

Happy 25th Anniversary, *Grist*!

This Jan/Feb 1982 issue of *Grist* marks the 25th Anniversary year of the Park Practice Program of which *Grist* is a major unit. *Grist's* Volume 1, No. 1 was issued in January 1957 under the joint sponsorship of the National Council of State Parks and the National Park Service.

Ira B. Lykes was named Chief of Park Practice in 1957, leaving his job as Superintendent of Shiloh National Military Park in Tennessee to come to Washington at the special request of NPS Director Wirth.

In 1962, Ira initiated a Plowback section of *Grist* which contained incentive award-winning suggestions from employees of the National Park Service. These suggestions soon were incorporated into the main section of *Grist*.

A Supplements section also appeared for several years which featured highlights of park and recreation products and equipment available from Institutes, Associations, and public sector businesses. In the main, though, *Grist* has changed little over the years, mostly because our readers and subscribers seem to want it that way.

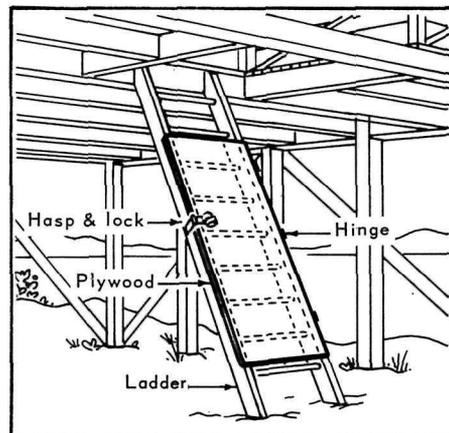
Jim Burnett has worked on *Grist* for the past 23 years, selecting items to appear in the issues, illustrating ideas and keeping in contact with members of the park and recreation community, encouraging them to share their time-, energy- and cost-saving ideas with fellow park and recreation employees. Jim is an invaluable resource to other staff persons as well as to the readers and subscribers he serves since he has an encyclopedic recall of nearly everything that has been published in *Grist* and *Design*.

Many of the ideas that appeared in that first 1957 *Grist* issue are still usable today. For instance, a ladder lock was developed by employees of



Ira B. Lykes

Photo by Abbie Rowe



Isle Royale National Park in Michigan to keep people from climbing the ladders on water tanks and other structures.

A 10- or 12-foot piece of plywood was hinged to one of the side rails to cover the lower rungs of the ladder. A hasp and lock were placed on the other side. The board fills all the space between rails, and rests solidly against the rungs making it impossible for people to get a grip or foothold in either the front or the rear of the ladder.

(Continued on p. 2)



1957 1982

Twenty-Fifth Anniversary

Grist

A publication of the Park Practice Program

The Park Practice Program is a cooperative effort of the National Park Service and the National Recreation and Park Association.

Russell E. Dickenson, Director
National Park Service

John H. Davis, Executive Director
National Recreation and Park Association

Editorial Staff

National Park Service
U.S. Department of the Interior
Branch of Professional Publications
Division of Cooperative Activities

Frank C. Goodell, Program Manager

James A. Burnett, Editor, *Design* and *Grist*

Kathleen A. Pleasant, Editor, *Trends* and Writer, *Grist* and *Design*

The Park Practice Program includes: *Trends*, a quarterly publication on topics of special interest in park and recreation management and programming; *Grist*, a bimonthly publication on practical solutions to everyday problems in park and recreation operations; and *Design*, a quarterly compendium of plans for park and recreation structures which demonstrates quality and intelligent use of materials.

Membership in the Park Practice Program includes a subscription to all three publications and selected back issues in vinyl binders with indices and all publications for the calendar year.

The initial membership fee is \$80; annual renewal is \$20. A separate subscription to *Grist* is \$15 initially, and \$7.50 upon renewal. Subscription applications and fees, and membership inquiries should be sent *only* to: National Recreation and Park Association, 3101 Park Center Drive, Alexandria, VA 22302.

The information presented in any of the publications of the Park Practice Program does not reflect an endorsement by the agencies sponsoring the program or by the editors.

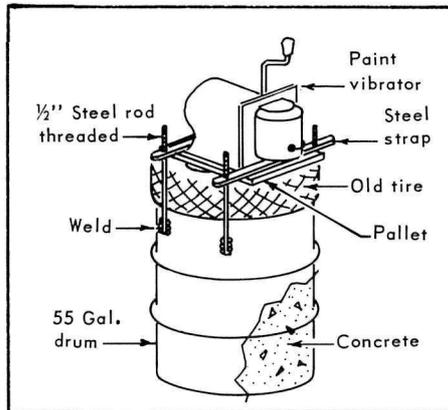
Articles, suggestions, ideas and comments are invited and should be sent to the Park Practice Program, Division of Cooperative Activities, National Park Service, Washington, D.C. 20240.

FOR SAFETY'S SAKE

All ideas and suggestions shared in the pages of *Grist* are presented as guidelines, not final working blueprints. Be sure to check any device or plan you want to adopt for compliance with national, state and local safety codes.

Happy 25th Anniversary GRIST!

(Continued from p. 1)



Another useful and enduring idea that appeared in *Grist's* first issue is this mounting for a paint agitator. Concrete is poured into a 55-gallon steel drum to fill it about 1/3 of the way up, and allowed to harden for 24 hours. Four 1/2" steel rods, threaded on one end, are welded upright from the sides of the drum, as illustrated. The paint agitator-vibrator is mounted on a wooden pallet; a discarded truck tire is placed on top of drum between the upright rods, then the palletized vibrator is placed on top of the tire. The strap steel, which has been drilled to accommodate the upright rods, is used to hold down the vibrator pallet.

This mounting makes operation quieter, cushions vibrator, helps extend its life and permits movement from job to job. If permanent mounting of the vibrator in one place is desired, the tire method can be placed between the vibrator and the concrete base.

We on the Park Practice Program staff are proud to be a part of this 25th year celebration and we know you, our readers, will join with us in wishing *Grist*, along with *Trends* and *Design*, best wishes for the next 25 years!

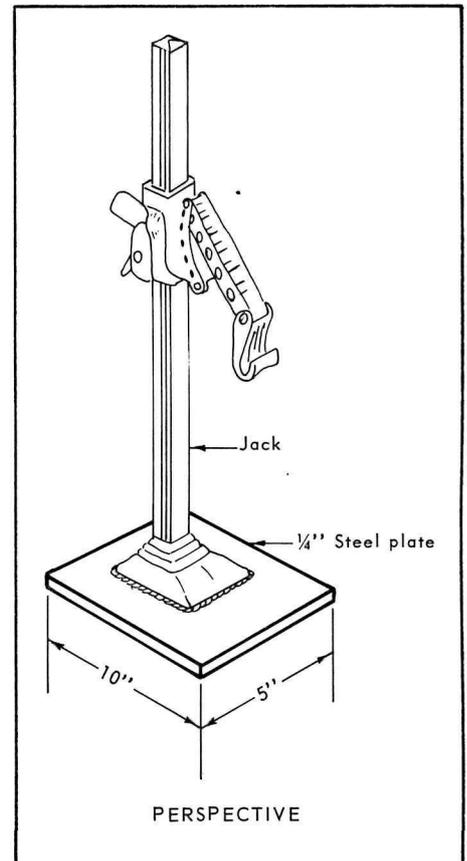
Safety

Jack Safety Feature

Many auto jacks have very small bases (6" x 3 1/2") or smaller that tip over easily. Also, the small base sinks into the ground when placed on dirt or soft ground, causing the jack to fall. Both of these instances can cause a hazard to the person using the jack.

James A. Carter, automotive mechanic at the Blue Ridge Parkway (NC-VA) suggests welding a metal plate (approximately 10" x 5" x 1/4") to the base of the jack. This plate would strengthen the base and provide less chance for the jack to tip over.

Carter was presented a \$25 National Park Service incentive award for his suggestion.



Safety Burp Strips

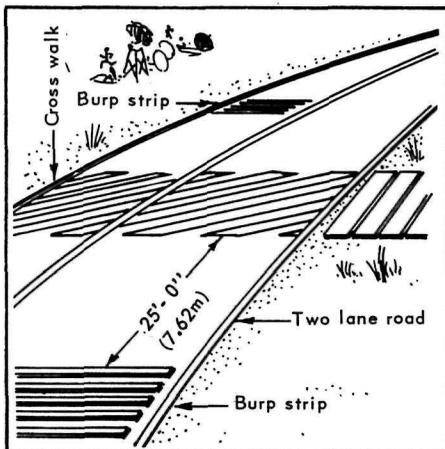
Providing safe public access to the beach was a growing problem at Playalinda Beach, Canaveral National Seashore. Twenty pedestrian crossings are available along 4.9 miles of road, and pedestrians must cross the road from the parking areas to dune crossovers. These crossovers are situated within heavily vegetated dunes which create a limited visibility for both pedestrians and vehicle operators.

Lead Maintenance Worker Frederick D. Shott, Jr. suggested installing safety burp strips at the pedestrian crossings to reduce traffic speed.

Shott constructed a preassembled form 8' wide and 4' 10" long with inside dimensions of strips 2" wide, 1" high and 1' spacing between 5 strips. He placed the preassembled form on the hard road surface about 25' from pedestrian crossings, shoveled asphalt into the five 2" wide strips, compacted the asphalt and removed the form leaving the 5 burp strips intact on the road.

Vehicle operators approaching the road experience a vibrating motion as the vehicle passes over the strips. This results in an immediate awareness of the pedestrian crossings and a reduction of vehicle speed.

Costs for these safety burp strips in-



cluding asphalt and labor are approximately \$200.

Shott received a \$25 National Park Service incentive award for his suggestion.

Sign Post Design Modification

Chris V. Case, maintenance worker at Valley Forge National Historical Park, PA, came up with this modification to a sign post design.

The National Park Service Signs System Specification Manual, Appendix G-10, describes construction and installation of fuse plates for the breakaway feature on multiple sign post installation. The torque specifications call for 200 ft./lbs. to be applied to the 5/8" bolts that pass through the steel tube and secure the fuse plate.

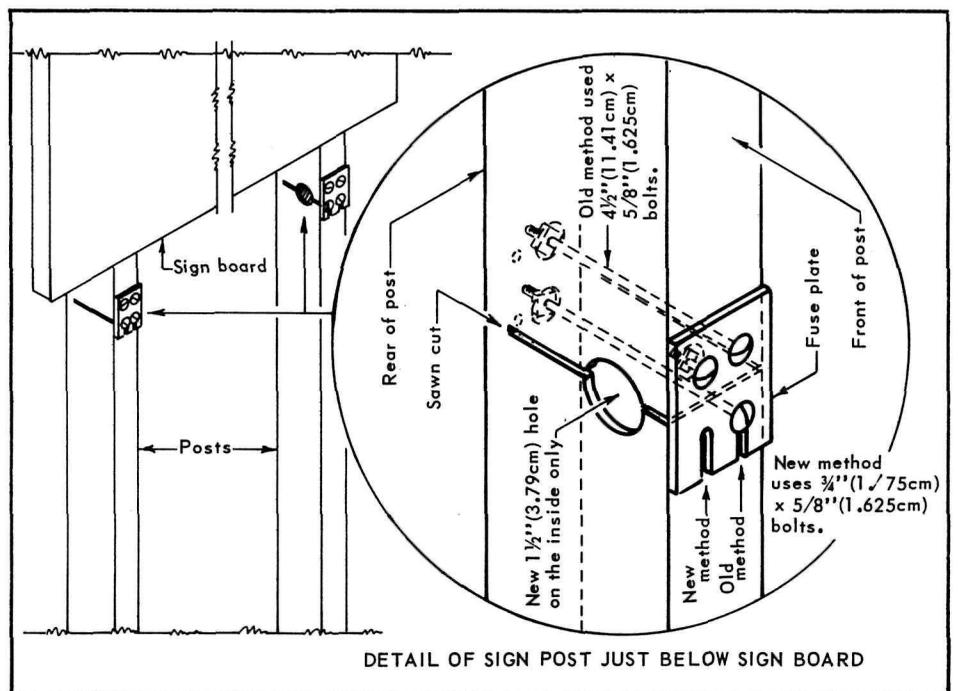
However, when the specified torque is applied, the tube begins to collapse, leaving the fuse plate attached with less

than recommended torque and a weakened and distorted sign post.

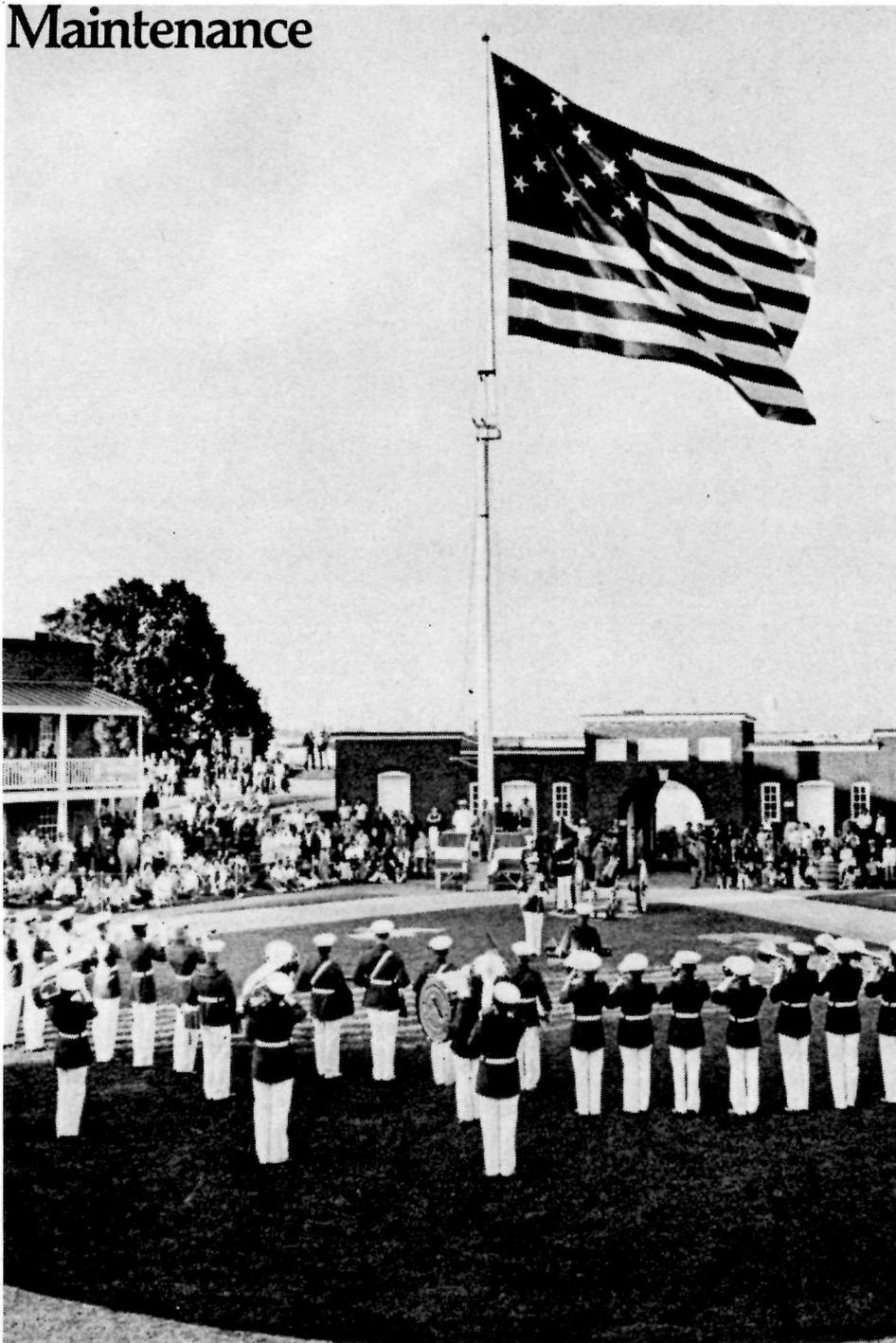
To eliminate the problem of tube distortion at less than required torque, a 1 1/2" hole was cut in the tube near the front in such a position that the center of the hole was on the same line as the saw cut made in the tube. The hole serves as an access opening so that nuts and a wrench can be applied to tighten the 5/8" bolts that pass through the fuse plate and the front of the metal tube. The proper torque can be applied to the fuse plate attaching bolts without distorting the tubular post.

The most outstanding advantage of this modification is that there is no need to redesign the fuse plate system. All that is needed is the money saving point of requiring only 5/8" x 3/4" bolts instead of the 5/8" x 4-1/2" bolts that are needed as the original plan describes.

Case received a \$400 National Park Service incentive award for this suggestion.



Maintenance



Flagpole Halyards

When halyards or ropes on the flagpole needed to be replaced, maintenance personnel would go to the top of the flagpole, run halyards through the pulley, and return to the ground. This would have to be done twice because of the two different sides to put up the flag.

Donna F. Lebo, park technician at Fort McHenry National Monument and Historic Shrine (MD) suggests taking the shackle off the old halyard, threading string through the old line end and the new line end, taping them so they form one line, and slowly running the line up the flagpole, through the pulley and down. Put the shackles on the new lines after separating the two lines.

This new method of changing the halyard can be accomplished by one person, instead of the usual three (one to go up in the chair and two to pull him or her up), and it's also safer. Lebo received a \$100 National Park Service incentive award for her suggestion.

Decal Lettering

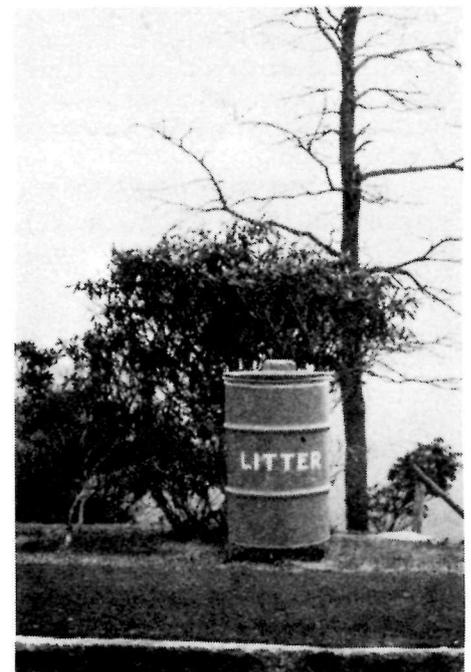
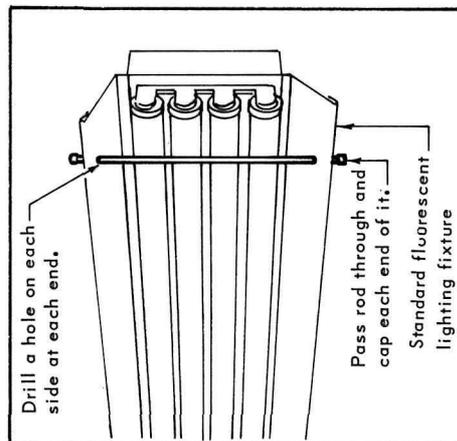
Hollis R. Freedle, Jr., maintenance worker at the Blue Ridge Parkway (NC, VA) suggests using adhesive decals to identify all road, picnic and campground litter cans. Decals improve the appearance of the litter cans and reduce costs for labor and lettering (when using stencils and paint).

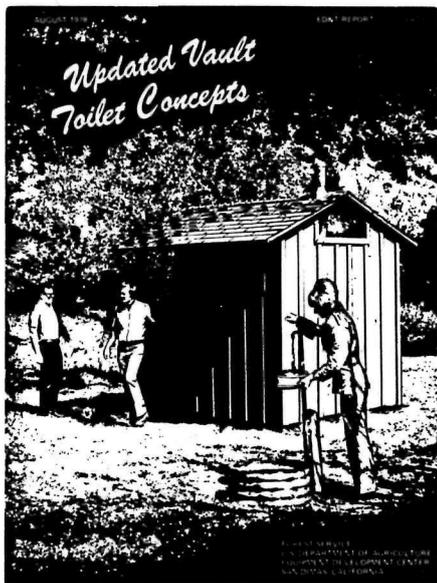
Freedle received a \$40 National Park Service incentive award for his suggestion.

Installation of Light Tube Retainer

Robert A. Higdon, electrician at Cumberland Gap National Historical Park (KY, VA, TN) has devised this new method for installing a retainer for fluorescent light tubes.

Higdon suggests drilling a hole in each side of the metal fixture. Draw a rod through and fasten to each end so it cannot jiggle out.





Updated Vault Toilet Concepts

The Forest Service has available a booklet which may be of interest to managers of remote recreation sites. The booklet is *Updated Vault Toilet Concepts*, ED&T Report #2300-13 and is available from:

USDA, Forest Service
Equipment Development Center
San Dimas, CA 91773

The document contains information and recommendations on design, construction and maintenance of building interiors; new and revised design criteria for building and venting systems; chemical and biological additives for vault odor control; materials for constructing the vault; and, some inventory listing of the diversity of vault contents.

The booklet is liberally sprinkled with photographs and drawings illustrating design features and venting system.

Following five years of work by the Environmental Staff Engineer at the San Dimas Equipment Development Center, the Forest Service of the U.S. Department of Agriculture published this report.

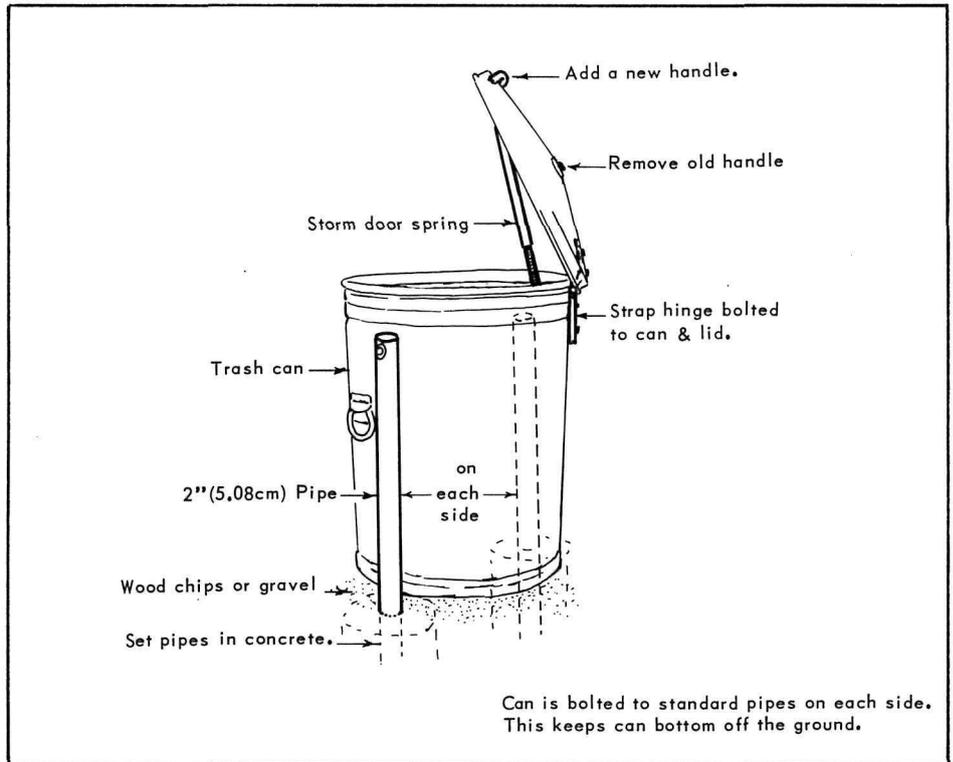
ED&T Report 2300-13 folds-in four earlier ED&T projects:

#1435—*Environmental Technical Services*

#2362—*Toilet Vaults*

#2440—*Integrated Field Evaluation of Vault Toilet Systems*

#2619—*Vault Toilet Venting Systems Redesign*.



Can is bolted to standard pipes on each side. This keeps can bottom off the ground.

Securing Trash Cans

Keeping trash cans secure from roaming dogs was a problem at Cape Hatteras National Seashore until Maintenance Worker Wallace F. Mathis came up with these ideas.

A first effort was to secure trash cans so that they could not be overturned. This was done by bolting a pipe to each can and extending the pipe into the ground about twelve inches. Although helpful, this did not eliminate the problem. Dogs were still able to pull out

trash, sometimes the entire bag, after knocking off the lid.

A second effort was to install a storm door spring to the lid. The spring action assures that trash cans will close securely. After a few banged heads and noses, dogs no longer cause problems as in the past. You might say that they "spring" away.

Materials cost approximately \$5.00 per can.

A \$200 National Park Service incentive award was presented to Mathis for his suggestion.

Securing Trash Receptacle Liners

Keeping plastic liners in trash receptacles secure was a challenge to employees of the George Rogers Clark National Historical Park (IN) until Gardener David Sorg suggested modifying the lids to keep the liners in place.

Cut away the center part of the lid, leaving only a 1" flat, horizontal ring around the rim. This ring is placed over the top of the bag holding it firmly in place. Use tin-shears to cut out the center of the lid. The cut edges are then hammered over, flat so no sharp edges are left.

When the trash is collected, the ring is easily removed, the plastic bag is collected, and a new bag is quickly fastened by the ring. This suggestion does not require the purchase of new materials; it



uses an item (the lid) which is often disposed of.

Sorg received a \$25 National Park Service incentive award for his suggestion.

Energy Saving

Timer Switches

Forgetting to turn the lights off at campground kiosks at Cape Hatteras National Seashore (NC) occurred far too frequently for Loren S. Whitehead, supervisory park ranger.

Whitehead suggested using timer switches to activate the electrical lights for the exterior and interior of the self-registration booth of the kiosk.

A \$50 National Park Service incentive award was presented to Whitehead for his suggestion.

Insulate Heating Thermostat

Park Technician Daniel L. Burgette has come up with a way to save money and energy at the George Rogers Clark National Historical Park in Indiana.

When the Memorial used more energy in 1979 than it did in 1980, in spite of a milder winter, Burgette felt that the energy waste was due to the setting of the thermostat. Although two thermostats are situated side by side on an outside stone wall, they often showed different temperatures on their thermometers in the winter.

The difference was that the cooling thermometer set out away from the marble wall 1½". The heating thermometer was within ¾" of the wall. The result was that the cooling thermometer more accurately measured the air temperature, and the heating thermometer was affected by the marble heat sink it was close to. Burgette set the heating thermostat on a 1" thick block of wood (foam could be used), thus insulating it from the stone wall. When the thermostat is set to 65° in the morning, the air will only be heated to 65°.

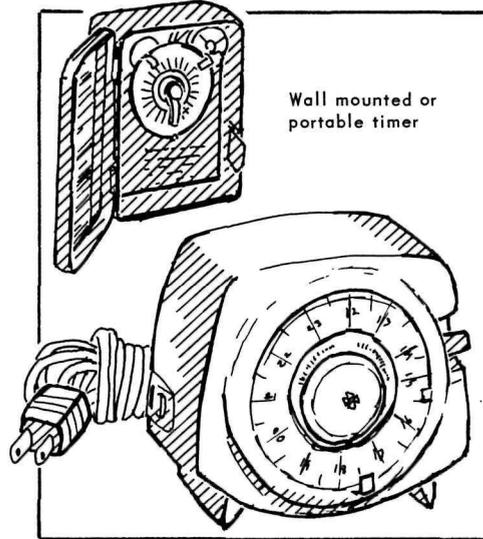
A \$25 National Park Service incentive award was presented to Burgette for this energy-saving suggestion.

Dimmer Switches

Replacing high wattage bulbs with lower wattage ones to conserve energy is not practical for everyone. Some people require different levels of light to function normally and we all require different levels of light for different tasks.

Arthur R. Williams, chief of maintenance at Dinosaur National Monument (CO, UT) suggests replacing all on/off switches with dimmer switches which would allow individuals to adjust the lighting to suit the need.

Williams received a \$25 National Park Service incentive award for his suggestion.



Homemade Cooking Stove, Part II

Professor Gerard G. Harrison of Springfield College, Springfield, MA, offers this ingenious heat control system for the simple stove that was illustrated in the Jul/Aug 1980 issue of *GRIST*.

Professor Harrison suggests that, rather than completely removing the top of the tuna fish can, you cut the top nearly all the way around. Bend up the top as indicated. Punch two holes through it and insert a portion of a coat hanger into the holes. This allows you to control the amount of heat by opening the top all the way or closing it partially.

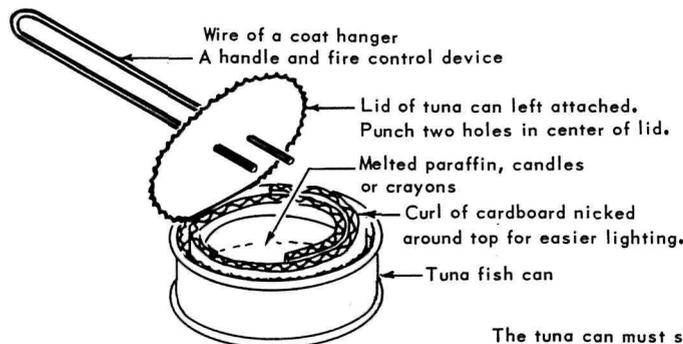
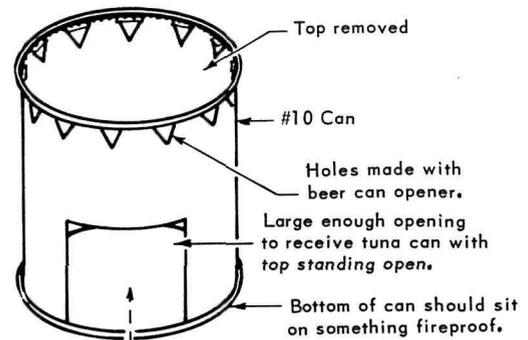
Users of this idea should keep in mind that the stove should be placed on a fire-proof surface and pot holders should be readily available to hold the hot stove.

NOTE:

You will need a can opener and tin snips to fix cans.

Use gloves or cooking mit when cooking.

Not drawn to scale



The tuna can must slide into the opening at the bottom of the #10 can.

Operation

Keeping Park Clean

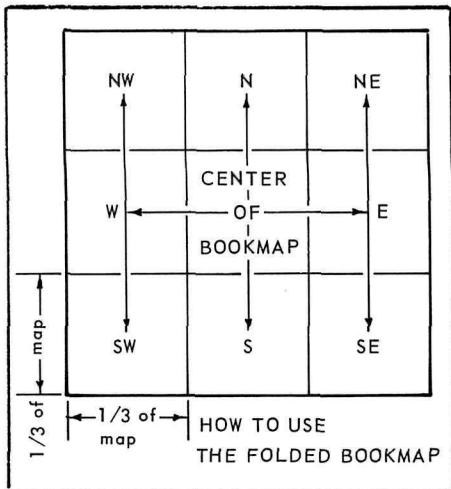
Melvin M. Sedwick, tree worker at Shenandoah National Park (VA) submitted this solution to an unsightly area 2 miles east of park headquarters.

The area was being used as a pull-off for vehicles and was littered with dumped trash which was a highway traffic hazard, and was unsightly to park visitors.

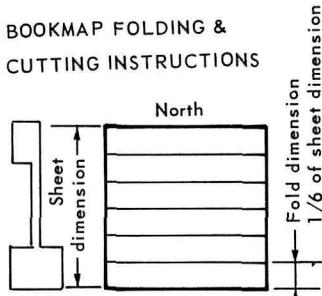
Sedwick suggested hauling in dirt, making an embankment and making the shoulders of the road meet specifications of the Highway Department. By eliminating the pull-off area, the trash problem was taken care of. This suggestion saved man-hours for cleaning the area, eliminated a traffic hazard and made the area more aesthetically-pleasing. Sedwick received a \$50 National Park Service incentive award for his suggestion.

Map Folding System

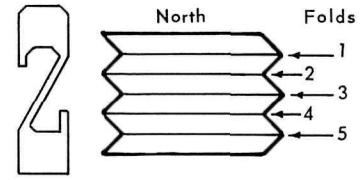
Dennis P. Fehler, landscape architect with the Forest Service's Mark Twain National Forest shares this excellent map folding system with *Grist* readers. This system is used by pilots to allow functional use of large maps in small or confined spaces. The map is folded so that one can read it like a book.



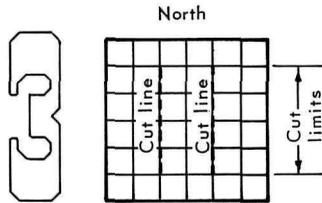
BOOKMAP FOLDING & CUTTING INSTRUCTIONS



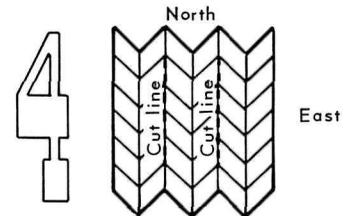
Divide map horizontally into 6 equal parts.



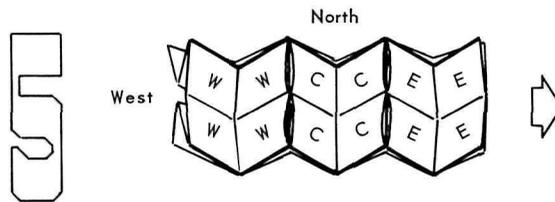
Fold accordion fashion NORTH to SOUTH - then reopen.



Repeat steps 8 and 2 in an EAST to WEST direction.

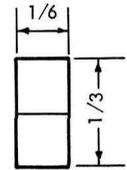


Use a sharp blade to cut where indicated.

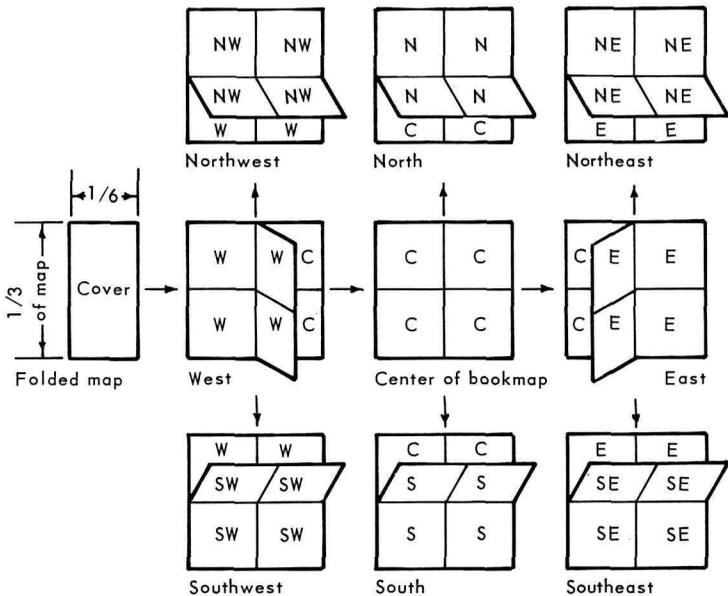


Refold accordion fashion NORTH to SOUTH and open to center (as shown above)

Accordion fold EAST to WEST.



Complete book 1/3 by 1/6 of original map's dimension.



HOW EACH OF THE NINE SECTIONS ARE DISPLAYED FOR READING

The Best of Grist

The National Society of Park Resources (NSPR) awarded the following published items in *Grist* as "The Best of *Grist*" for this past year. The awards were conferred in October 1981 at the NSPR banquet held during the annual National Recreation and Park Association's Congress in Minneapolis, Minnesota. Articles that appeared in *Grist* between July 1, 1980 and June 30, 1981 were eligible.

First Place Award

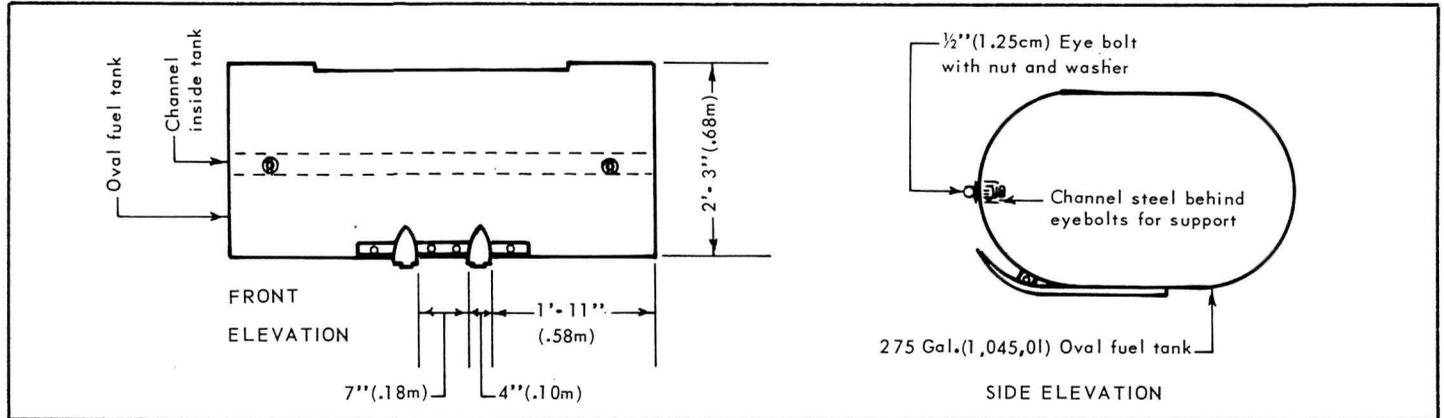
"Ski Trail Blazer" by Peter J. Parsil

Park Superintendent Parsil of Pearce Valley Park, Bucks County, PA designed and used what he calls the XC Trail Blazer to create an initial cross-country skiing trail. Park maintenance staff constructed the piece of equipment from a

recycled 275-gallon oval fuel tank and used snowmobile skis donated by a local dealer. The skis are fastened to the bottom of the tank and the trail blazer is pulled from 1/2" eyebolts attached 4" from each side.

A piece of 3/4" manila rope is spliced to snap hooks for quick hook-up and the trail blazer is pulled through the snow with a Thiodol Spryte with the rope looped through a ring hitch.

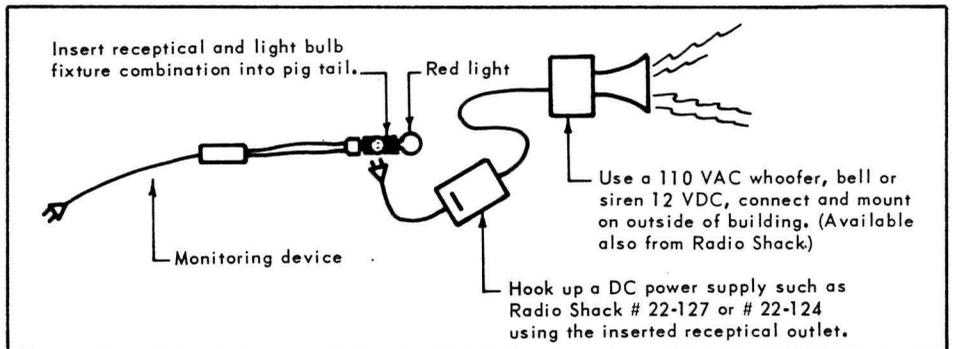
Parsil's article appeared in the Jan/Feb 1981 issue of *Grist*.



Second Place Award

"Temperature Monitoring Spots Freezing" by Robert L. Greer

This article appeared in the Mar/Apr 1981 issue. Greer, YACC camp director in Gettysburg, PA, designed a signal light that automatically turns on when the temperature inside a building falls below 38° Fahrenheit (3° Celsius). The device simply modifies the thermostatically controlled heat tape that is commonly used to wrap water pipes to prevent them from freezing.



Third Place Award

"Surge Tank Mixer" by Jackie Darrell Messer

Park worker Messer suggested building an aspirating aerator rather than buying one. Estimated cost is approximately \$1,435 to include a pump; controls and starter; pipes and fittings; blacksmith, operator, mechanic, and plumber labor; and supports. A ready-made aerator costs approximately \$7,481.

This award winning item appeared in the Mar/Apr 1981 issue of *Grist*.

