



**BEFORE:** Acute 'congestion' marked old-type galley. Right: Sailor tries to sleep while shipmate gropes for coat.

mospheric conditions, including temperature, ventilation, noise, vibration and odor.

- Opinion polls among a total of 7300 officers and men on what they themselves thought of the living conditions in their ships.

In the course of the investigations, some weird facts were discovered:

- One cargo ship, for example, was so hard pressed for bunk room for the crew, it had to sling hammocks for its men in a cargo hold.

- A survey ship placed four bunks in a garbage disposal room.

- A battleship had crammed 32 bunks into two gun turrets and a combat information center.

These fact-finding missions led the investigators to basic causes. Digging deep, the analysts probed the missions of the ships in an effort to determine if more clear-cut assignments of missions might help reduce the excess gear. They pored over historical records, scrutinized the findings on living conditions of other agencies including research institutions, industrial designers, uni-

versities, manufacturers and the British, Canadian and Turkish navies. In all, more than 1,000,000 separate items were noted, analyzed and developed.

Their conclusion: Living conditions on practically all types of Navy ships today are in need of improvement. If the need is not met, the Navy in general will suffer in decreased efficiency of the men who man the ships and perhaps a declining re-enlistment rate.

The face-lifting job given the destroyer *Meredith* is one result of the OpDevFor survey. The idea here was to evaluate the livability features that could be built into an existing ship on a conversion budget.

In this case, it was found possible, by redefining the ship's missions, to reduce her complement by four officers and 31 enlisted men. Then, using the living space saved as a result of the reduction in personnel, modifications were made—the changes Joe Brown found on his first-day tour of inspection. The cost of the modifications was approxi-

mately \$500,000, an amount slightly less than the cost of the new three-inch 50-caliber gun system which was installed during the same overhaul period.

But the improvements made in *Meredith*, substantial as they are, are but a part of the story. Conversion of an existing ship is an expensive proposition. On the other hand, the same features that would cost heavily to install in a ship already in being can be built into a new ship with far less expense.

For this reason, it is the ships still on the building ways or just reaching the blueprint stage that excite the imagination and put a twinkle in the eyes of the BuShips "experts in shirtsleeves."

This collective twinkle is now being translated into a number of noteworthy livability improvements now being built into ships under construction in the current building program.

For example, in Puget Sound, Wash., they're putting the finishing touches to a new and more power-

**AFTER:** Remodeled compartment, dumb waiter, speed chow line. Right: Utility shield adds ready stowage for crew.

