



**MARTIN MATADOR**—The TM-61B Martin Matador, a new surface to surface guided missile, made its appearance in the President's inaugural parade. It is shown with its launcher and towing vehicle. The latter two vehicles are both of revolutionary design and are capable of carrying the missile and all support and launching equipment to previously inaccessible launching sites.

## MILITARY SCIENCE

## Guided Missiles Display

### See Front Cover

► THE LARGEST public display of the nation's guided missile armory was paraded before President Eisenhower, holiday-free Washingtonians and visiting firemen on Inauguration Day.

With the exception of one weapon, every operational guided missile in America's arsenal appeared in the Inaugural Parade.

In all, 11 different killers were wheeled along the streets from the U. S. Capitol to the White House. Five of these weapons had never before been on public display.

The Army showed off two Nike A's, two Honest Johns, a Redstone and a Corporal. The Navy rolled out for the first time one each of a Terrier, a Regulus, a Sparrow and a Sidewinder.

The Air Force, which joined the missile parade with reluctance, displayed a Matador, a Snark, as shown on the cover of this week's SCIENCE NEWS LETTER, and for the first time, a Falcon.

As reported by the American Ordnance Association, this is what each missile can do:

The Nike is a surface-to-air missile, liquid-fueled and supersonic. It intercepts and destroys enemy targets coming from any direction regardless of evasive action.

The Honest John is a rocket that is fired from a mobile launcher. It is a surface-to-surface weapon.

The Corporal is a surface-to-surface wea-

pon that can be equipped with either atomic or conventional-type warheads. An all-weather weapon, it is propelled by liquid fuel at supersonic speed.

The Redstone, another surface-to-surface missile, is described as the largest successful U. S. ballistic guided missile.

The Sparrow-I is an air-to-air missile powered by a solid propellant to be used against attacking jet bombers and fighters.

The Regulus is a surface-to-surface missile resembling a swept-wing jet fighter, designed to be launched from submarines, surface ships and shore bases.

The Terrier is a surface-to-air, slim, needle-nosed, supersonic and all-weather missile. It intercepts planes at longer ranges and greater altitudes than conventional anti-aircraft.

The Sidewinder stands a little taller than an average man and is cheap to make. It is an air-to-air weapon.

The Matador, a surface-to-surface killer, is a subsonic, tactical jet powered missile launched from a roadable launcher.

The Falcon is an Air Force air-to-air power punch that is an electronically fired and guided solid-propellant missile. Launched from an airplane wing, it "homes" in automatically on a target at supersonic speeds.

The Snark is a long-range strategic missile powered by a turbojet engine. One like it was recently lost somewhere over Brazil.

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## MEDICINE

## Adrenal Hormones Help Tear Down Aging Body

► THE AGING human body is torn down by one of the same glands that helped it grow, Dr. Harry Sobel, University of Southern California School of Medicine, reported to a conference on constructive medicine in aging, sponsored by the Wm. S. Merrell Company in Cincinnati.

The adrenal gland produces a variety of hormones that affect the entire body and the aging process, Dr. Sobel said. It produces both male and female sex hormones as well as hormones that both build up and break down human tissue.

These building and breaking hormones are constantly working against each other, and as a normal person ages, there is a shift in balance between the two.

The hormones that break down tissue are the ones that tend to predominate in older age, he said.

In a three-year study of over 500 patients, Dr. Sobel and co-workers found definite hormone changes in heart attack cases.

"Our studies found a substantial drop in female hormone excretions as measured in the urine of both men and women who had experienced heart attacks. We feel it is more probable that the female hormone deficit existed before the heart attack," Dr. Sobel reported.

The study also showed that chronically ill patients have the same hormone secretion characteristics as do persons who are much older. As an index of age and condition of the adrenal gland, he suggested measuring the relative quantity of hormones secreted in the urine.

Dr. Sobel was assisted in the study by Drs. Oscar Madgison, Frederick Moore, Jack L. Lewis and Jack Bernstein, under the direction of Dr. Jessie Marmorston, University of Southern California.

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## TECHNOLOGY

## Univac Rental to Aid Small Businessmen

► SMALL businessmen with big problems can now rent time on a new Univac computer.

This electronic "brain," designed to aid firms unable to buy their own Univacs, was dedicated at the Franklin Institute in Philadelphia. It will become part of the Franklin Institute Laboratories and will be used in research for private clients.

The Univac was installed by Remington Rand, Inc. It is similar to models the firm has turned out for large corporations in recent years.

Opened to the public at the Institute was another Remington Rand installation, a "Progress of Computation" exhibit. This uses graphic displays and mechanical devices to trace the history of computing devices.

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