



## SPARES

Three of these blades make one propeller. Many of these spare blades are kept in each of the servicing bases.

ly be carried. The plan will contain data and instructions for every man in the multiple flight crew aboard the giant flying boat.

Weather maps will be drawn four times daily, to facilitate laying of flight plans. Even while Pan American Airways meteorologists keep a sharp watch on their own stations and on ports of call, they will also watch the district to the north and west of the departure point, and the area between Canada, Greenland and Iceland. In this way, they will be able to foresee coming weather at the start and along the way, for weather in the northern part of the western hemisphere comes in, generally speaking, from the north and west.

If adverse winds are exceptionally strong, the payload will be cut accordingly; if they are phenomenal, the flight may even be cancelled. The Clipper must always have aboard at take-off enough gasoline to take her one-third farther than her destination. And it is required to land at its destination with that reserve intact, to be used only in emergency.

Should weather conditions change, the master and the operations manager, kept in contact by radio, can naturally change the plan in flight. Pan American Airways pilots in general will not pay particular attention to conditions at their destinations in Europe at the time they take off. "A lot can happen to the weather in 24 hours," Allan C. Clark, division

meteorologist, explained. "It may be terrible in Southampton when a plane clears Baltimore and New York, and still be nearly ideal by the time the ship reaches the other side.

"Besides, in a couple of thousand miles across the Atlantic, you have plenty of room for turning slightly and heading for an open port."

At last the flight time analysis has been approved by the captain and Operations Manager Clarence H. Schildhauer. The last passenger and letter is aboard. The flight plan is in action.

But it doesn't end here.

A continuous record of the ship's passage is kept ashore as it wings its way across the Atlantic. Every half hour, a radio operator aboard the plane flashes back to the home port the Clipper's position and a weather report.

Exact fulfillment of the flight plan, the be-all and end-all of airline operation as the surest means to safety, is

facilitated by the careful subdivision of activities on the flying Clippers.

Much too large for the three-man crews familiar on the domestic airliners, the flying Clippers will be manned by Pan American's basic five-man crews, plus several junior flight officers. Though the passenger may see only two stewards, above him on the flight deck will be working at least six or seven men at a time.

Engine performance, in accordance with the flight plan, will be watched by a flight engineer and one or two assistants. Navigation is the duty of the pilot members of the crew, with principal responsibility delegated to one man; operation of the Morse radio transmitters and receivers is the duty of a specialized radio officer. Two pilots will be up front. Coordinating their activities is the master. And his primary job is to bring his ship home—in line with the flight plan.

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## PSYCHOLOGY

## Old Folks Need Clubs For Happy Adequate Life

THE THREE ages of man are childhood, the working and child rearing years, and old age.

In the world's handling of the first three score years, striking progress has been made. School and home take care of about the first twenty, and there is prospect that in the coming years, nursery schools for those 2 to 6 will find wide usage to preface happily the schooldays of the present. For adults, social security is being attempted and parenthood is being made more intelligent.

With the coming of the pleasant evening of life, the years that begin at 60, 65, or 70, depending upon circumstances, perhaps the most difficult period of life begins, an interval for which our community is not well equipped.

Old age is a new phenomenon on today's scale. When mankind was young, a person of 40 was old. The rigors of life, disease, war and privation solved the old folks problem. Never before in history were there so many above 60 as now. And our population is aging. In ten years more than a tenth of our population will be over 60. There will be more of these old folks than children under six.

A critical time of life comes when the children leave the parental nest to

establish their own homes. How disappointing it often is to achieve affluence, build the dream home, only to find that with the children gone they do not need it. Nor is financial security the complete answer. Prestige and desirable social setting are more important.

What the world really needs are clubs for old folks, not institutions like the average home for the aged and poor farms, but voluntary residences as respectable as Florida and California havens for the elderly rich. They should be much more socially and intellectually adequate, tuned to after-sixty problems as scientifically as nursery schools handle the preschool problem.

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