

ROCKETS AND MISSILES

Student Rocket Facility

► THE FIRST AMATEUR ROCKET static firing stand to be built under an Army engineer officer's nation-wide student rocketry safety program will be erected near Washington.

The safety facility, designed to spot unsafe rockets before they are launched in the open, will be constructed with public funds by high school students of Fairfax County, Va., Neal Shedd, county schools supervisor of science, told SCIENCE SERVICE.

The suburban Washington test stand is the first of many expected to be built throughout the nation during the coming year under a plan sponsored by Lt. Col. Charles M. Parkin, Jr., Army Corps of Engineers, Ft. Belvoir, Va.

Plans and specifications for the steel and concrete static firing stands were drawn up and tested by the veteran engineer officer. He has recently been waging an intensive off-duty campaign for a national student rocketry program that will "allow high school students to pursue their interests in the field, but at the same time will protect them and the general public from the possible dangers of indiscriminate rocket firings."

The crux of Col. Parkin's program, being

tried in the Metropolitan Washington area on a pilot basis by the national capital section of the American Rocket Society, is the steel and concrete bunker in which a student rocket is fired while fastened firmly in place.

Measuring devices within the firing chamber record valuable data for the students "even in the case of those rockets that explode, although the primary purpose is to weed out the dangerous rockets before they can be launched into the air from supervised, approved launching sites," Col. Parkin said.

Fairfax County school administrators expect the safety stand to cost about \$1,200, with high school students to be paid for labor and reserve Army Engineer Corps personnel residing in the area "probably to be paid for technical consultation," Mr. Shedd said.

"The facility has been requested repeatedly by our science teachers," he added.

The plans and specifications, which already are in the hands of education and civic groups in many communities, are available at no charge from Lt. Col. Parkin, G-3 Section, Ft. Belvoir, Va.

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Vanderbilt University, reported. He spoke at the American Association of Plastic Surgeons meeting in Dallas.

However, the victim must remember to keep the amputated part of the finger. Dr. Douglas suggested wrapping it in tissue before heading for the hospital.

Seventeen such cases have been reported, all successful, partially because of the prompt action of the amputees. The severed tissue must be re-sewn as soon as possible to insure success, Dr. Douglas said.

Bleeding, in such accidents as these, should be controlled by tourniquet only, Dr. Douglas reported. Corrosives like iodine should not be placed on the open wound. Careful handling of the delicate tissue and extremely accurate sewing of the parts are essential. Dr. Douglas reported that he used magnifying glasses to match up fingerprint lines and small notches of the finger.

Dr. Douglas said that extremely accurate alignment of the amputated portion of the finger allows quick renewal of the blood supply. The finger, he added, is an area of terminal circulation. Fresh oxygenated blood need travel only a small distance in the finger to supply tissue needs.

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ASTRONOMY

Moon Changes Color

► THE MOON changes color as it moves across the sky. It is greener at lunar sunrise than at sunset, and greener when it is at young crescent phase than when it is full.

The moon would appear much more colorful than it does if it could be seen without the interference of the earth's dancing atmosphere.

The colors are probably due to the intrinsic coloring of the rocks or surface deposits, not vegetation.

These are the conclusions of V. Axel Firsoff of the British Astronomical Association, made after studying several hundred observations of the moon through special filters that allow only one narrow band of light to reach the eye.

These filters, called monochromatic, also reveal slight differences of hue and allow the observer to make distinctions between seemingly identical whites, grays or blacks. The white of snow, for instance, Mr. Firsoff reports in *Sky and Telescope* (May), is not exactly the same as that of quartz or magnetite.

Lunar colorings are generally faint, but they can be seen by careful observers. One of the most definitely colored areas is a diamond-shaped stretch northeast of Aristarchus, one of the brightest of the lunar craters, in the northeast section.

This is how Mr. Firsoff said the moon would look when viewed through filters of different colors:

In red, the maria, or seas, are dark and

the general picture of mountains and valleys is clear at the terminator, the line between the dark and light portions of the moon.

With a yellow filter, the seas are generally paler and the contrasts of light and shade are not as noticeable.

A green filter brings out all the bright features, especially the rays from Tycho, the crater near the moon's south pole from which radiates the longest and most conspicuous ray system.

In blue light, the terminator's features are dull, some of its highlights being barely distinguishable.

In violet light, the whole picture is quite dull, details on terminator being visible only when the moon is very high in a clear sky. Some of the regions bright in blue light appear slightly hazy, as though seen through a luminous veil.

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SURGERY

Save Sliced Finger; Have it Sewed Back

► A FINGER TIP accidentally cut off can be successfully sewn back to the digit if the victim seeks immediate surgical help.

Accident victims can be spared the necessity of further skin grafting operations and of going through life with a shortened finger, Dr. Beverly Douglas of the plastic surgery division, department of surgery,



MAN-MADE CACTUS—Spot lights and a hot air blower melt the paraffin mold from a model of a cactus that became part of the three-dimensional giant cactus forest exhibit in The American Museum of Natural History's new Hall of North American Forests.