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WWW.CHROMEHOVES.NET *Mission for Defense*



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Personal copy for: *A. Peck*

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The installation and testing of the Titan launching system is AMF's biggest single national defense assignment. Each one of us is an important instrument for accomplishing this task. It is a difficult assignment, exacting many personal and organizational sacrifices. We are making them because we know the job must be done.

The work must be done quickly and with full respect for the taxpayers' dollar, but we will not compromise on quality or reliability for mere speed. Our survival as a nation depends, in great measure, on Titan systems that will operate flawlessly should the need arise.

This book is about the Titan launching system, what it is and what it means.

It expresses my concern over the need for an increased sense of *reverence* toward the combination of power and perfection that is essential to an operational Titan system.

Here, also, is some information about the training program we have developed to make certain that every man associated with Titan knows his job, and to insure that this vital part of our nation's defense will be instantly ready when we need it.

 President



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The defense of the United States is based on a powerful striking force to deter enemy aggression. It depends equally on the alertness and skill of the men who operate and command that force.

America's modern defenses consist of several highly complex and powerful firing devices.

The B-52 is presently a standard firing device for national defense. It is an elusive launching system for the Skybolt air-launched missile, permitting rapid reaction to any attack while still retaining recall capability.

The men who man the B-52 operate with a trained knowledge and an instinctive respect for their weapon that makes it a feared and precise instrument of America's deterrent power.

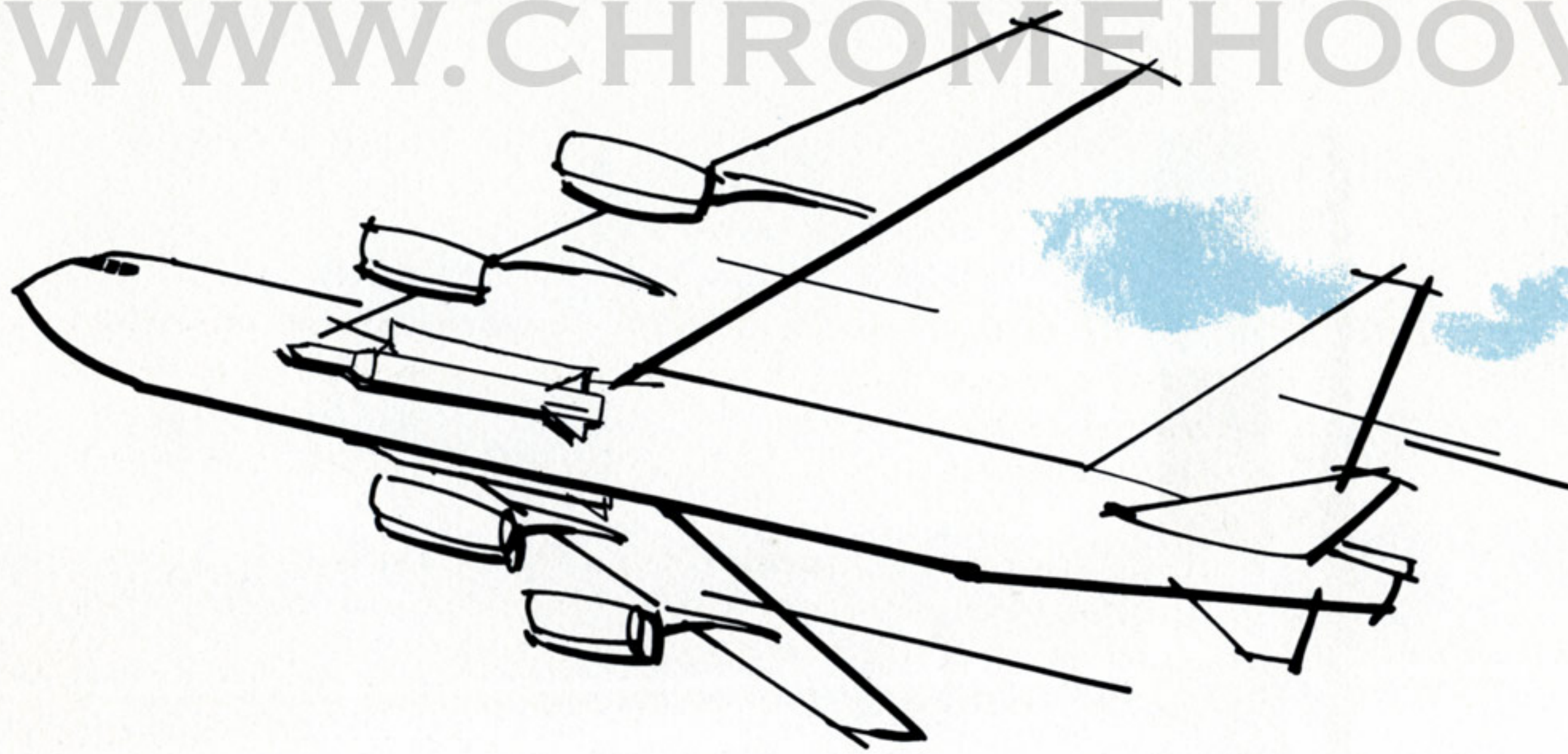
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The Polaris submarine is the first undersea launching device for ballistic missiles. Its ability to move swiftly and for long periods beneath the surface of the sea give it special protection against attack.

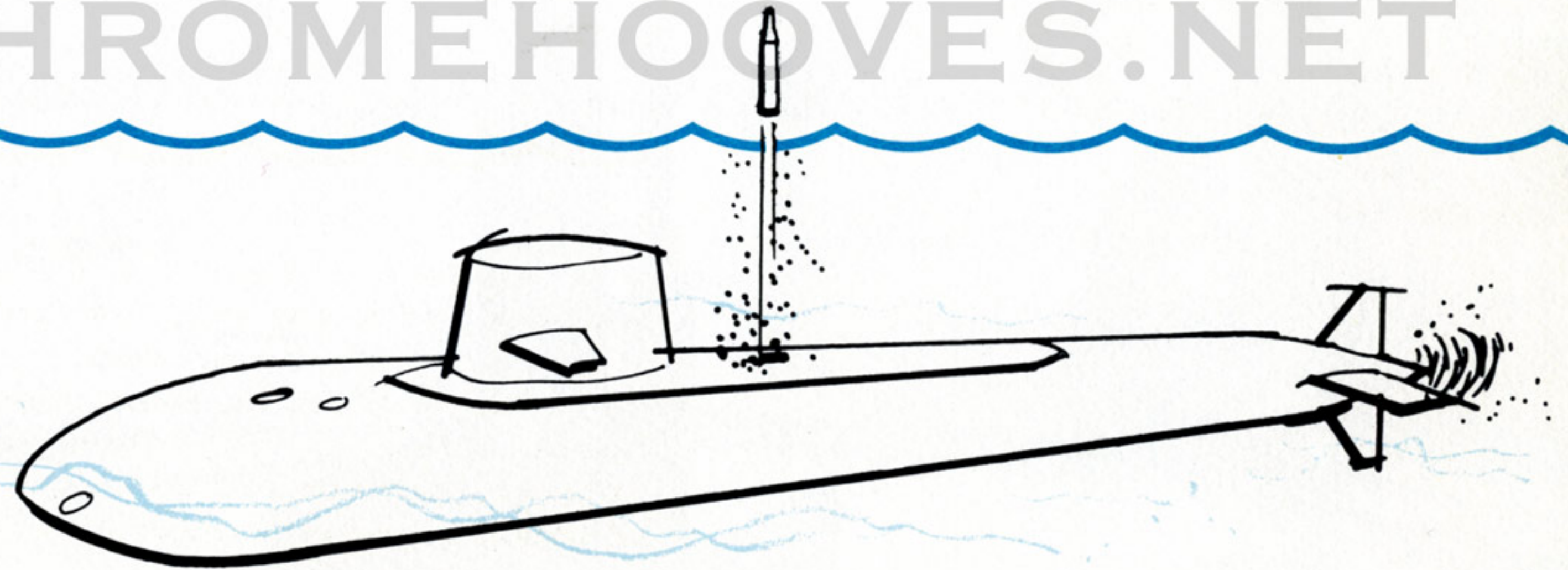
The officers and men of each submarine are responsible for the accurate operation of this sensitive firing device for peace. They know that if they are imprecise or careless, America can easily lose a valued link in its chain of defense and that, like all seamen, they may pay with their lives for their error.

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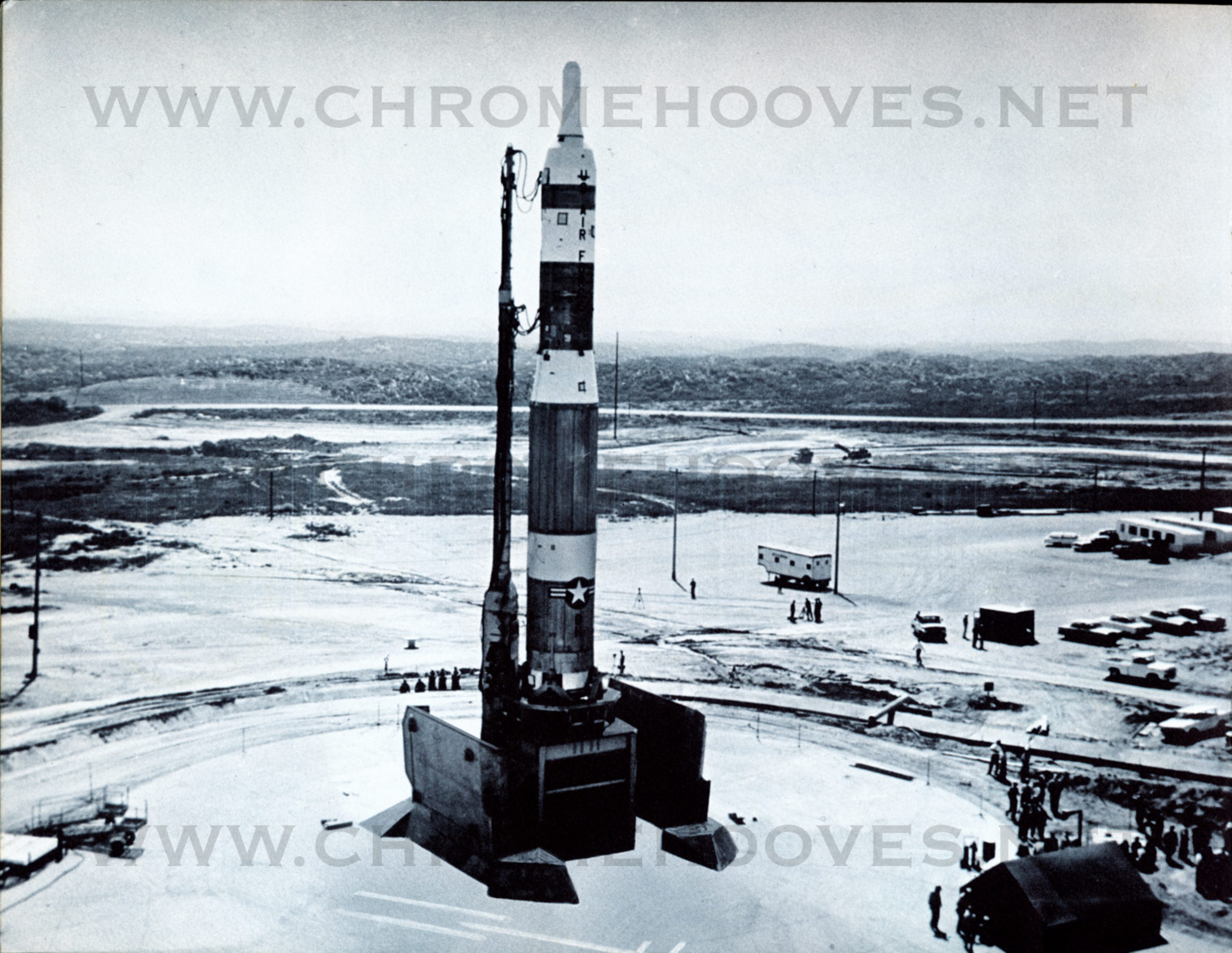


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The massive launcher for Titan, like the B-52 and the Polaris submarine, is a firing device for ballistic missiles.

The Titan launcher system differs from the others in that it is the first launcher protected from enemy attack by placing it underground.

It differs, too, in that it can be mistaken for just another elevator mechanism. Because it is highly automatic, people may think the Titan system does not demand the trained care, efficient maintenance and instinctive awe inspired by a nuclear-armed B-52 or Polaris submarine.

Not so. The Titan launcher has the very same mission and capability as the B-52 and the other firing devices in America's modern arsenal. It can turn its power upon its creators just as surely as can any weapon that is not handled with the respect it is due.

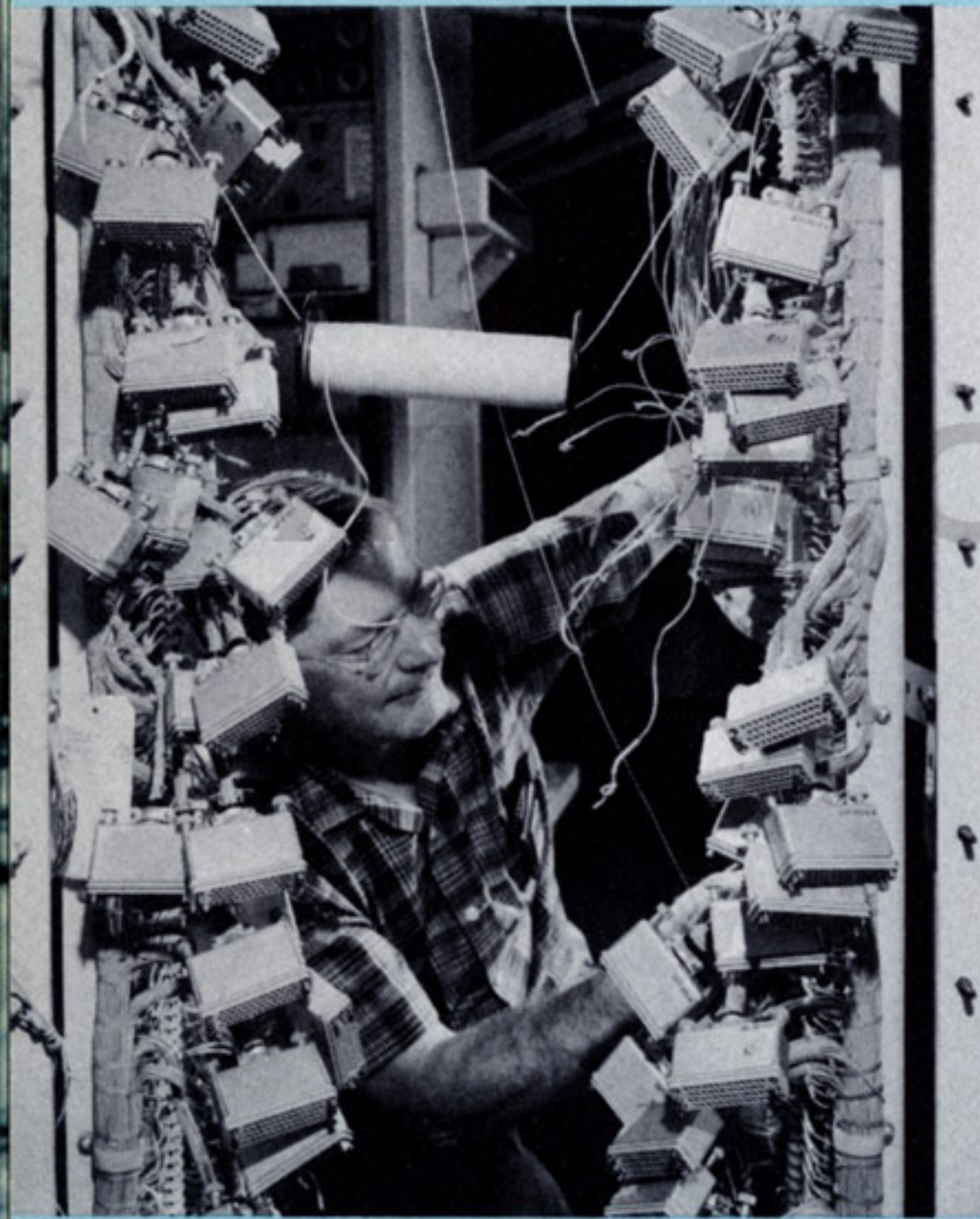
The mission of Titan begins far below the surface of the earth. Raising this massive but delicate missile loaded with explosive liquids, along with its supporting platform and equipment and bringing it to a gentle stop—all in a few brief seconds — requires coordinated power and precise control.

Its movement must be so controlled because failure to rise in the prescribed time may result in firing delays or even an abort condition.

But if the launcher rises faster than its designed speed or decelerates too rapidly, it may upset the delicate balance of fuel and liquid oxygen within the missile, which is a totally unacceptable condition for the performance that must be achieved for the United States Air Force and America.



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A safe and successful system is a proper blend of

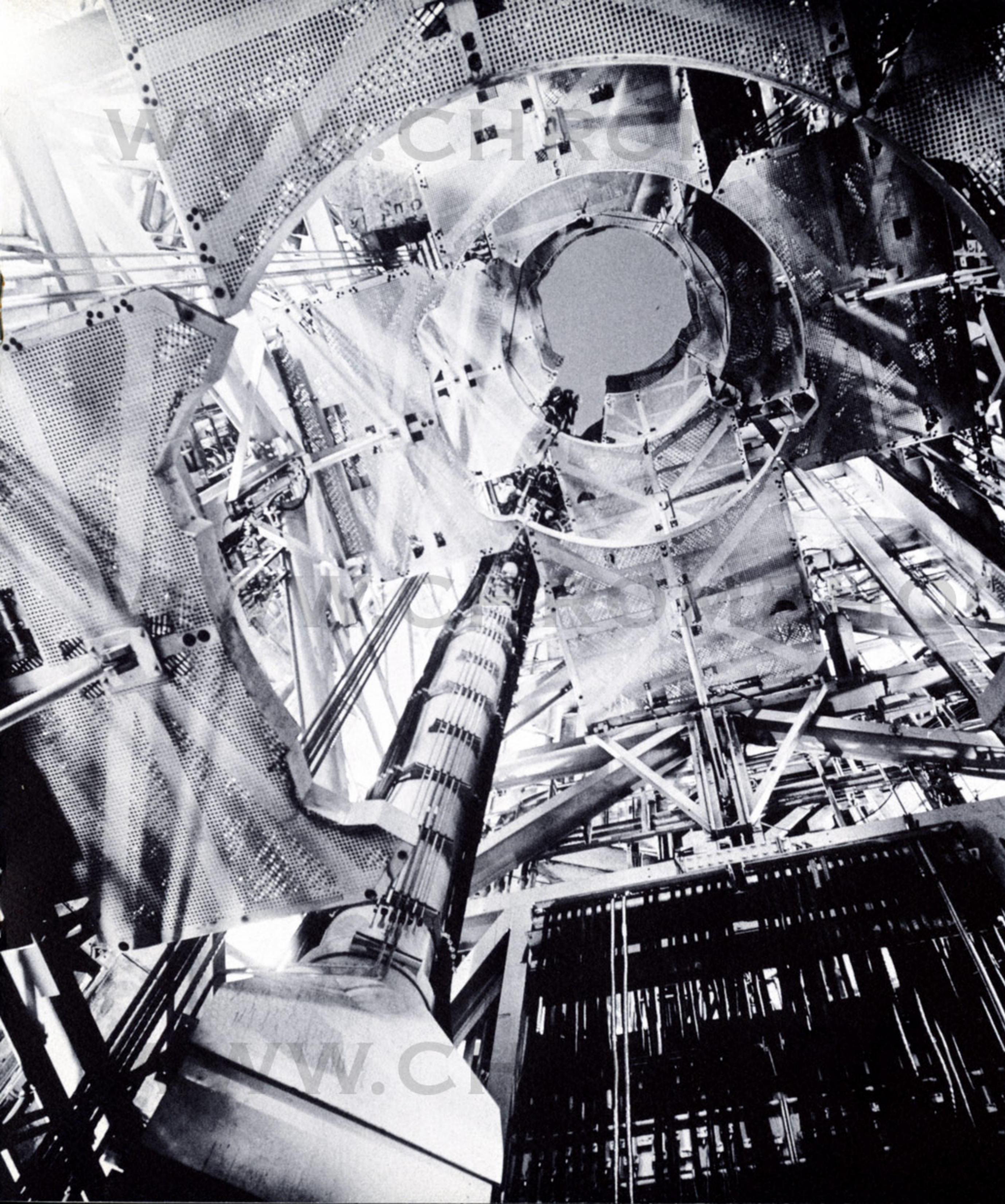
- Equipment engineering to insure system integrity.
- Quality manufacture to translate designs into reality.
- Installation that makes certain that everything goes where it belongs and operates properly.
- Exhaustive test programs leading to fail-safe check list procedures.
- Trained and rehearsed manpower to make all the other ingredients work successfully.

The people who man, test and check out this firing device for its critical job must possess all of the talents, training and motivation of a Polaris crew or a B-52 command group.

Efficient personnel operating with tested procedures will do the job right and maintain America's deterrent power for peace.

To reach this state of training is our goal. We are taking individuals, rehearsing them as crews in dry runs until we achieve quality performance from a weapons system that demands intimate knowledge, constant alertness and unwavering respect.

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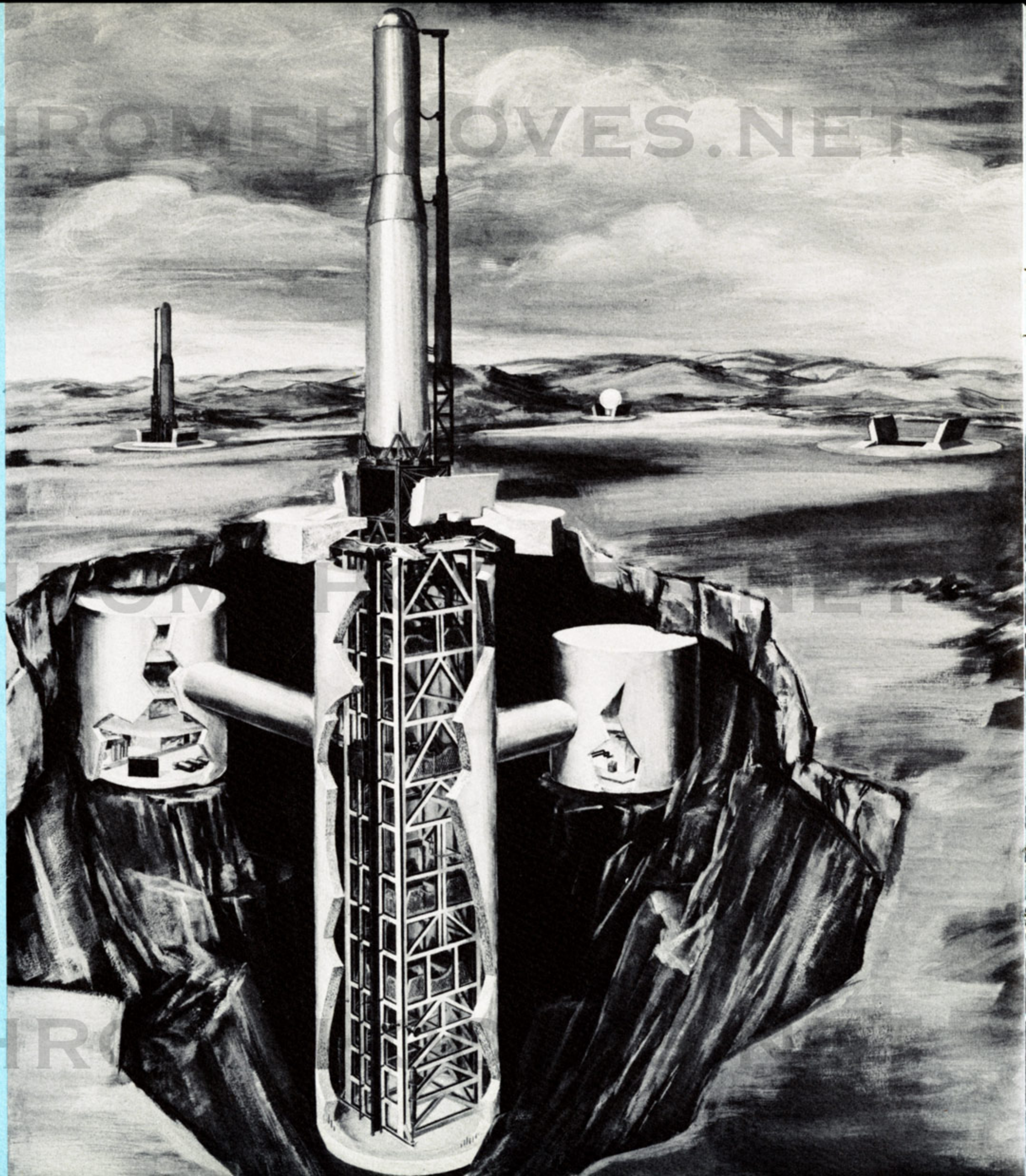
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What is the Titan launcher? The sheer bigness of this 160-foot, fourteen-story structure is difficult to visualize. Consider that to provide protection from a thermo-nuclear attack, a protective silo was built that required enough concrete to make a sidewalk forty-one miles long, the distance from Washington, D.C., to Baltimore.

There is enough steel in the crib structure and launcher platform to build three U.S. Navy destroyers.

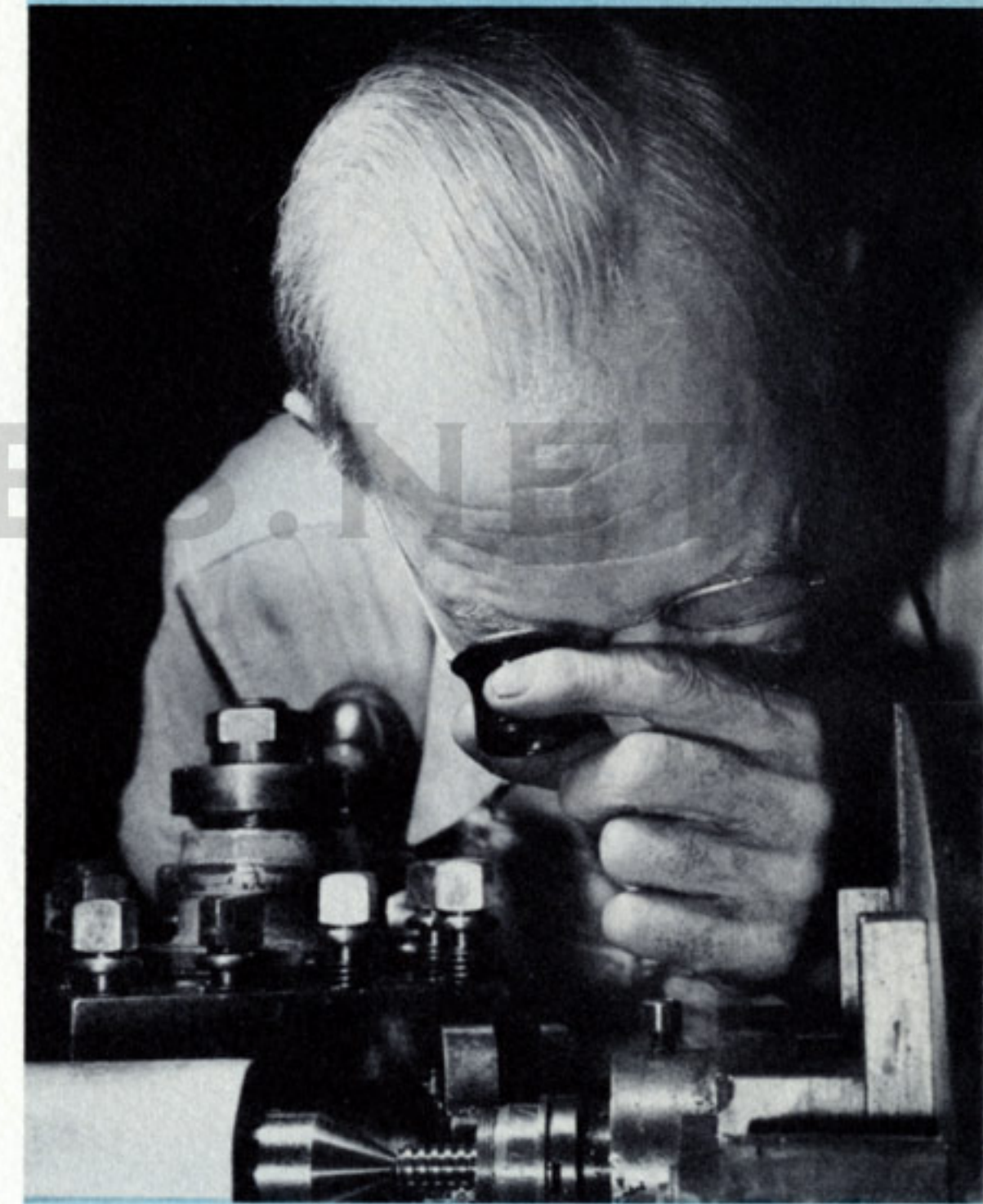
And the silo doors that protect the launcher from overhead blast are three feet thick and weigh 260 tons.

Every part of this system is big and complicated: the motors and pumps which provide the electricity and hydraulic pressure, the complex of tunnels which distribute power and provide access for personnel, the operating mechanisms which raise and lower the launching platform.

It is raw size that provides the brute force needed to lift the massive Titan into launching position.

But, for all its size, this launcher is also delicate and sensitive. It must operate with the precision of a fine watch. The men who test, operate, maintain and check out this powerful launching system must be fully trained as individuals and developed into smoothly operating crews ready around the clock to check out and test this unique device.

The B-52 and the Polaris submarine cannot operate without men who know their jobs perfectly. The life of each depends on how well the other does his job. It is no different with Titan. The man who does not know his job is a danger to his fellow workers and to his country.

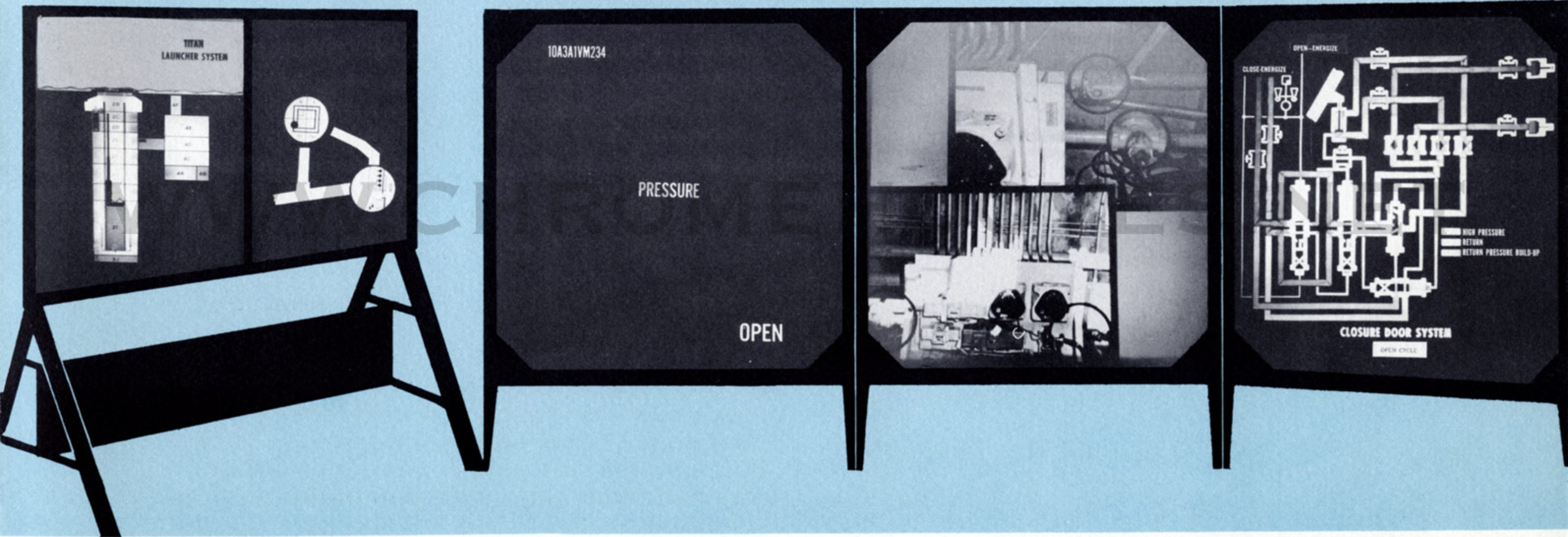


To achieve this high degree of personnel confidence, mutual responsibility and respect for equipment, AMF needed a program with which to train, evaluate and record individual capabilities as well as to reach total team proficiency. Such a program, carried out on the job, would require almost unlimited access to the Titan system itself, a nearly impossible condition.

The Titan Trainer is the device we have developed to accomplish the program with only limited silo access. The Trainer consists of four major elements:

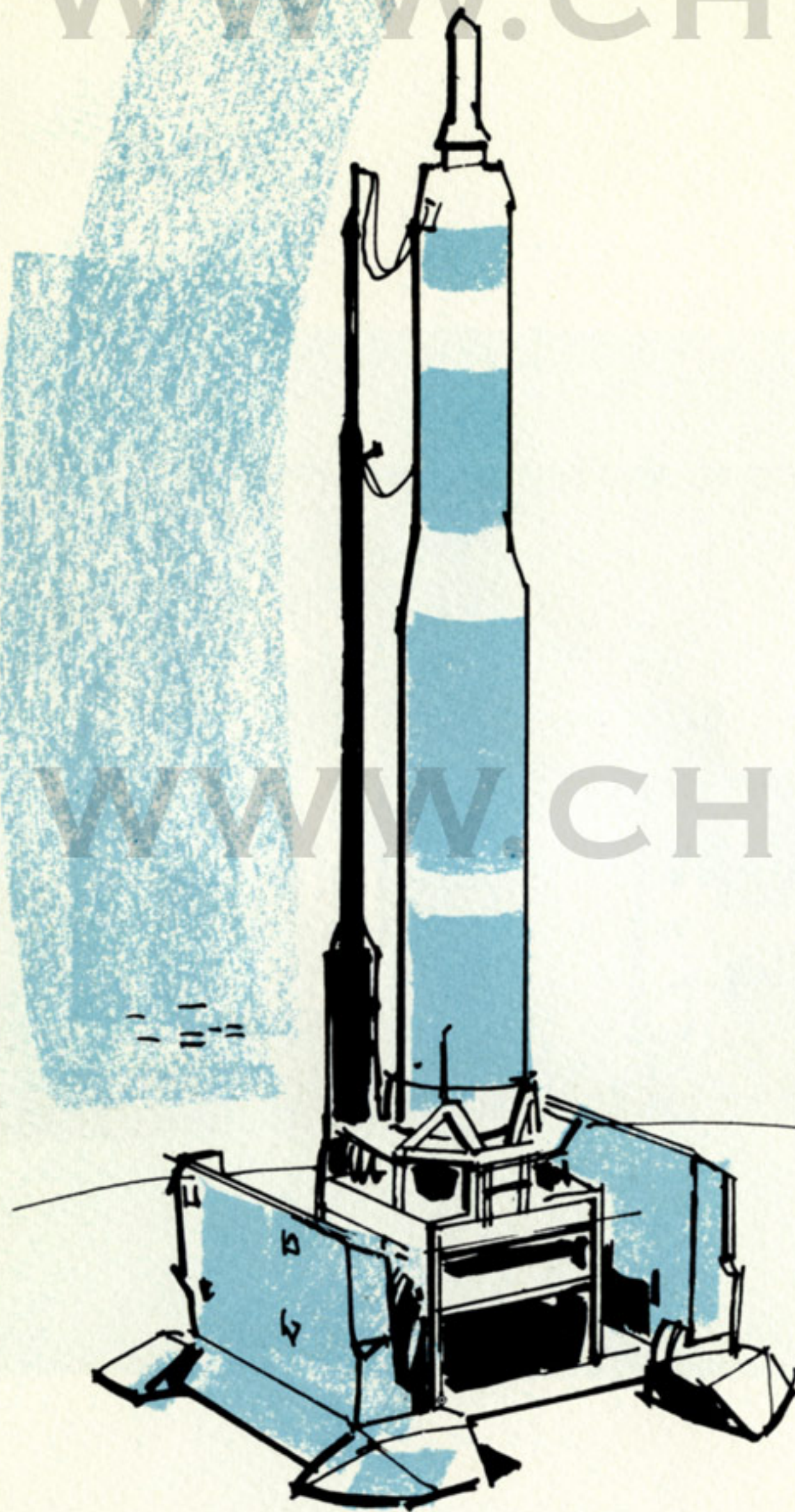
- 1/ The Equipment Locator allows the exact location of specific areas in the silo through a system of lights on a cross-sectional diagram and by markers on a plan view.
- 2/ The Check List Screen, which presents each item of the appropriate check-list.
- 3/ The Test Slide Screen, displaying a grouping of valves of other components from which the individual selects the proper one. An answer control visually verifies this selection.
- 4/ The Flow Diagram Screen on which schematic diagrams of various major sub-systems are displayed for discussion.

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This is a program of concentrated test and maintenance of equipment to insure a state of readiness. Anyone associated with it must realize the importance of team proficiency and instinctive reaction.

Our greatest need is for total team proficiency in operating this system. This need will be magnified as the number of sites and personnel increases.

The knowledge we have gained must be passed on to all who are responsible for Titan, especially to those who did not have the opportunity of growing with the equipment during its early stages of design and test.

It is to this end that we are establishing this program of training, testing and evaluation. We will utilize it whenever and wherever possible. It is one more facet of our effort to completely fulfill AMF'S obligation for a reliable, smoothly functioning system.

Later, it will be the United States Air Force's job to assure itself that in the Hard Titan Firing Device it, too, has complete capability to support its weapons in the field.

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We are counting on You!

Antu Wenzel

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