



PARK PRACTICE

VOLUME 13
NUMBER 6

Grist





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THE NATIONAL CONFERENCE ON STATE PARKS, INC.

DEPARTMENT OF THE INTERIOR, National Park Service

NATIONAL RECREATION AND PARK ASSOCIATION



GRIST--What, Why, and How?

GRIST is a means of exchanging ideas and practices among its contributing subscribers--men and women from local, state and federal government agencies, colleges and universities, and others both foreign and domestic who have the common interest of parks and recreation. In spite of the varied mailing addresses, GRIST's subject matter is aimed primarily at field operating personnel, offering time-, labor-, and money-saving devices (tricks-of-the-trade) and other appropriate information. Each idea presented has been used to advantage by its contributor and is passed on to the GRIST readers to use or modify to suit their needs.

Many times ideas are contributed with only slight changes and arrive in our office chronologically to suggest influence of one idea upon another. We hope this is the case for there is greater good in suggestion, in a teaser to start employees thinking, and in the development of original solutions then in setting standards or advocacy of a single "right" solution. Its these changes our subscribers check out when they develop their own devices.

Three times each year, GRIST carries an 8-page issue of PLOWBACK which contains stories on techniques and devices for which National Park Service employees have received incentive awards. All articles deal with park and recreation subjects and are as informative and useful as are those items which appear in GRIST.

GRIST does not carry advertising matter, however, it does occasionally run articles telling park and recreation people about new products and processes that will result in better serving of the public or will result in a saving of manpower or money.

To make GRIST even more useful, a ten-year index covering the first ten volumes was published early this year. Now, old ideas can be located quickly and used. Some are as useful today as when they were printed 13 years ago.

To join the Park Practice Program and obtain copies of GRIST for the first year and for four previous years the cost is \$10.00 and \$3.50 renewal each year.

(This comes to you neatly bound in a heavy vinyl binder with room to collect future issues.) Each additional subscription to GRIST purchased by a participant in the Park Practice Program for within-organization distribution and sent to the same address as the first copy will cost only \$1.00 a year. (Binders available \$3.75 ea.)

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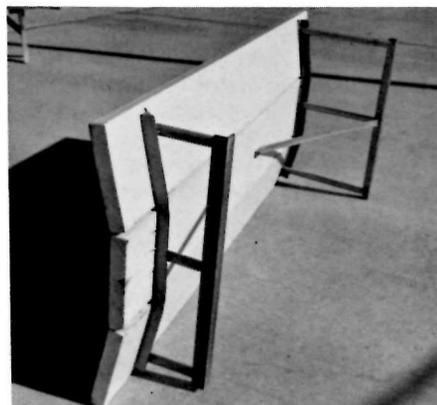
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or just write to the National Conference for information and free samples of the Park Practice publications.

-Ed.

COLORFUL SUNNING BOARDS

Superintendent Wilbert C. Schmidt, Elmhurst Park District in Illinois, says that the sunning boards shown here are a bit heavier than available commercial boards, but this is an advantage because it discourages moving them around. The boards are yellow pine on angle iron and flat steel supports. They are painted gay colors which brighten up the pool area. Material



for each board costs a little over \$13, and requirements are as follows:

3 pcs.	2"x10"x6' yellow pine
9 ft.	1 1/2"x1/8" angle iron
8 ft.	3/4"x1/4" flat steel bracing
6 ft.	3/4" pipe
14	2 1/4"x1/4" carriage bolts wood preservative paint

OPENING CARDBOARD CARTONS

Broken finger nails, from pulling and tugging, frequently upset the usual calm of Don Black's secretary when she struggled to open a well-sealed cardboard carton, until Don showed her an easier way.

Since razor blade or knife openers often damage carton contents, not to mention the person using one of them, Don suggests using a claw hammer. Prepare to open the carton on the side which is glued. (The hammer will open flaps that are held with metal staples, but partially open staples are a hazard to hands and arms.) Place the claw hammer at an angle across the flaps for best leverage.

Containers for mimeograph paper and NPS brochures usually have an open slot that makes them easy to open with a hammer.

The air is clearer at Joshua Tree National Monument and the highly polished fingernails are intact.

In these times of austerity, high cost, inadequate help, the need is very great indeed for the exchanges of GRIST ideas. Look around you. Have you developed a new way of operating in your area or a better gadget that you think others in the same business would like to hear about? If so, please send a quick diagram or description, a photograph if possible and credits to:

Chief, Division of Park Practice
1100 Ohio Drive, S.W.
Washington, D.C. 20242

We will take it from there. Thanks.

PARK PRACTICE GRIST

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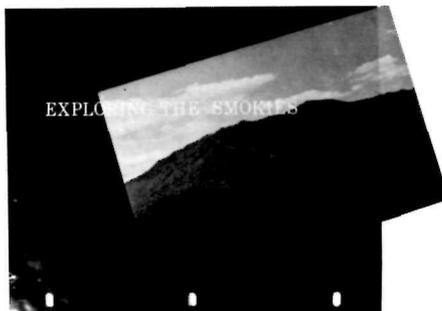
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Speaking of Interpretation -

QUALITY SLIDE TITLES

Slide titles of professional quality are being made at Great Smoky Mountains National Park by Assistant Chief Park Naturalist Edgar P. Menning in a quite simple way.



1. Obtain a series of 5x7" postcards of various park views. Obtain permission to photograph them.

2. Place titles on document protectors (GSA-7510-286-1407), using "Deca-dry" Instant Lettering. (Example Century School Book White, 36 pt.—Chart-Pak, Inc., 5536-CL.)

3. Place selected postcard in the document protector, arrange the title pleasingly and mount on easel.

4. Take photograph with single lens reflex camera mounted on a tripod. (You can use various macrophotography units available for closeup work.)

Variety can be obtained by changing the postcard background, using the same title.

GEOMETRY LESSON IN THE WOODS

"How tall is that tree?" At Grizzly Creek Redwoods State Park in California, they have made it possible for the visitor to answer his own question.

By sighting along an arrow pointed toward a giant redwood top and measuring the distance from base of the arrow to base of the tree, park visitors can compute the height of the redwood. The computation uses the theorem that a 45-degree right triangle has two equal sides. The distance from the base of the arrow to base of the tree (equal to height of the tree) is marked off at 10-foot intervals, using highway pavement markers. The arrow is set at a 45-degree angle with the ground and point of ground measurement beginning.

A sign near the directional arrow states: "In a 45-degree right triangle, for every foot of run there is one foot of rise." Also a simple instruction: "There are markers every ten feet—count them and determine tree height."



State Park Ranger Jerry Hayes, designer of the tree measuring device, reports that frequently a young lad is seen, with dad in tow, explaining the geometry lesson just learned.

This is our country. All we have and all we are we owe to it, so let us think more of our duties and obligations than of our rights and privileges.

—Richard Lieber

TWO-FAUCETED WHARF HYDRANT

Wharf hydrants for fire protection are numerous throughout Benicia State Park in California, and in the same area there was a need for garden hose outlets. Adolph Seeger, park attendant, saw a way to save time, money, and material

Instead of attaching a pipe at the base of the standpipe of the wharf fire hydrant (the usual way), he found that the saving could be made if the cover plate of the hydrant were tapped, threaded, and a 3/4-inch hose faucet inserted.

In case a fire hose is needed, the top valve is closed, the cover plate (with faucet) is removed, and the fire hose attached.



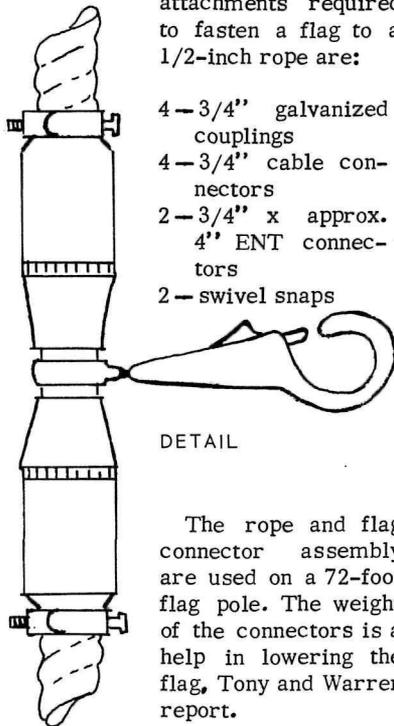
LET THE FLAG FLY FREE

A device allowing swivel action in two directions permits free movement of a flag at all times and prevents it from becoming twisted around the flag rope. The suggestion comes from Tony L. Reaves, laborer and Warren H. Gillespie, caretaker, Andrew Johnson National Historic Site.

The parts were obtained at an electrical shop except for the snaps which were purchased at a hardware store. Half-inch twisted plastic rope was used. The rope slips through the connector assembly and is held in place by screw clamps.

Material for the two attachments required to fasten a flag to a 1/2-inch rope are:

- 4—3/4" galvanized couplings
- 4—3/4" cable connectors
- 2—3/4" x approx. 4" ENT connectors
- 2—swivel snaps



DETAIL

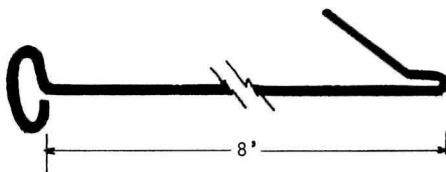
The rope and flag connector assembly are used on a 72-foot flag pole. The weight of the connectors is a help in lowering the flag, Tony and Warren report.

Good Citizenship is inculcated by giving attention to history.

—Kansas Supreme Court

BUOY CHAIN HOOK

When they wanted to haul in a cement buoy anchor at Clear Lake State Park in Michigan, they always made a dive for the chain. Supervisor Donald L. Jones elim-



inated that dunking (which wasn't exactly his idea of fun and games if it didn't happen to be swimming weather) by designing the hook shown in the sketch. Don finds several other uses around the park for the 8-foot long hook.

FLAMMABLE FABRICS
FATAL TO FIREFIGHTERS

Some of those new fabrics which are such work savers for Mom are hazardous for anyone likely to come in contact with a source of ignition. Most obviously that applies to firefighters. Cases have been reported of firefighters suffering serious and even fatal burns which resulted from the flaming and melting of garments they were wearing.

The problem fabrics are reported as having been synthetics or thermoplastics, used either alone or in combination with other materials. They are commonly referred to as permanent-pressed, or no-iron fabrics. On contact with an ignition source these fabrics can either burn or melt, or both. In one case a pair of pants ignited, burst into flames and melted into a hot, sticky substance which caused deep burns. This sticky melted substance will not knock loose when slapped with the hands, in fact, it sticks to the hands, severely burning them as well.

Plain cotton and wool are flammable, of course, but neither will melt. Mixed with the no-iron synthetics, however, they may be hazardous.

Thermal insulated clothing, now worn so frequently by outdoor workers, is similarly hazardous since it is usually constructed of quilted layers of synthetic fabrics. Some of these garments have been made of materials which have been given flame-retardant treatment. This will not prevent the fabric from burning or melting when it is in contact with a source of ignition, but it will stop the burning after the source of ignition has been removed.

After a number of their fireguards who had been wearing these flammable, meltable fabrics had been seriously burned, the California Division of Forestry prohibited the wearing of any no-iron, permanent-press clothing. Safest thing for a firefighter then is to wear all cotton or all wool garments.

This article is based on information in NPS National Capital Region Safety Message No. 6903.

NEW LIGHT ON TRASH CAN SHEDS

They sounded just fine, those Gettysburg trash can sheds described in the May/June 1968 issue of GRIST. Time proved that all the advantages listed did exist, but it also showed up some disadvantages, and the people at Gettysburg National Military Park think that GRIST readers ought to know.

Superintendent George F. Emery writes that maintenance cost was high because the wood was subject to a number of kinds of damage and deterioration. The sheds have been replaced with a heavy duty metal container available from commercial distributors.

The Jackson litter receptacle, made of

an aluminum alloy, is said by the manufacturer to resist corrosion for years, and to be exceptionally strong and durable. The designer and manufacturer is Jackson Company, P. O. Box 2731, Pomona, California.



George says the containers, painted green, are serving their purpose exceptionally well, and they think they are about the neatest appearing trash receptacles they've seen.

OUTDOOR CIGARETTE AND
ASH RECEPTACLES

Eight-inch terracotta sewer pipe was used to make the outdoor cigarette and ash receptacles shown in the photograph. Maintenance man Walter J. Luby, Everglades National Park embedded them in hexagon cement bases, filled them with sand and placed a round piece of hardware cloth across the top.

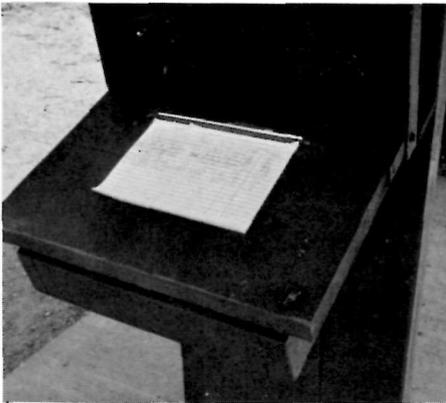


At Everglades the receptacles are used outside buildings and along park nature trails. Walt suggests that they be painted a color which will conform with the surroundings.

Vandals aren't likely to walk off with the receptacles—they weigh 150 pounds! They are inexpensive, too—cost about \$12, including pipe, cement, paint, and labor.

A POINT TO REGISTER

It's frustrating for a visitor to open a trail register box and find that the pencil point is completely worn down or broken. If he has his handy Boy Scout knife or a ball point pen, it's no sweat, if not, he can, beaver like, gnaw on the end, or more likely, just not register. You can't keep a ranger running back and forth on the trail with sharpened pencils, and no way seems yet to have been devised for chaining, bolting down, or otherwise vandal-proofing a pen. But there is a simple solution—so simple that Jon F. Haman, district ranger, Hovenweep National Monument asks you not to be insulted that you didn't think of it.



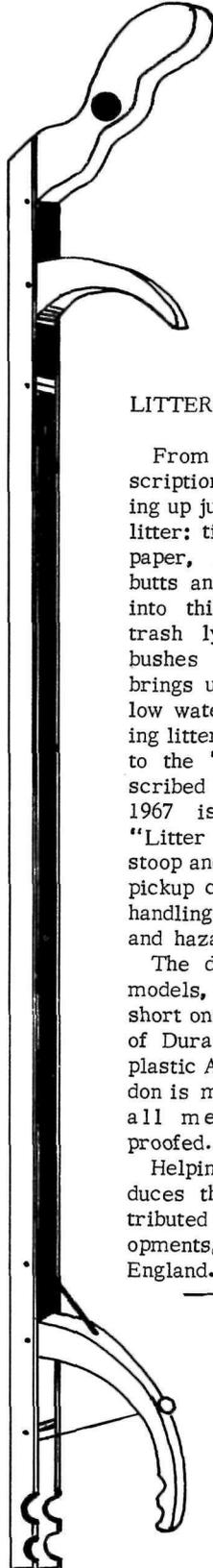
At Hovenweep, to prevent nonregistration from the no-pencil-point syndrome, they supply an inexpensive plastic, school box type pencil sharpener at each registration box. The sharpener has a hole through which goes the rivet which holds the blade and through which it can be nailed or screwed to the registration box. The sharpener is tilted down so that shavings and graphite fall to the ground and are quickly tromped into the trail and back to Mama Nature. A sharpener cost five cents, and if it wears out, is broken, or stolen, it is simply replaced.

CAMPGROUND WHO'S WHO

Registered campers at Proud Lake Recreation Area in Michigan, don't have to stop at the contact station when returning from an off-campground errand or expedition. That is, they don't if they display an identification card, given to them at the time of registration, so that it is easily visible to the on-duty ranger, enabling him to know who's a camper and who's a visitor.

This eliminates an annoyance to the camper and saves the time of the ranger for attention to the unregistered visitor.

H. B. Guillaume, Parks Division, Michigan Department of Natural Resources and R. Palowoda, assistant park supervisor, Proud Lake, passed along the idea.



LITTER PICKER

From England comes the description of a device for picking up just about every kind of litter: tin cans, broken glass, paper, rags, even cigarette butts and matches. It reaches into thick grass, pulls out trash lying under scratchy bushes or stuck in hedges, brings up objects from shallow water, or snatches floating litter. Similar in principle to the "Picker Upper" described in the July/August 1967 issue of GRIST the "Litter Picker" takes the stoop and bend out of the litter pickup chore and most of the handling of dirty, unpleasant, and hazardous trash as well.

The device comes in two models, one 32" long and a short one 26" long. It is made of Duralumin and a tough plastic ABS. The Everlast tendon is made of terylene, and all metal parts are rust-proofed. It is light and strong.

Helping Hand Company produces the tool which is distributed by Battenhurst Developments, Sandhurst, Kent, England.

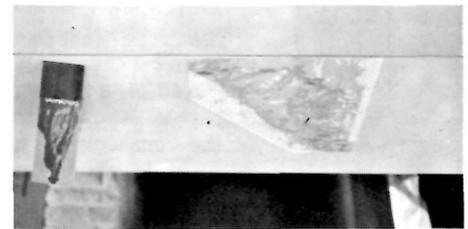
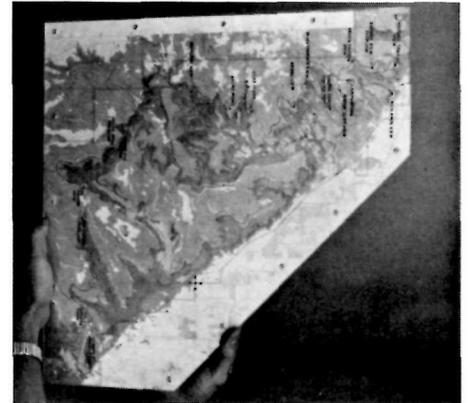
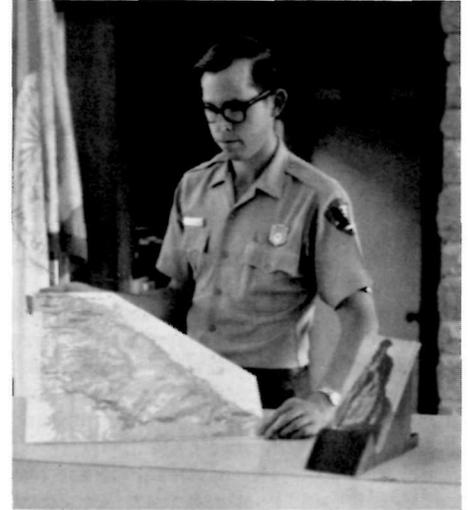


PLEXIGLAS-PROTECTED

PORTABLE MAP

Here is a variation on the many different ways of protecting maps which receive constant handling or which are displayed for visitor convenience and information.

Seasonal Park Naturalist Donald G. Hill, Colorado National Monument suggest placing the map between two pieces of 1/8" plexiglas fastened together with 1/4" pop



rivets. To avoid scratching surfaces, the rivets should be countersunk 1/16". The plastic can be trimmed with a fine toothed saw, and the edges are easily smoothed with sandpaper.

As the photos show, maps so protected are easily handled, portable, and attractive.

VANDALISM—READ ALL ABOUT IT

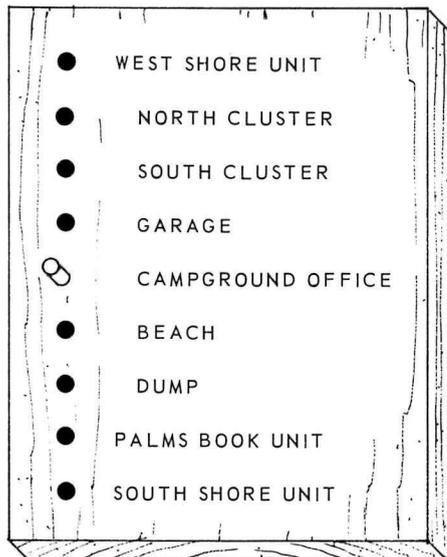
A real vandalism problem in your area? You'll find the shocking damage to park features, and all the rest of the "tear-it-up" syndrome, well described in a new paperback, "Vandals Wild", by Joseph W. Bennett. A few copies on your counter might help the public understand the problem and win some support for efforts to stamp out vandalism. Single, paperback copies cost \$2.95 each (cloth, \$5.95), but a 40-percent discount is offered for 5-99 copies. Order from Bennett Publishing Company, 8905 SW 57 Ave., Portland, Oregon 97219.

PHILLIPS SCREW DRIVER SUBSTITUTE

If you need a Phillips screw driver, just don't happen to have one in your hip pocket, and there's none within hiking distance, try a 10-penny nail. Frank Gawne, assistant supervisor, Clear Lake State Park in Michigan, has found that a 10-penny nail can be used for a small screw or a 20-penny spike for a larger one. If pressure is needed, bend the nail or spike to a 90-degree angle near the driving end for best results.

CAR NUMBER 10 WHERE ARE YOU?

At Indian Lake State Park, Michigan, there is a peg board fastened to the outside of the office building where the duty ranger reports before beginning his day's field work. On the board, in letters large



enough to be seen from the entrance road are the names of all of the locations where he might be working. Before departing for the work location he places a peg along side the name of the area.

William R. Manning, assistant supervisor, says that this saves much driving at Indian Lake where the three units which they supervise are widely scattered.

SO LONG MULE

Obsolescence may have come to the American mule, brought on by a two-wheeled truck which, like the mule, can travel a narrow mountain grade without tipping over.

The Forest Service of the U.S. Department of Agriculture granted a contract to Summers Gyro Corporation, a subsidiary of Gyro Dynamics Corporation, to develop a heavy-duty version of a unique trail truck which harnesses the forces of a gyroscope to maintain equilibrium on

grades up to 60 percent. The two-wheeled vehicle being field tested by USDA weighs nearly 11,000 pounds, has a front driver's platform, and 5,000 pound cargo capacity transportable up a 60 percent grade.

The Forest Service Equipment and Development Center at Missoula, Montana is the test site where the test vehicles have been used in place of men and mules in the trail maintenance program.

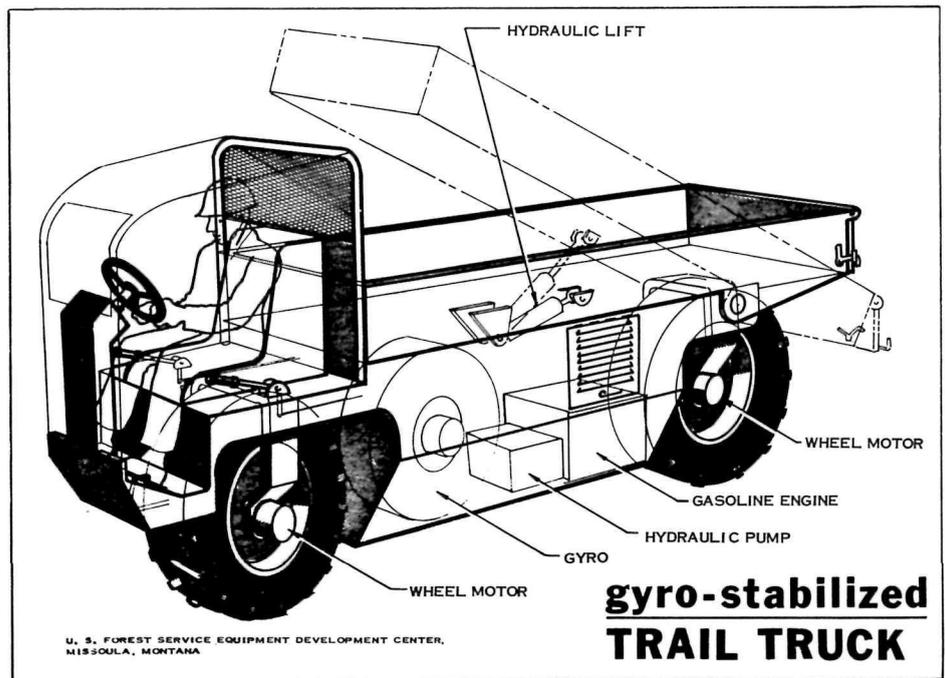
The contract to design and build the heavy-duty version followed successful tests of a smaller vehicle with a 1,000 pound payload capacity. In hauling capacity, the 1,000 pound version replaces four mules.

These vehicles harness the kinetic forces of the gyroscope (the same forces which keep a child's gyroscope top from tipping over) for part of their stabilization

qualities. However, the overall design is such that a vehicle can maintain its balance even when the engine is not in operation. For example, the vehicle will remain upright for 15 minutes as the gyro continues to spin. As a gyro vehicle moves along a trail or grade, the gyroscope and servo mechanisms bank it into equilibrium so that it remains upright. The Summers system uses a 20-inch diameter gyroscope which weighs 180 pounds and spins at 5,500 rpm.

These vehicles are based on patented technology which may someday result in a gyro-stabilized automobile that will be smaller and safer than today's cars.

Address of the developer is Summers Gyro Corporation, Thousand Oaks, California.



TRASH TRUCK TOPPER

Tarp used as cover for a one-ton trash hauling truck at Metamore-Hadley Recreation Area in Michigan, barely lasted through a summer in spite of efforts of park personnel to extend its useful period.

Efforts to cut down that replacement expense brought forth an idea from Ranger Donald McCoon. As the sketch shows, the device is a mesh covered frame for the top of the truck racks.

The cover is constructed in three sections. Each section is hinged together in such a way (see notes accompanying sketch) as to make an "accordian" fold for quick removal and storage. A 2"x4" frame for each section is sized to allow a one-inch overhang on the front and sides of the truck racks and is covered with fine mesh poultry wire. Screen door hooks and eyes are used to hold the cover on the high truck racks.

A 2"x4" frame, fitted with poultry wire or hardware cloth covers the tailgate. This is hinged at the top, so nothing has to be removed when dumping trash.

Material required for 1-ton truck

3 ea. - 2"x4"x7'

6 ea. - 2"x4"x8'

22'x36" fine mesh poultry wire

4 doz. corner fasteners

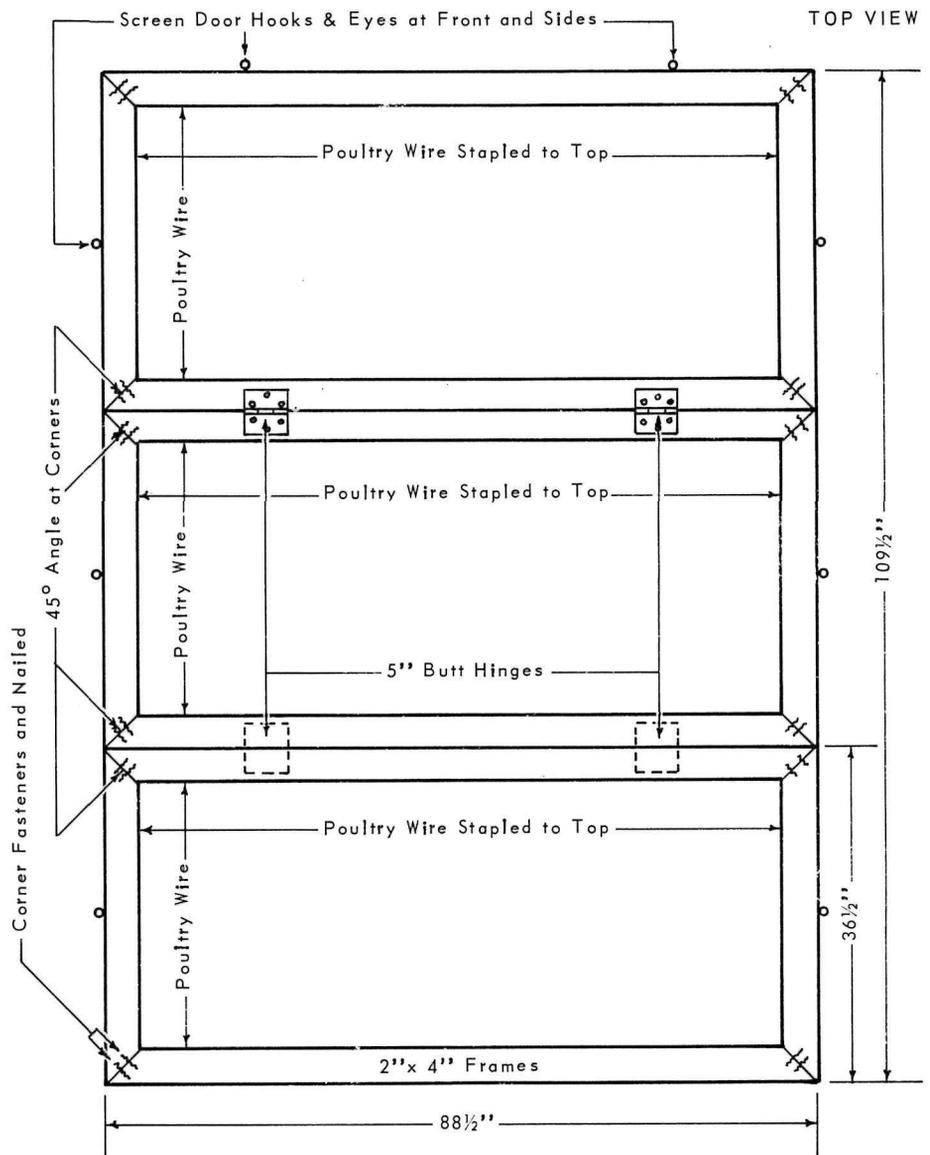
2 lbs. poultry staples

5" butt hinges

porch screen hooks and eyes

The cover cost about \$20, the price of a new tarp each year. It has been in service for 2 years with only minor replacement cost (poultry staples and hooks and eyes), and looks good for at least a couple more.

Robert H. Auel, assistant park supervisor sent Don's idea to GRIST.



CHOCK BLOCK

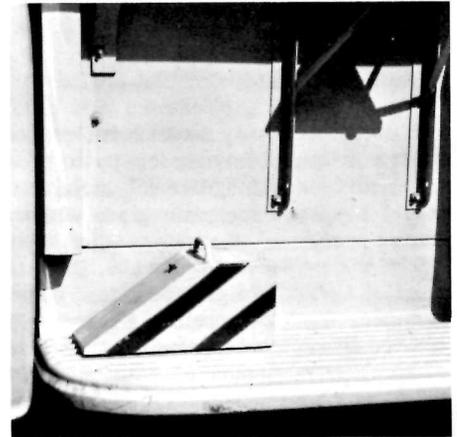
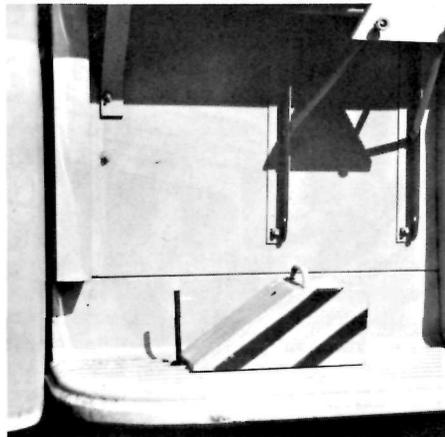
The wheel chock shown in the photos was designed by William Stroh, Jr., building repairman, Sequoia and Kings Canyon

National Park. It is made of hardwood with a curved face corresponding to the contour of a rear vehicle tire and wide enough to ensure an adequate block area. It is painted "day-glo" yellow with red diagonal bands. A metal screen door type handle is fastened to the block with screws.

An 8-inch bolt fastened to the running

board of the vehicle and a hole drilled in the block of the proper size to permit slipping the block over the bolt provide a carrying spot.

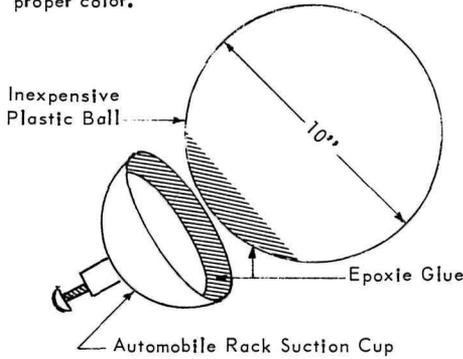
Materials and labor brought the cost of the blocks to about \$5.50 each, or about \$3.50 less than commercially available metal blocks when bought in quantity.



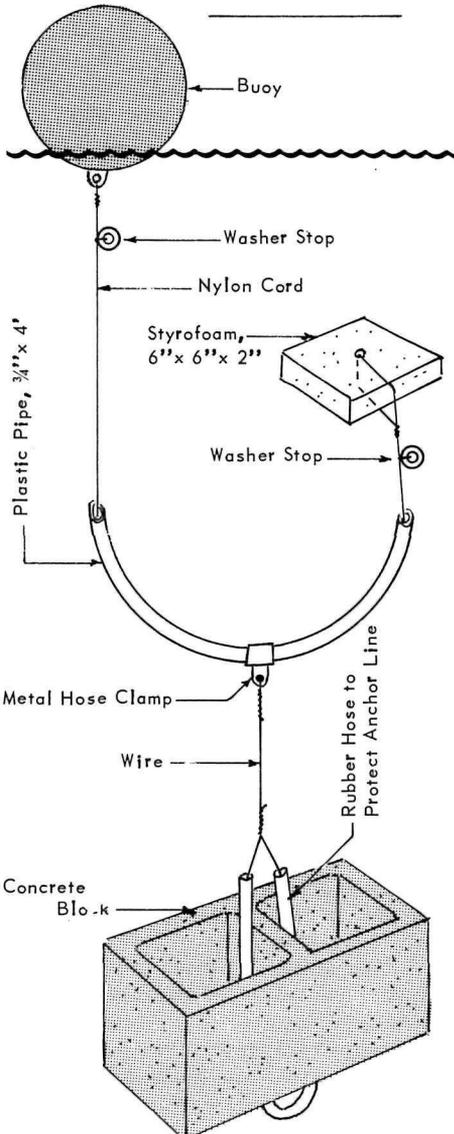
SELF-ADJUSTING MARKER BUOY

Peter J. McNiff, recreation specialist, Wyoming Recreation Commission, has designed the self-adjusting marker buoy and replacement shown in the sketches. It is used to mark waterways on bodies of water such as reservoirs which have a considerable amount of water fluctuation.

Spray plastic ball with rubber or vinyl paint of proper color.



While the Wyoming Recreation Commission has used the device primarily to mark waterski slalom courses, the same principle could be used for buoys to mark channels, hazards, and the like.



DO-IT-YOURSELF FLAGPOLE ROPE REPLACEMENT

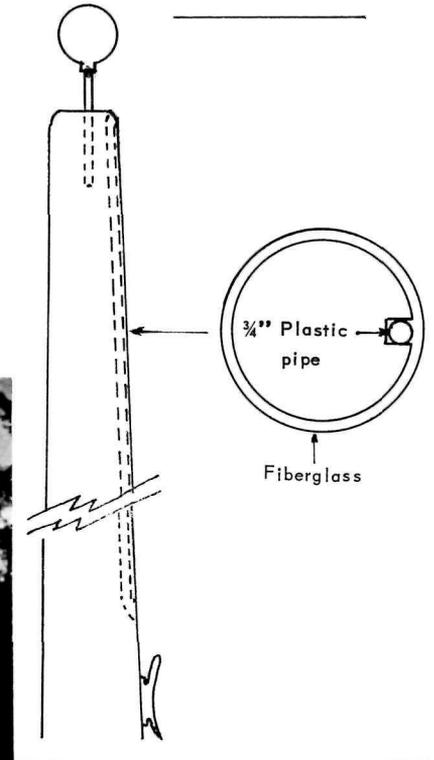
No need to call the fire department! Not since Superintendent Lorne Campbell, Pierce County Park Department, Spanaway, Washington, designed a flagpole you can re-rope from the ground, even if you are alone.

A nearby utility pole manufacturer turned the 45-foot pole to Lorne's specifications and routed a 1-inch groove from the top to 12 feet from the base. Five feet of the base go in the ground, so the groove ends 7 feet above ground. A 1/4-inch plastic pipe was fitted into this groove and the entire pole was then coated with fiberglass, concealing the pipe. The ends of the pipe were ferruled with fiberglass, giving a smooth tough surface for the rope to ride over, eliminating the need for a pulley. The rope runs up the outside of the pole, down through the pipe, and back out. With the aid of an electrician's tape run through

the pipe and back down to the ground, a damaged rope can be replaced from ground level.

The fiberglass coating is white and covers the entire pole, which eliminates the need for painting and prevents deterioration.

The ball which Lorne installed on top of the pole was an 8-inch float ball (can be brass or copper) and rod which had been primed and varnished.



**MORE DETAIL ON
FISH CLEANING TANK**

An illustration for the item titled, "Cleaner Tank for Cleaning Fish," which appeared in the May/June 1969 issue of PLOWBACK, did not show the vacuum breaker. This deficiency, which could cause a serious cross connection was called to our attention by Engineering Director J. J. Byrne of the Forest Service, U.S. Department of Agriculture.



DEATH TO YELLOW JACKETS

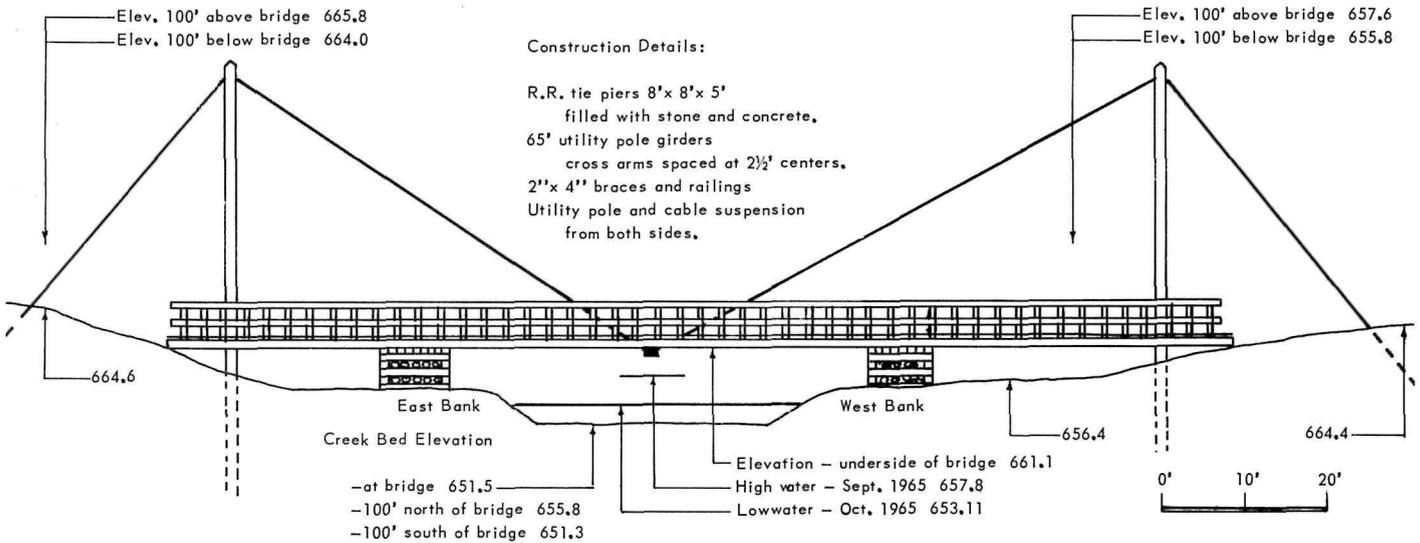
Knowing the habits of pests usually supplies the clue to the most effective way to exterminate them. The San Mateo County Mosquito Abatement District in California developed the following method to control yellow jackets without the work of locating their nests or spraying poison. It is based on the fact that yellow jackets, while they eat sweet liquids themselves, take home protein for their larvae.

First, mix two tablespoons of 40-percent wettable chlordane powder (not liquid) with a six-ounce can of tuna fish and two teaspoons of vegetable oil. Place three or

four tablespoons of the mixture in small pans set in small wire cages. Suspend these, out of the reach of children and animals, at likely locations around the park. Change the meat about once a day.

The yellow jackets fly into the cage and take some of the bait home to the larvae. The poison kills both the larvae and the adults, but the latter can make many trips before they die (in about eight hours), and a few days of poisoning can wipe out the whole colony.

Ben H. Thompson, the former executive secretary of the National Conference on State Parks, sent along this useful item which appeared in News and Views, a publication of the California Department of Parks and Recreation.



TEMPORARY FOOT BRIDGE

The foot bridge shown here was to have been a temporary one, but it is now more than four years old—and it is a do-it-yourself project.

Wilbert C. Schmidt is not a professional bridge builder; he's superintendent of Elmhurst Park District in Illinois, and he's never built a bridge before.



The piers are filled with broken concrete and rocks. As one of the photos shows, the same kind of material was piled on the upstream side of the piers to create a breakwater as protection for them.

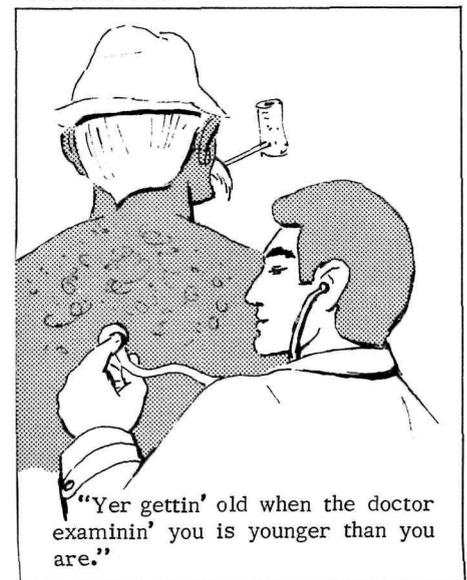
In the spring, water has been within eight inches of the center and under side of the pole supports, but occasional re-nailing and minor repairs are all that have been necessary. Vandals cut one of the upright support poles which loosened all guy wires. These had not been replaced when this item was submitted, but the bridge was still in use.

With the exception of the upright poles



and guy cables (the telephone company helped with those), the work was all done by park personnel, at a cost for material and labor of a little less than \$3,000.

"RANGER RED" sez:—



"Yer gettin' old when the doctor examinin' you is younger than you are."

Jim Burnett & IBL