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NASA TECH BRIEF

Adjustable Drill Bar Replaces Complex Jigs

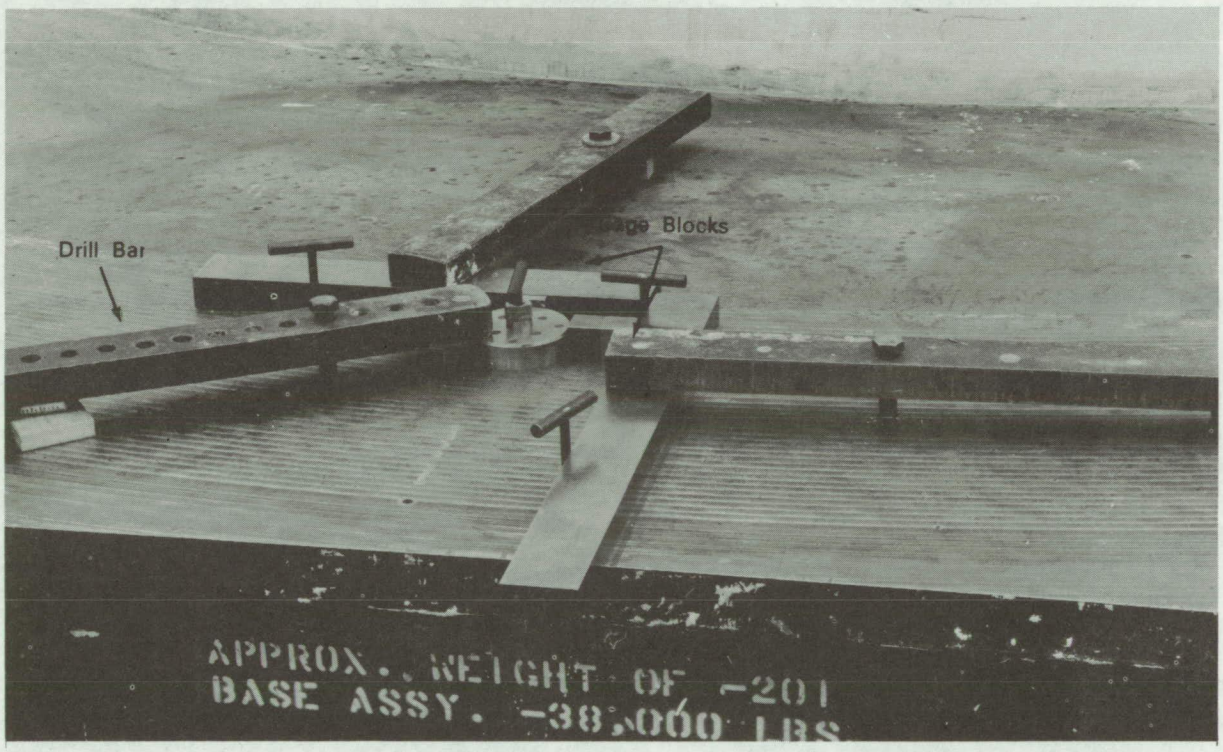

Figure 1. Previous Method

The problem:

To reduce the time and skill requirements for precision drilling on large surfaces. The complex jigs (see Figure 1) used in the past took appreciable time and put a premium on the skill of the setup man.

The solution:

An adjustable drill bar, shown in Figure 2, incorporates a micrometer screw which, when used in conjunction with standard gage blocks, provides a rapid method of drill hole location.

How it's done:

The desired hole pattern is obtained by making a drill plate from an engineering drawing. A three-hole, 90° 10″ increment grid is made, and the stationary member is fastened to one side of this grid. The member is held in place by the two hold-downs. The machined ways permit the movable member of the assembly to slide to any desired position within its range. By using an appropriate gage block, the selected drill hole in the movable member can be placed pre-

(continued overleaf)

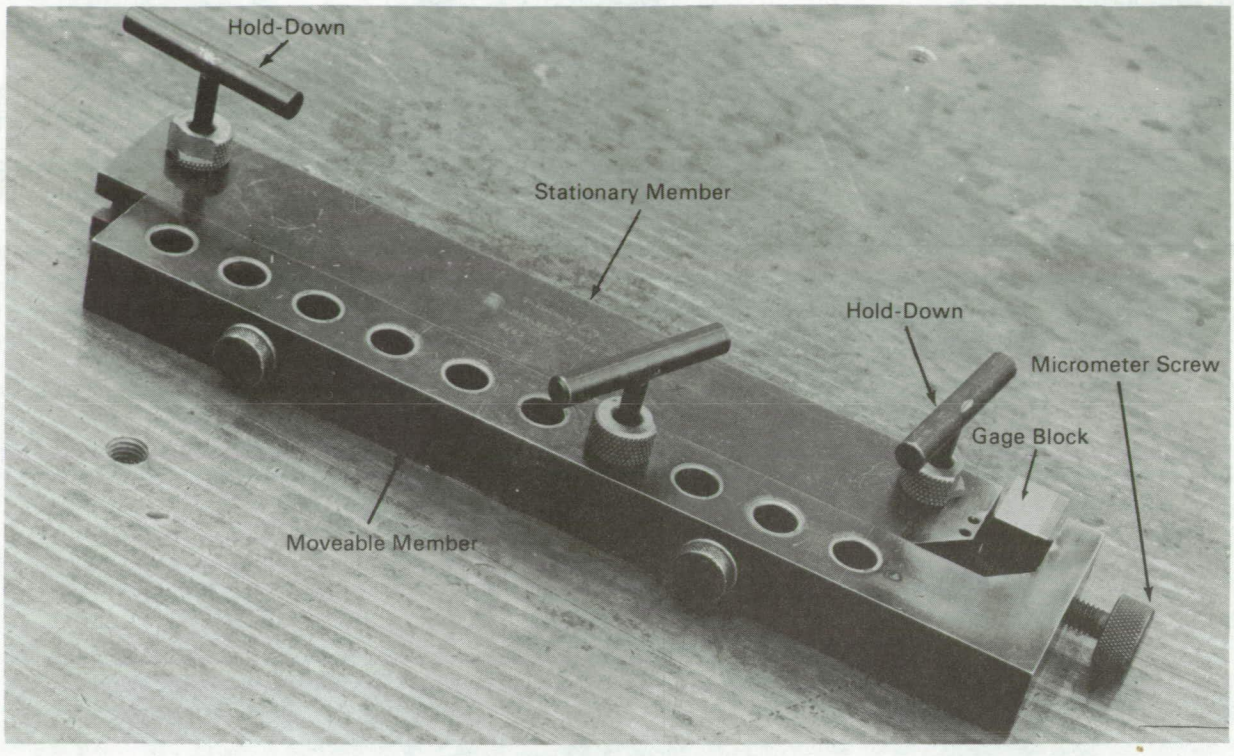

Figure 2. Adjustable Drill Bar

cisely on the workpiece using the micrometer screw.

Notes:

1. This device is versatile in picking up oddly dimensioned tool hole points and acts as a sine drill bar.
2. No additional documentation is available. Specific questions, however, may be directed to:
   Technology Utilization Officer
   Manned Spacecraft Center, Code BM7
   Houston, Texas 77058
   Reference: B70-10547

Patent status:

No patent action is contemplated by NASA.

Source: John H. Coventry of
North American Rockwell Corp.
under contract to
Manned Spacecraft Center
(MSC-15624)