stop to look at the rewinding of the coils in the main motor of a battleship. That's routine."

A typical incident occurred when he was manager of the Navy Yard at Puget Sound. A big ship had been brought in for extensive mechanical repairs. The officer in charge of that sort of work reported that the repairs were impossible without pulling out all the damaged machinery. Some younger engineer officers, however, evolved a plan for doing the job without removing the machinery. It involved methods that had never been tried before, and was admittedly intricate and complicated. But Robinson. his eyes lighting up, digested their plan as fast as they could tell it to him, and didn't even hesitate. "Go ahead," he told them, though the senior engineer still insisted it wouldn't work. It did.

When the Admiral goes home at night, his relaxation is reading technical treatises, then early to bed. The pomp and splendor of being an admiral leaves him cold. He ducks launchings and other ceremonies whenever he can, and hates getting dressed up in the finery of his rank. "I want one thing understood," he said, when I told him I was going to write this article. "You don't get me to have my picture taken in uniform."

One Man in Two Jobs

WHEN Robinson became Chief of the Bureau of Ships last year, he was the first man ever to hold that job. Previously it had been two jobs. Building and maintaining ships had been the province of the Bureau of Construction and Repair; machinery and all its related gear had been under the Bureau of Engineering. This had inevitably led to overlapping, bickering and jealousies. And the emergency was too great to let that situation go on. Admiral Robinson became chief of the whole works.

No man had ever faced such an assignment. It meant that he was to build a navy bigger than any other country had ever built in the world's history - and in a hurry. And the facilities, the men and the management were all lacking.

Facilities meant, first of all, shipyards. We had our navy yards, and a half a dozen private shipyards that were accustomed to building naval vessels. They would all have to be drastically expanded to the utmost, and still they wouldn't do the job. Robinson had a survey made, and found 170 smaller shipyards dotted about the country which were sound and reputable, presumably capable of building ships of one sort or another for the Navy. He called in their owners, found out what they could do and put it up to them, not only to build ships but to get the American competitive spirit into the work.

He Gets Results

TODAY, all up and down our coasts and along the Great Lakes, little shipyards are vying with each other to turn out vessels and lighters by the hundreds. And if you add in the little rescue boats, the launches and all the smaller craft, mounts into the thousands. This in addition to more than 150 big warships under construction in the bigger yards.

But besides shipyards, facilities



"Hasn't he killed it yet, Daddy?"

A NAVY IN A HURRY

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meant material and equipment, and plants to provide them. These, in many cases, were even more grievously lack-

So the Admiral started building these facilities, too. When a shortage of reduction gears, for instance, threatened the whole program, a plant was rushed to completion in Milwaukee to supply them. And so with other critical materials.

To supply labor, he had training centers established in all the major centers, and meantime stepped the working week up from 40 to 48 hours, and put on additional shifts. Thus many of the yards are now working 24 hours a day, six days a week. And where bottlenecks develop they also work Sundays.

With his own bureau organization, the Admiral sets the example of speed. He had contracts all drawn and arranged long before the regular annual appropriation for the fiscal year 1941

was enacted. And within one day after the measure was signed, contracts for 19 major vessels were awarded. When the second supplemental appropriation came along, contracts were being telegraphed out of his office within two hours after the money became legally available.

No Waste Motion

AND yet, though his office is just about the busiest in the country, it is never riled. "I've never seen him fly off the handle, or even get discouraged," one of his assistants told me. "He just listens to the problems before him, decides what difficulties are insurmountable and which ones are just straw, and that's the end of it." His sharpest rebuke, they say in the bureau, is to quietly answer a subordinate's query with: "That's a detail. Do it."

Actually, as an engineer, he is keenly interested in details; but of

course he has little time for them. And, as one officer pointed out to me, "A man could live nine lives and still not have time to go into all the details of a battleship." Backing up the statement, the officer reached into a drawer of his desk and pulled out a printed card. "This is a list of the different specialized sections in the bureau," he said. "At least a hundred and fifty of them

He put a finger on the card. "Here, for instance," he said, "are the experts on radio and sound - nine different kinds of them. Or look down here at the technical sections - sixteen of them. Gyro compass, air conditioning, turbines and gears, welding and cast-

ing, damage control . . . "
"Damage control?" I interrupted. "What does that mean?"

"Everything that can be done to make a ship less vulnerable," he said. "It may be structural, like building in sealed compartments; it may be some

technical device, like the Gauss belt to counteract mines; or it may be some simple item of equipment, or even a regulation to be enforced keeping some particular door closed, for example.

"Did you happen to notice that British officer who was just here? He was from a British ship that is being repaired in one of our yards. Well, something happened to that ship. Maybe our damage-control man will be able to figure out a way to minimize the damage if the same or similar situation should arise with one of our ships."

The officer went on pointing out others of the 150 different categories of experts, but I'm afraid my mind was wandering. I was thinking back to the big ship that I had seen under construction in the Navy Yard.

"It is an intricate job, building a battleship, isn't it?" I said.

The officer grinned. "It adds up to a lot of details, all right," he said. "But the Admiral says, 'Do it!' And we're doing it."



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