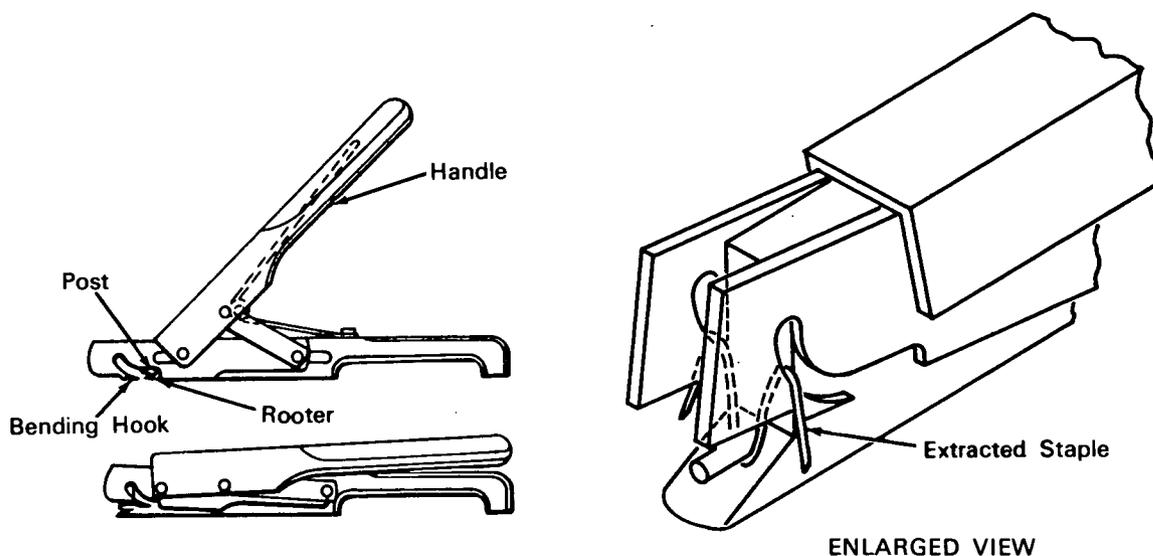


NASA TECH BRIEF



This NASA Tech Brief is issued by the Technology Utilization Division to acquaint industry with the technical content of an innovation derived from the NASA space program.

Heavy-Duty Staple Remover Operated By Hand



The problem: Large, heavy-duty wire staples are difficult to extract with commercially available staple removers. Considerable time can be lost in the process of extracting staples from thick documents because the lower extremities of the heavy staples must usually be straightened (e.g., with pliers) before employing a commercial manually operated staple remover.

The solution: A heavy-duty hand tool, which requires only one simple operation to extract the staple, without damaging the surface material.

How it's done: The wedge-shaped rooter is slid under the staple to be removed, and the handle of the device is squeezed down until the staple is completely extracted. In the process of extraction, the sides of the staple are pulled upward by the bending hook, while the top central portion of the staple is held down by

the post, as shown in the enlarged view. This bending action facilitates one-step extraction of long staples with a minimum exertion of force on the handle, which provides a large mechanical advantage as a lever arm.

Note:

This staple remover (an original design by the Jet Propulsion Laboratory) easily removes staples from one-inch-thick reports and is especially effective for removing round-headed staples from packing crates.

Patent status: NASA encourages commercial use of this innovation. No patent action is contemplated.

Source: Ralph Renner and Thomas Morrison
Jet Propulsion Laboratory (JPL-IT-1004)