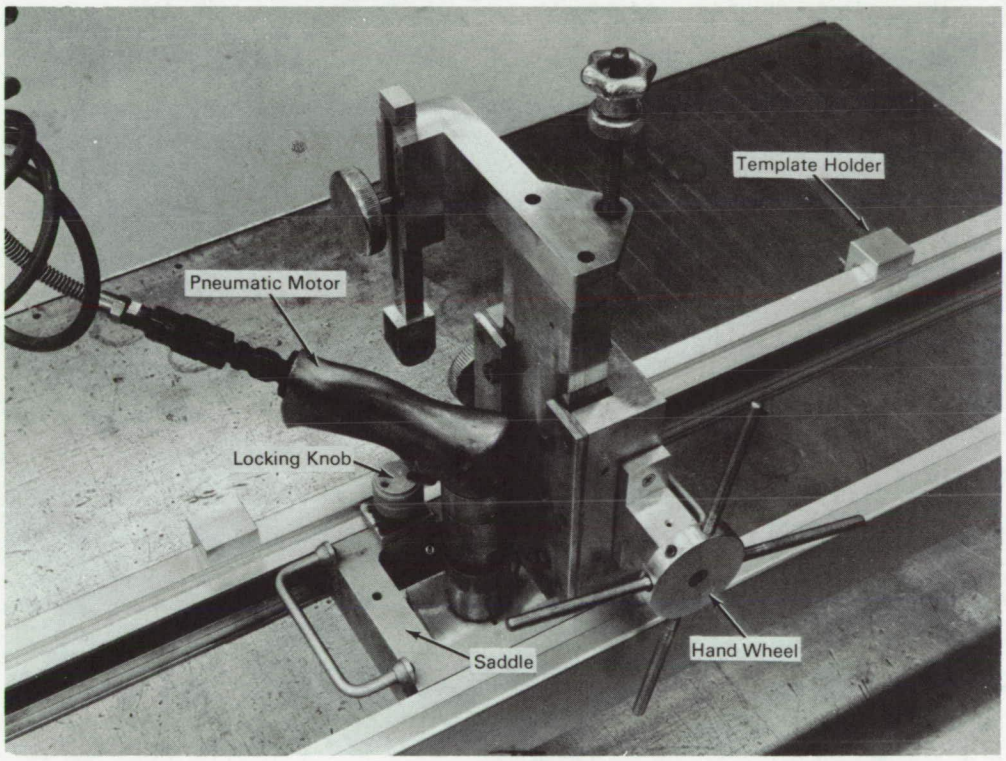
NASA TECH BRIEF

Mill Profiler Machines Soft Materials Accurately



The problem:

In machining soft, fragile materials such as styrofoam phenolic-filled cores, use of a drill press restricted working area, required more than one operator, and resulted in work that was frequently out of print tolerance.

The solution:

A mill profiler that machines, bevels, slots, and grooves in soft materials to any desired thickness. A single operator can accurately control cutting depth in contour or straight line work.

How it's done:

The profiler rides on extruded aluminum rails above a steel table that is scribed with grid lines. A saddle holds a pneumatic motor that drives the cutting tool, which is raised or lowered by a four-spoke hand wheel. The proper tool is placed in the tool holder (not shown) and the depth of cut is selected. In the

(continued overleaf)

cutting operation, either the workpiece is held in place beneath the rails as the cutting tool is moved through it, or the saddle is locked to the rails by the knob beneath the pneumatic motor handle and the workpiece moved against the cutter. One of the rails is provided with blocks and wing nuts to hold a template for cutting to a pattern.

Note:

Inquiries concerning this innovation may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
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Reference: B66-10254

Patent status:

No patent action is contemplated by NASA.

Source: Joseph A. Rauschl
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