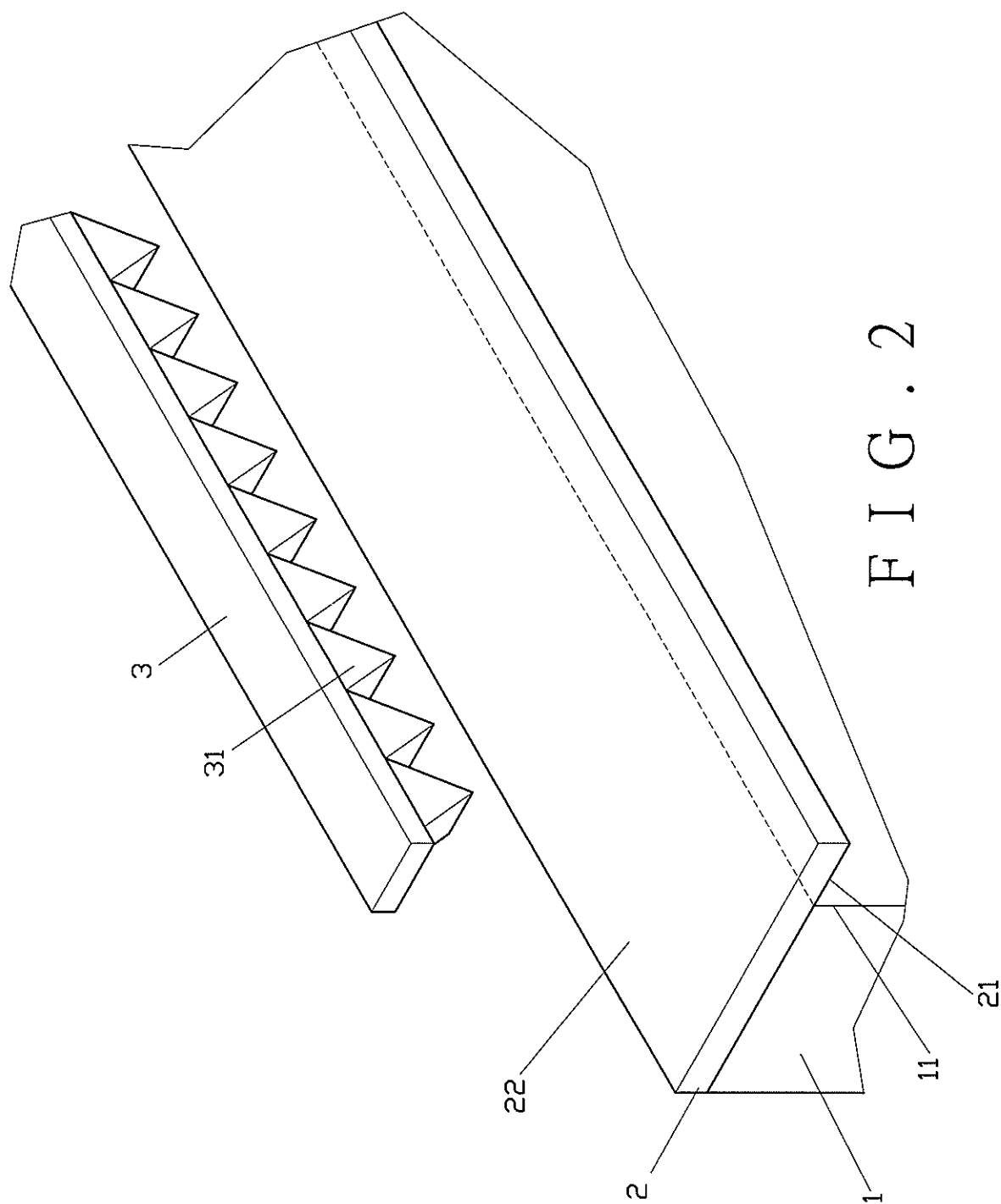
(G) Return the punching head to the first position, and then shift the punching head to a working distance in a direction parallel to the shearing edge to a second position.

(H) Feed the metal plate in a direction towards the shearing edge of the workbench again.

(I) Repeat the Steps C, D, E and F, when the punching head is situated at the second position.

(J) Return the punching head to the second position, and then shift the punching head to a working distance in a direction parallel to the shearing edge of the workbench and return the punching head to the first position to complete a processing cycle.

F I G . 1



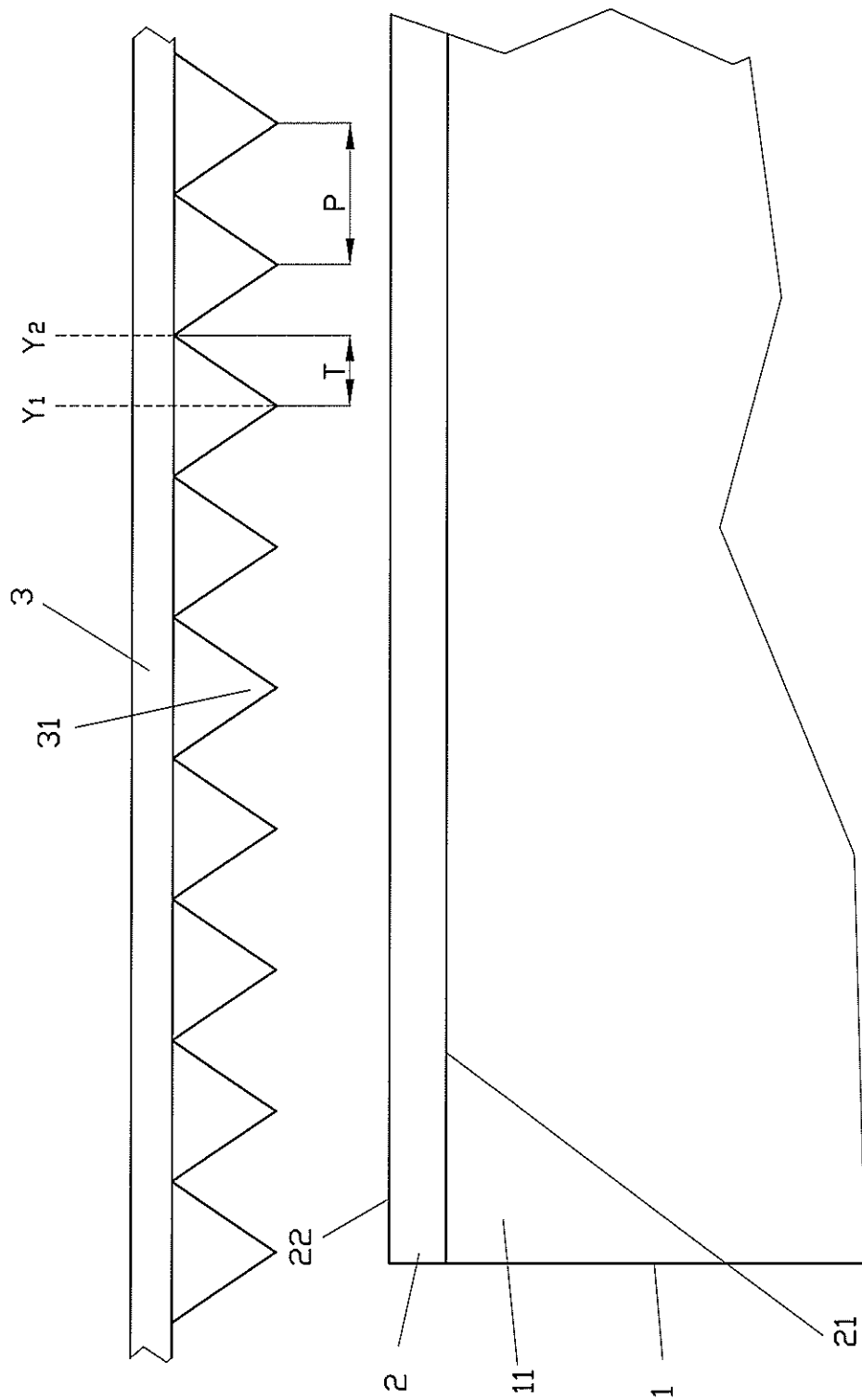


FIG. 3

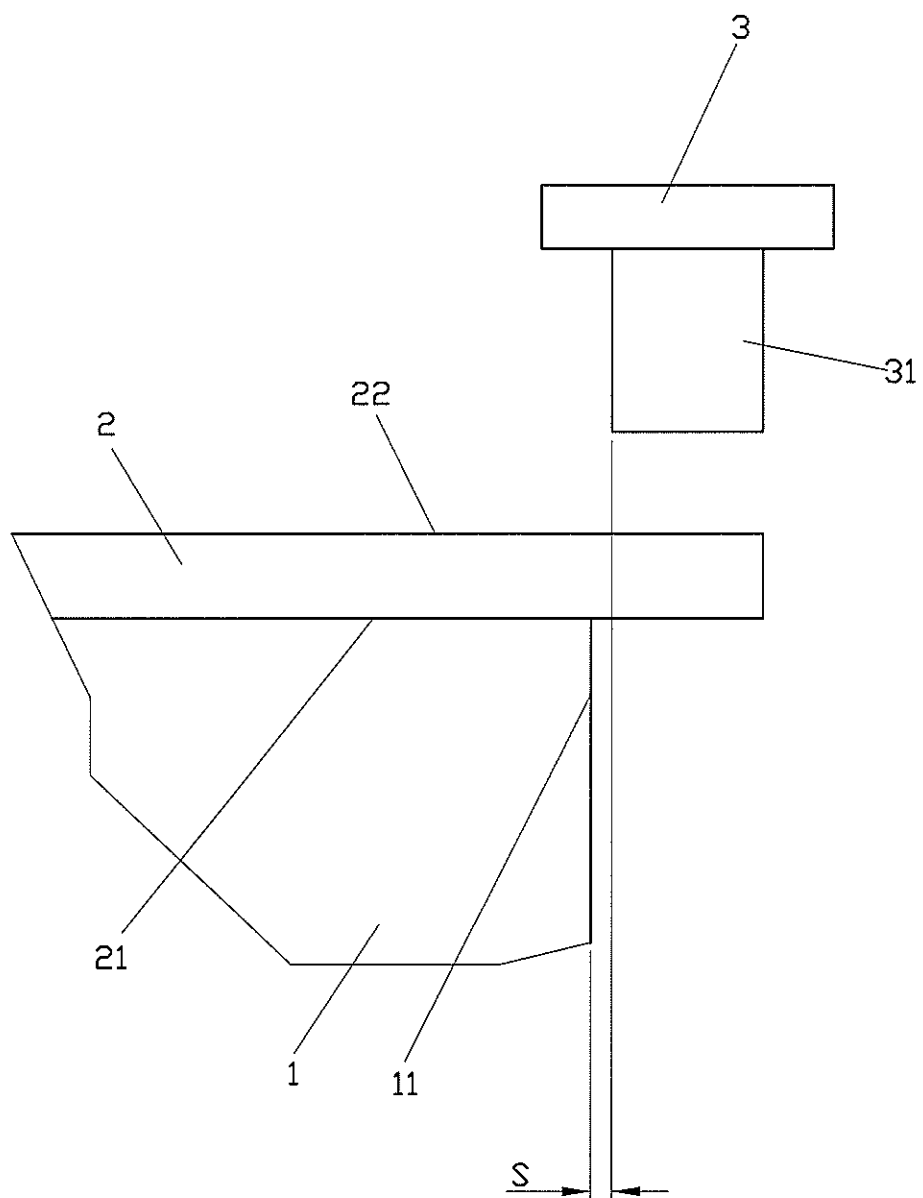


FIG. 4

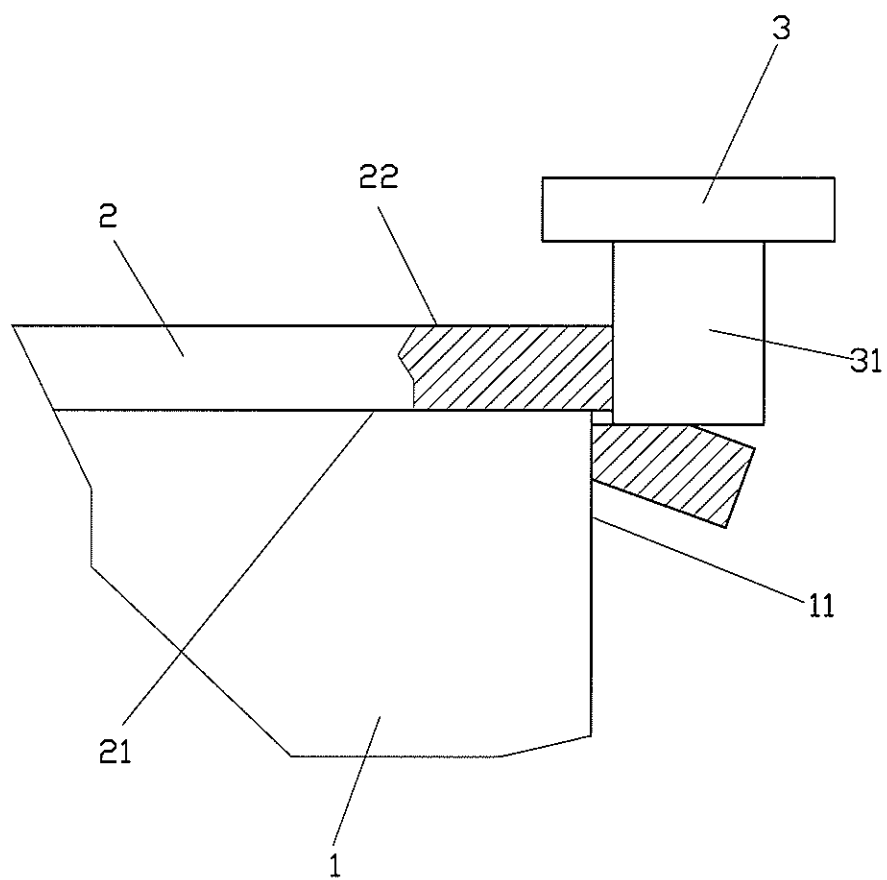


FIG. 5

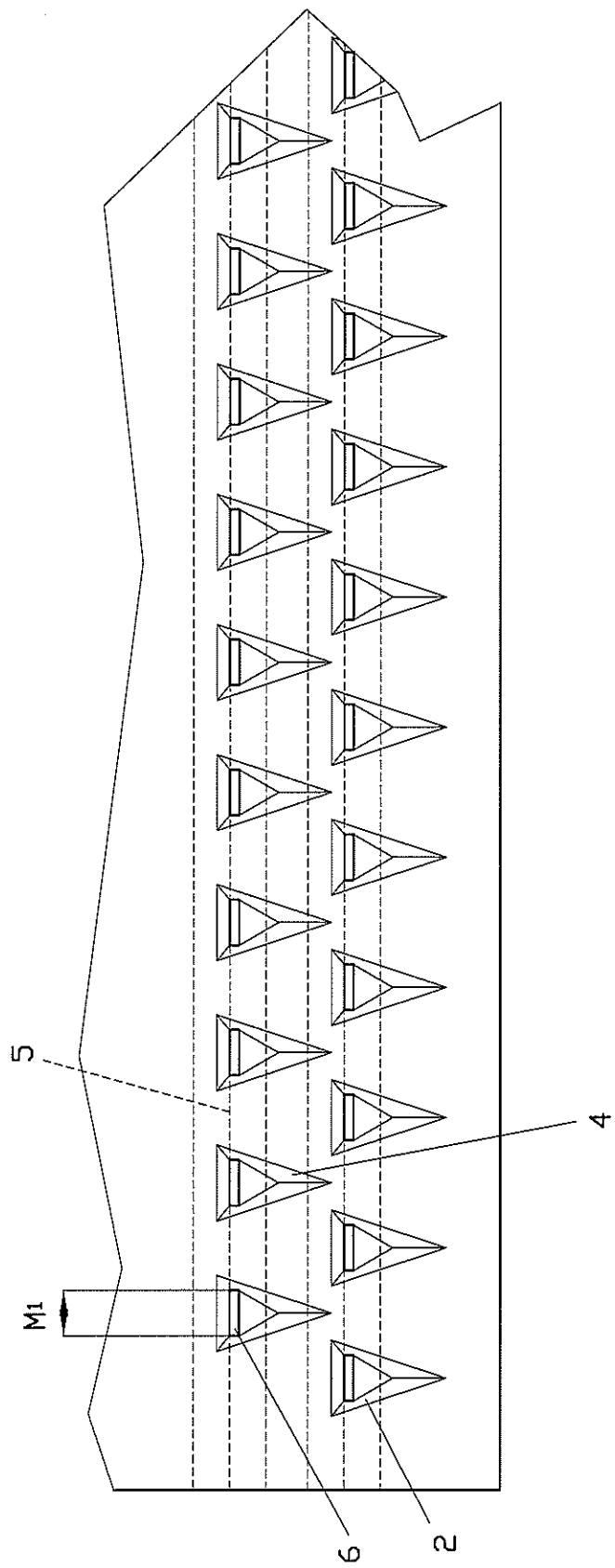


FIG. 6

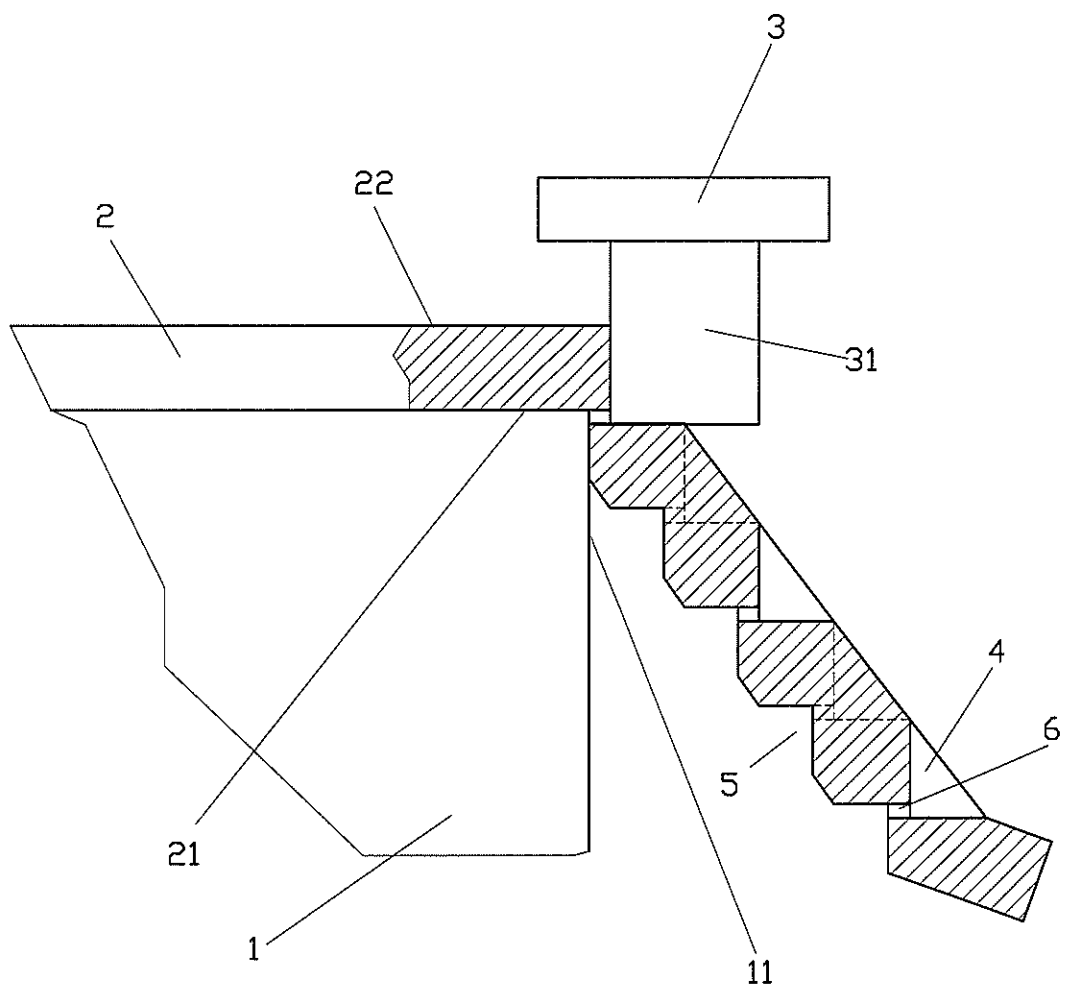


FIG. 7

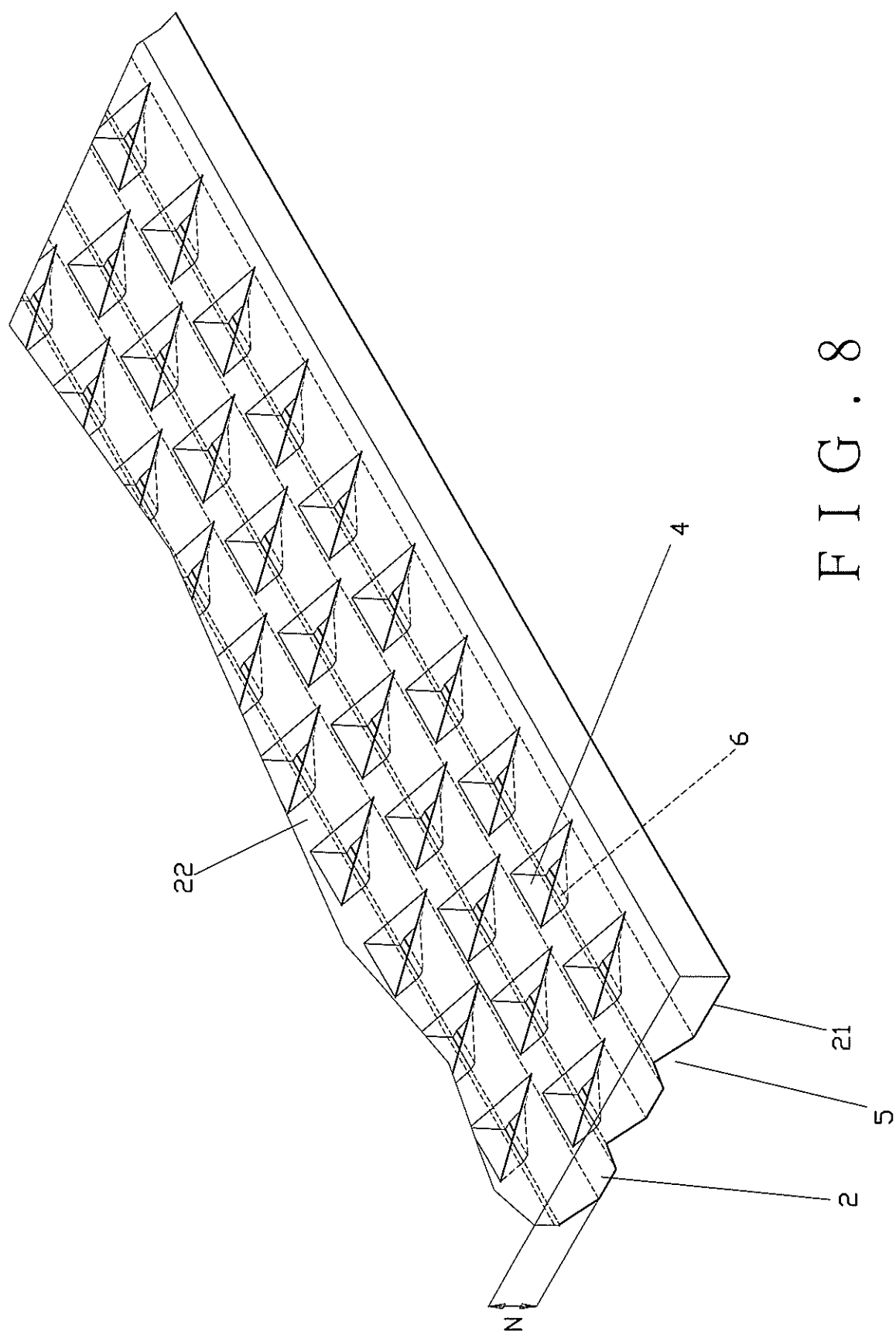


FIG. 8

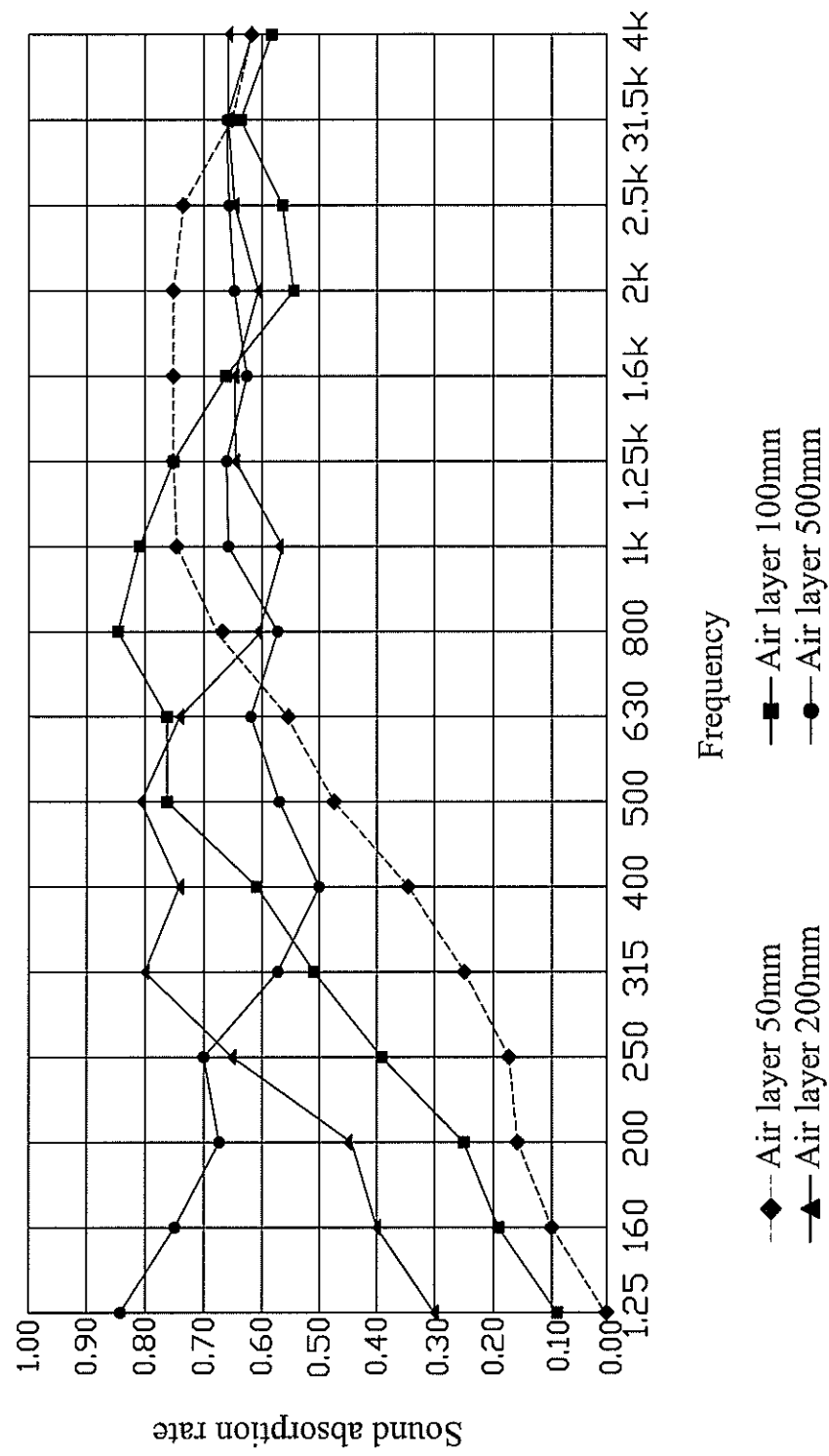


FIG . 9

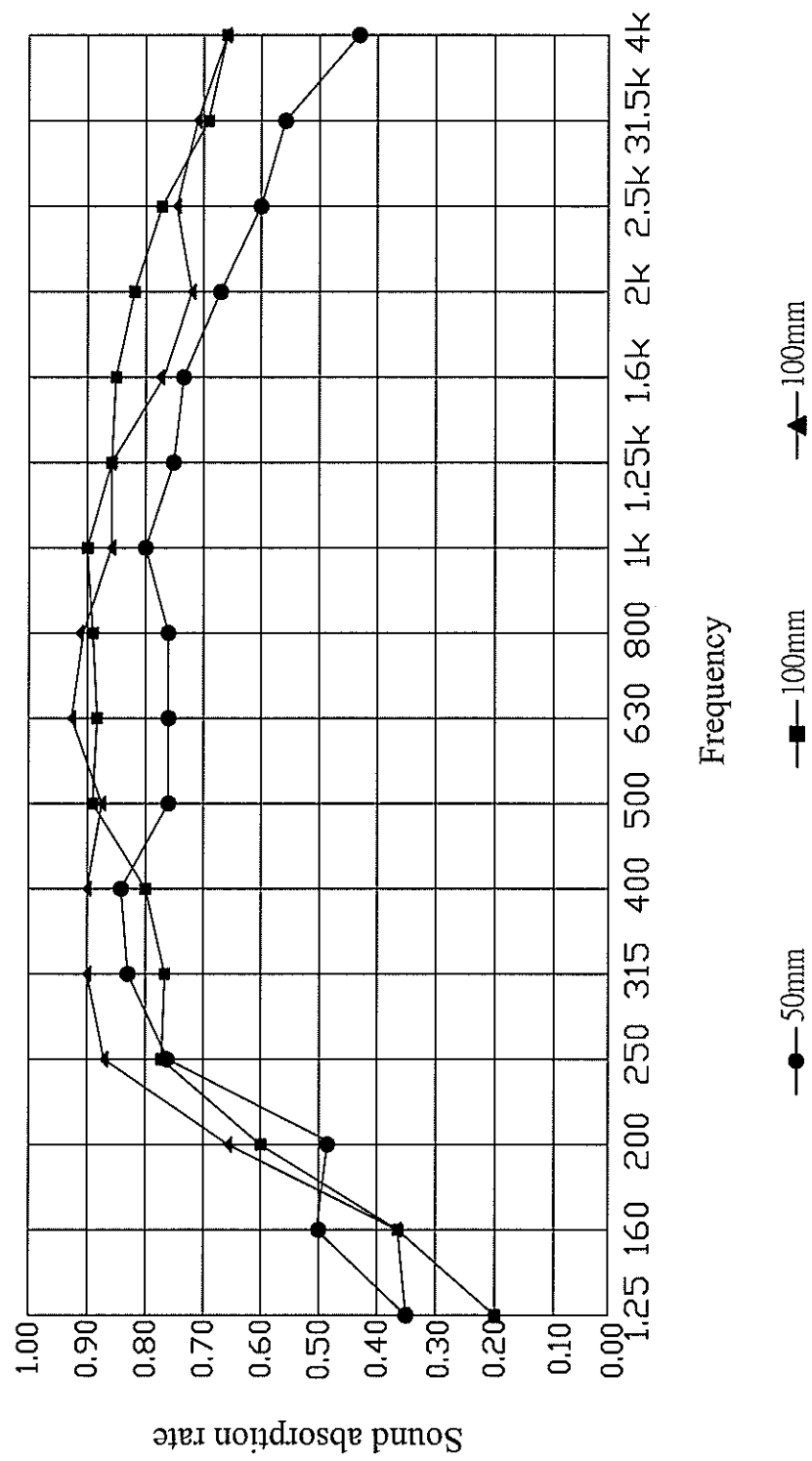
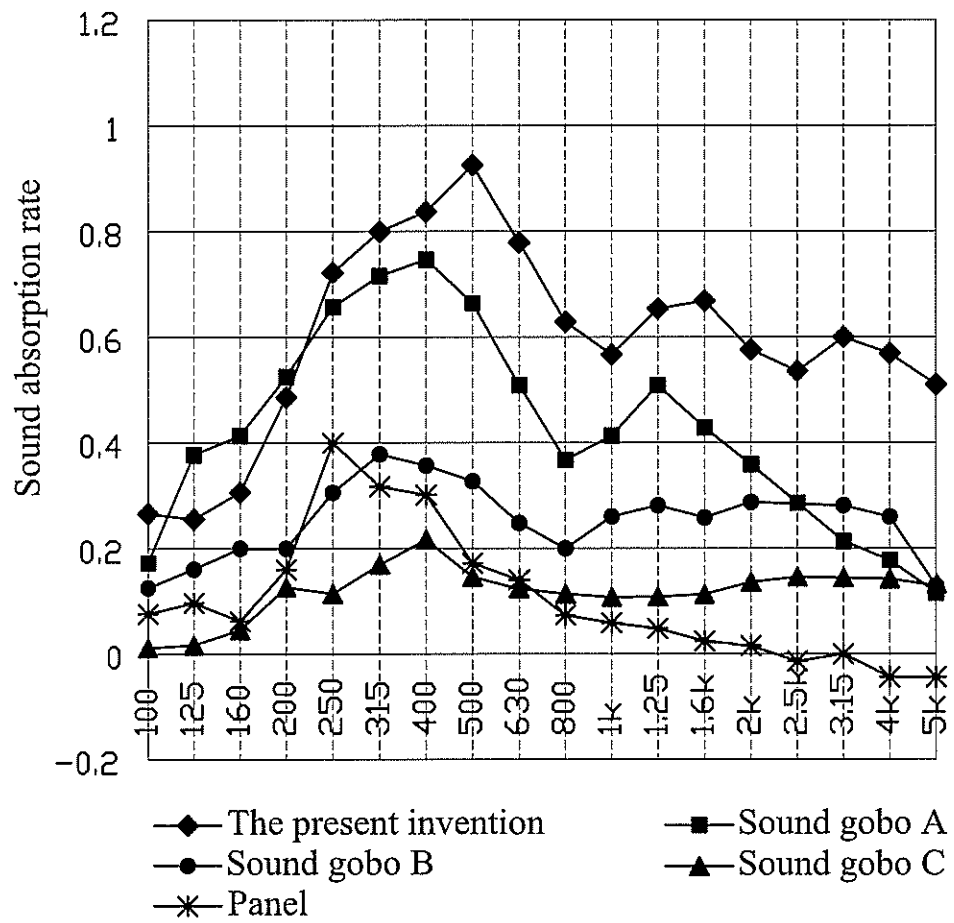


FIG . 10



F I G . 11