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(12) **United States Design Patent**  
**Dixon et al.**

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(54) **COMBINATION DISC CUTTER AND SPINAL VERTEBRAL SPREADER**

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(\*\*) Term: **14 Years**

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(51) **LOC (7) Cl.** ..... **24-02**

(52) **U.S. Cl.** ..... **D24/147**

(58) **Field of Search** ..... D24/147, 146; 606/61, 79, 84, 87

(56) **References Cited**

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*Primary Examiner*—Stella Reid

(57) **CLAIM**

The ornamental design for a combination disc cutter and spinal vertebral spreader, as shown and described.

**DESCRIPTION**

The combination disc cutter and spinal vertebral spreader is used to remove a portion of a damaged human spinal disc with a novel “Z” shaped knife at the working end of the tool.

The act of removing a portion of the disc, as the tool is inserted, allows the spreader to reach the center of the vertebral end plates. Once the spreader portion is centered between the two vertebrae, the combination disc cutter and spinal vertebral spreader can be rotated one quarter of a turn, allowing its uniquely configured cutout notches to avoid vertebral protrusions as the cam surfaces spread the vertebrae, returning them to their original spacing. Once the tool has been rotated, the flat portions adjacent to the cam surfaces lock the spreader into the spread position. A graft material may be inserted to maintain normal vertebral position after the tool is removed.

FIG. 1 is a left side view of the combination disc cutter and spinal vertebral spreader with the cutter knife at the left end of FIG. 1.

FIG. 2 is a right side view of the combination disc cutter and spinal vertebral spreader.

FIG. 3 is a top view showing the shaded cam surfaces thereof; the bottom view being the mirror image thereof;

FIG. 4 is an end view looking toward the knife end, showing the upper and lower cam profiles, the knife edge, and the oblique surfaces blending the transition from the flat surfaces to the “Z” shape of the knife edge thereof.

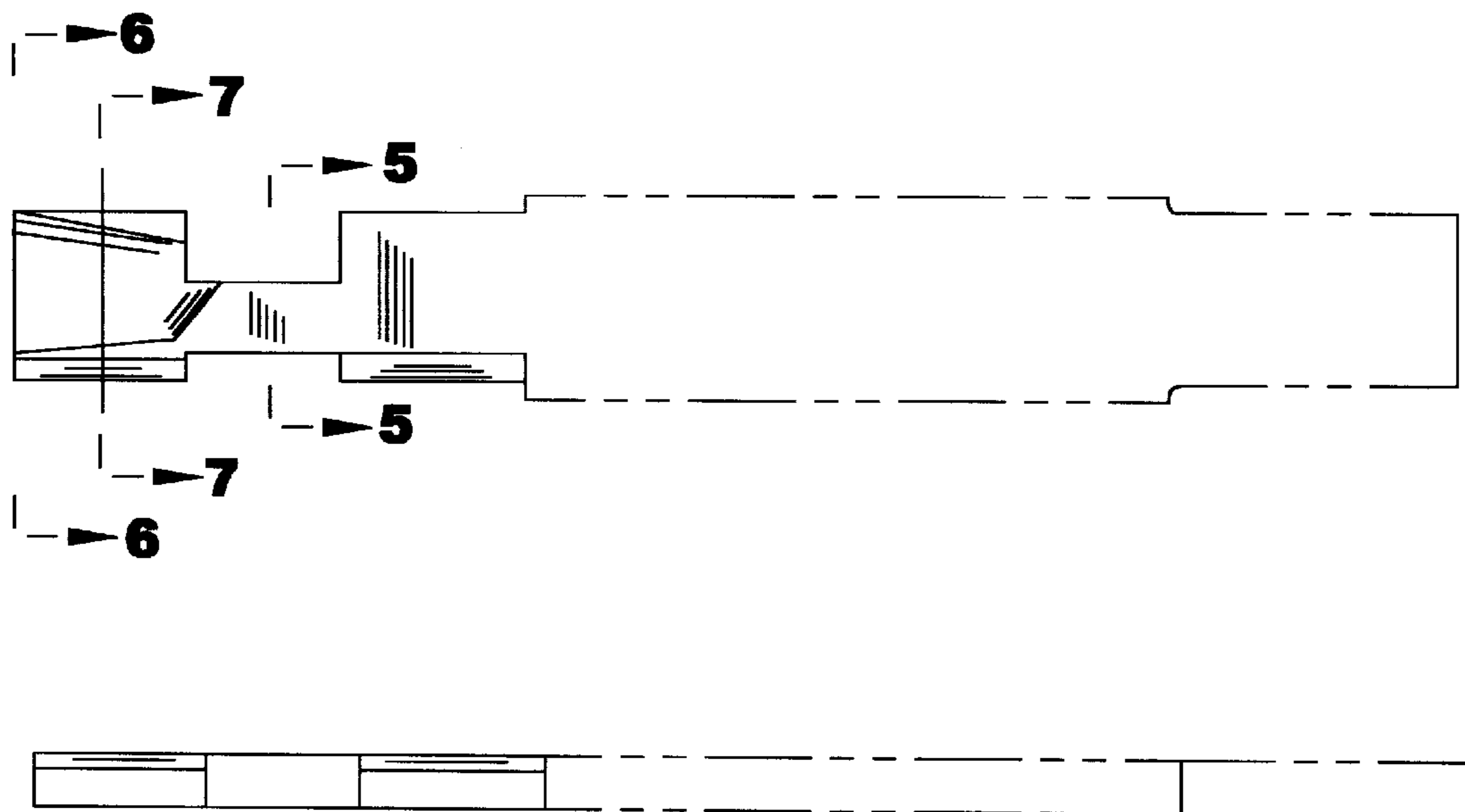
FIG. 5 is a cross section view along the line 5—5 of FIG. 1, showing upper and lower notch sides.

FIG. 6 is a view of the “Z” shaped knife-edge viewed from the same point as FIG. 4, but showing only the knife edge surface with no depth into the plane of 6—6 in FIG. 1; and,

FIG. 7 is an enlarged cross section view along the line 7—7 of FIG. 1, showing the upper and lower cam profiles and the oblique surfaces blending the flat surface into the cutter knife edge profiles.

The broken line showing of the handle is for illustrative purposes only and forms no part of the claimed design.

**1 Claim, 2 Drawing Sheets**



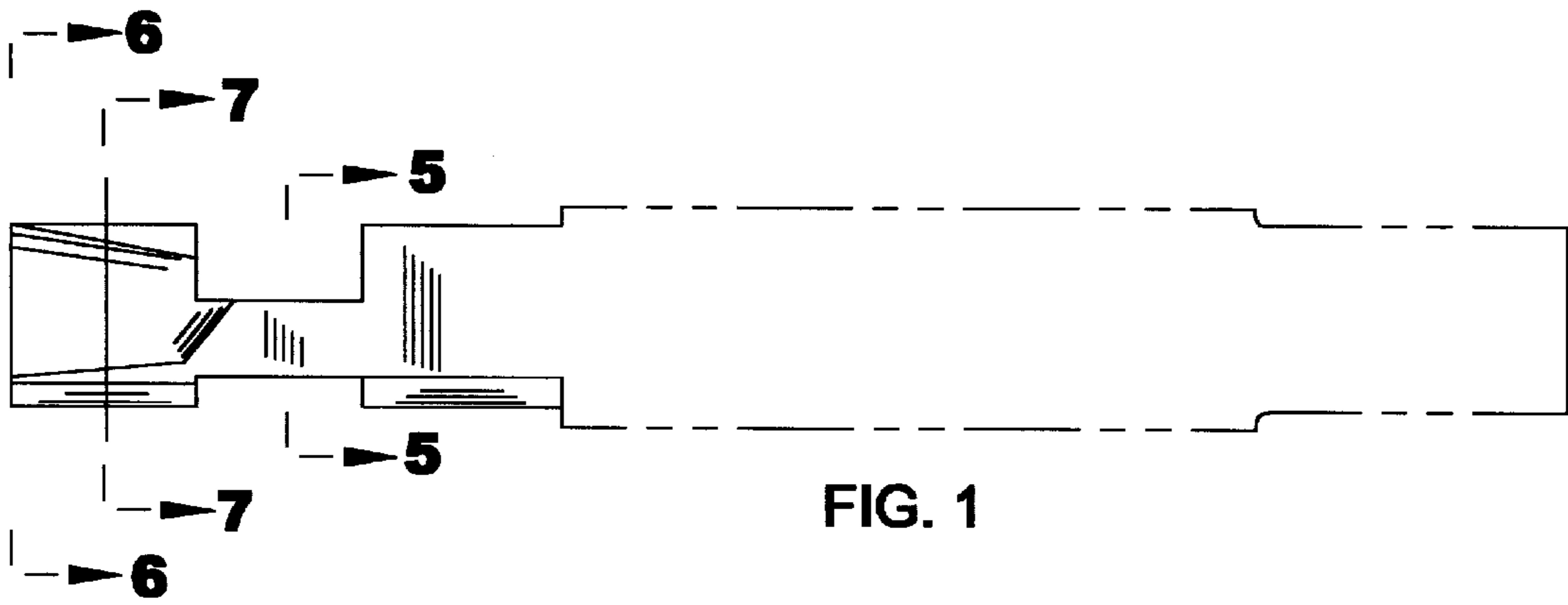


FIG. 1

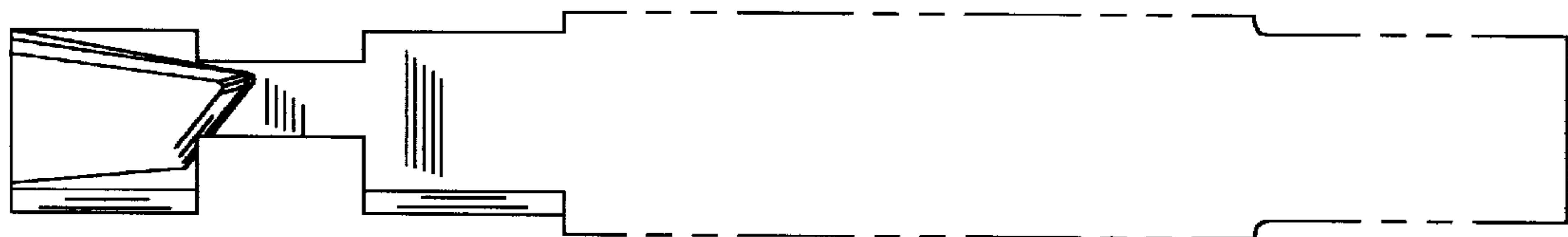


FIG. 2

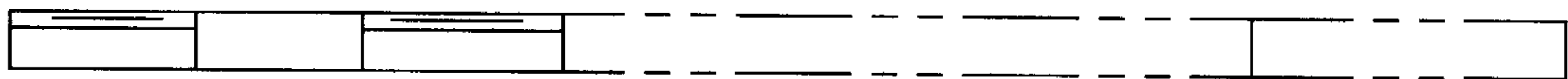


FIG. 3



FIG. 4



FIG. 5



FIG. 6

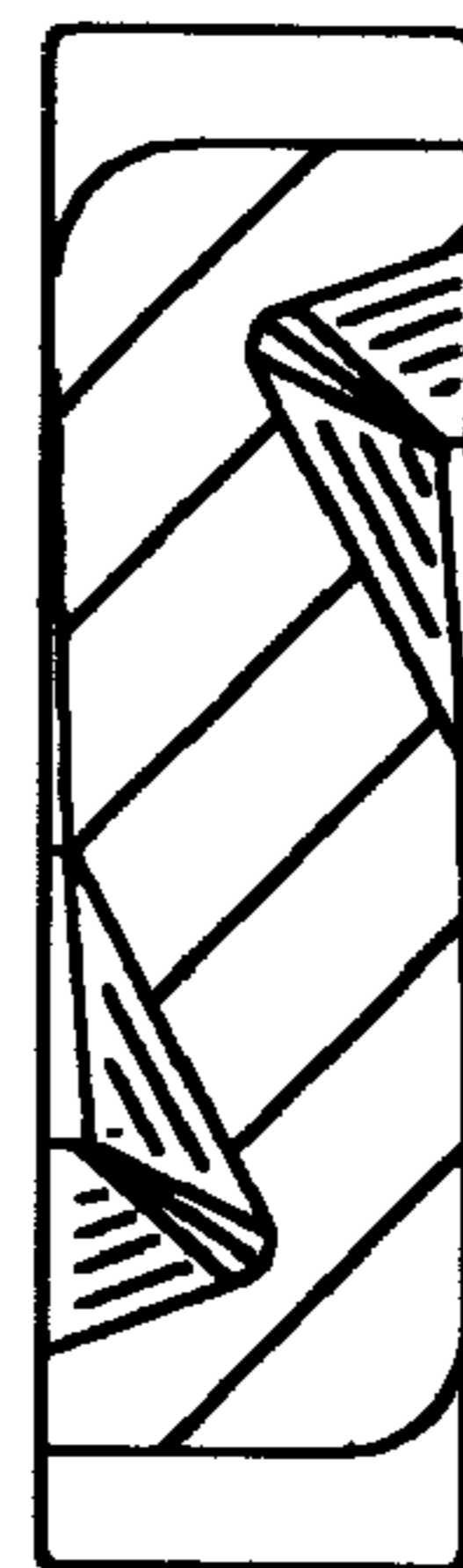


FIG. 7