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## SOME SHARED IDEAS ON VANDALISM PREVENTION

Writing to a new acquaintance whom he had met at a park conference, Charles J. Gebler, public programs officer, NPS Pacific Northwest Region, shared some thoughts on preventing vandalism in parks and recreation areas. He has passed them along to share with GRIST readers. Some of them have been suggested before, but they bear repeating.

1. The sight of a vandalized object encourages additional acts of this type. So, refinish signs and repair other types of damage as soon as they are discovered. The same is true of litter. Litter begets litter. In an experiment conducted in a State park, the litter from a restroom floor was picked up every hour of one day. The total pieces of litter on the restroom floor that day was minimal. The next day the dropped pieces were allowed to remain all day. The accumulation at day's end was staggering.

2. Clean and well-maintained picnic benches, fireplaces, and similar facilities seem to demand more respect. As in the case of vandalized signs and accumulated litter, there seems to be a psychological factor. There is no guarantee, however.

3. In choosing fireplaces, select those which present the least possibility of breakage in vulnerable places. Steel oven doors and lightweight grills are particularly susceptible.

4. Fasten picnic tables and litter receptacles to the ground when they are adjacent to a cliff. When loose they are too much temptation for vandals.

5. Concentrate litter receptacles in central pickup areas. Scattered cans invite damage. Litter receptacles are well used in back country situations, but they should be of a type which are easily emptied.

6. Initiate a back country litterbag program. National Park Service, Forest Service, and other Federal agencies have had success with this. Place the responsibility for litter carryout on the wilderness user's back, both physically and

morally. This approach, combined with posters and literature, can be quite effective.

7. Experiment with carving boards. A board or wood slab with an invitation to carve on it rather than on trees often works. Some visitors feel they must leave some sign that they have been there, and sometimes this device will satisfy that urge.

8. Consider using rough textured surfaces on buildings, especially restroom walls where possible. This discourages graffiti. It should be noted, however, that if writing on a rough textured wall does occur, it is difficult to remove.

9. Use a rough textured material (epoxy compounds with grit) on top of rail fences. This has proven to be especially effective on bridge railings at Mount Rainier National Park. Grit surfaces offer the vandalizer a ruined knife for his efforts. (An epoxy compound is manufactured by the Essex Chemical Corporation, 845 Woburn Street, Wilmington, Mass. 01877. The product is urethane anti-skid coating, Kit #8010-013-8665 at \$16.10 per unit. This product requires a three-step process and produces an anti-skid surface found on many stairs.)

### CONTAINER FOR HOT CHARCOAL

Gary Patzke, assistant park superintendent, Devil's Lake State Park, Baraboo, Wisconsin, designed the hot charcoal container shown here.

Photo number 1 shows the swing-door trash container which Gary used for the housing. First, the triangular top was removed, then holes were drilled at four-inch intervals on all four sides to allow heat to dissipate from the inner steel liner which will contain the hot charcoal (photo number 2). The cover for the housing was cut from the side of a damaged and discarded swing-door container (cut 1 inch past the corners to allow for a lip). Holes were also drilled in this lid, not only to allow heat to escape, but to allow rain to enter as well.

No. 4

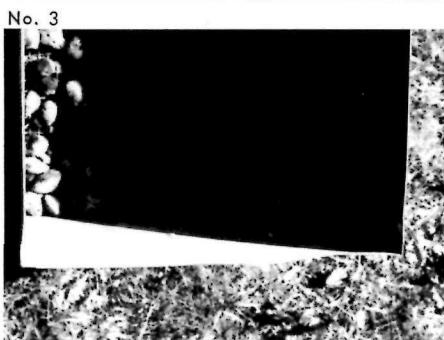
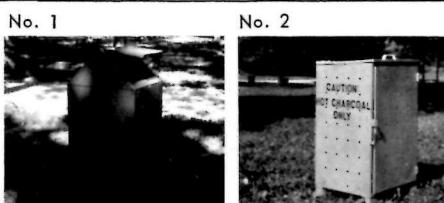


Photo 3 shows two flat-iron cross pieces installed about the middle of the steel liner to provide support for half-inch mesh hardware cloth. Since corners of the mesh did sag some, Gary suggests getting additional support for it by installing channel-iron around the inside of the liner.

The charcoal either cools or burns out, then falls to the bottom of the steel liner. The burned out chips on the hardware cloth and the ashes at bottom of the liner can easily be removed periodically.

Painted with heat-resistant aluminum paint and lettered in red (photo 4), the discarded trash container becomes a safe disposal for hot charcoal. Set at strategic locations, these units can be moved for mowing, or if pranksters persist in tipping them over, they can be bolted to a cement platform.

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rule of safety—DO NOT PANIC. If there is snow, you can follow your own tracks back to familiar territory. If you are unable to find your way back to camp, stop. Gather some firewood and start a small, smokey fire. Use those matches which, of course, you always carry in a waterproof container. The small fire will give you warmth as well as guide help to you.

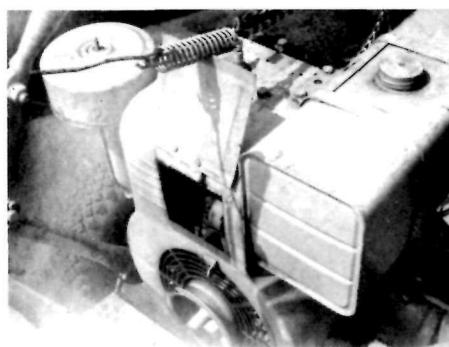
**Take it easy.** If this is the first time you have been out of the city for a year, take it easy for a while. Give your body time to adjust to the vigorous physical activity. You will have a better time and there will be less chance of a heart attack. If you feel faint, stop and rest. Take your time going back to camp.

**Beware of the "sound-shot" hunter.** This is an eager, greedy, and careless hunter we all meet one time or another on a hunting trip. He is the fellow who will shoot if he hears a twig break or sees a branch move. Never shoot until the entire animal is visible.

These suggestions have been adapted from **News Release**, State of West Virginia Department of Natural Resources, Information and Education Division, December 2, 1970.

### FLIP-TYPE DOOR FOR DAILY MOWER CLEANING

Whirlwind and similar type mowers accumulate grass cuttings, dirt, and dust which pack around the engine head, causing overheating of engines designed to be air



cooled. No way is provided, short of removing the entire cover (a shop job requiring special tools), for the operator to see the accumulation or to remove it on

the spot even if he knew it was there. The result at National Capital Parks has been heavy expense and frequent downtime while mowers were in the shop for repairs or replacement of engines.

William H. Baker, equipment repairer foreman, designed a flip-type door in the housing which permits easy access for daily removal of the accumulated debris from the cylinder and head, using air pressure. (See photos.)

Installed cost of the flip-type doors is about \$4.00 for each mower, and it is estimated that engine life is improved by 20% as a result of daily inspection and cleaning.

### NEW STEMMING METHOD IN BLASTING OPERATION

Mud-cap blasting has some safety hazards and some undesirable effects. Finding earth that is free of small stones and sufficiently cohesive to make a desirable mud-cap mix is sometimes a problem, and any small stones overlooked in the mixing can become a missile hazard to the blasting operator. Extreme care must be taken in placing the mud-cap around and atop a primed charge, and efforts to dislodge sticky mud from shovels or other tools is a hazard. In addition, blast force can cause deep penetration of mud into pavement over a wide area and can stain any nearby trees. The unsightly mess remains until a heavy rainfall.

Owen E. Lucas, foreman R&T, Shenandoah National Park, suggests using water-filled plastic bags in lieu of a mud-cap. His procedure has been reviewed by the Safety Research Center, U.S. Bureau of Mines, Pittsburgh, Pa., and safety of the method has been verified by them. National Park Service has recommended use of the water-filled plastic bags "when soil condition is such that it is difficult to find earth free of small stones and/or not cohesive enough to make a desirable mud-cap mix."

**DIRECTIONS FOR USE****Assemble Materials Prior to Use**

Place plastic bags, a 5-gallon bucket, strong cord, and burlap bags in a 50-gallon drum.

**When Needed**

1. Load drum and contents onto truck.
2. Remove all contents from drum and place them on truck bed.
3. Fill drum with water.

**At Blasting Site**

4. Encase plastic bag in burlap bag, place over charge and gently fill with water. Tie ends of plastic and burlap bags.
5. Remainder of procedure is the same as for mud-cap blasting.

**TIPS FOR HUNTERS**

Ira S. Latimer, Jr., director of the Department of Natural Resources of West Virginia, a state which plays host to many out-of-state hunters has issued some tips to hunters which, if observed, could make their trip more enjoyable and possibly save lives. (There were 70 hunting accidents in the state in 1970, 7 of them fatal.)

**Be visible.** Your outer gear should be blaze orange if possible, but at least a bright, highly visible color. Choose hunting partners who are also brightly dressed.

**Bring warm clothing.** A warm jacket, hat, gloves, and thermal underwear are essential. When you spot a trophy buck or bruin you want to be warm enough to pull the trigger. Boots should be waterproof and sturdy.

**Know your landmarks.** After you've set up camp, take some time to familiarize yourself with the lay of the land. Notice surrounding mountain peaks, an odd looking boulder, or a tree on the skyline. Line them up with your camp. Fix these guideposts firmly in your mind. If you should become confused about direction when you are away from camp, don't forget the first

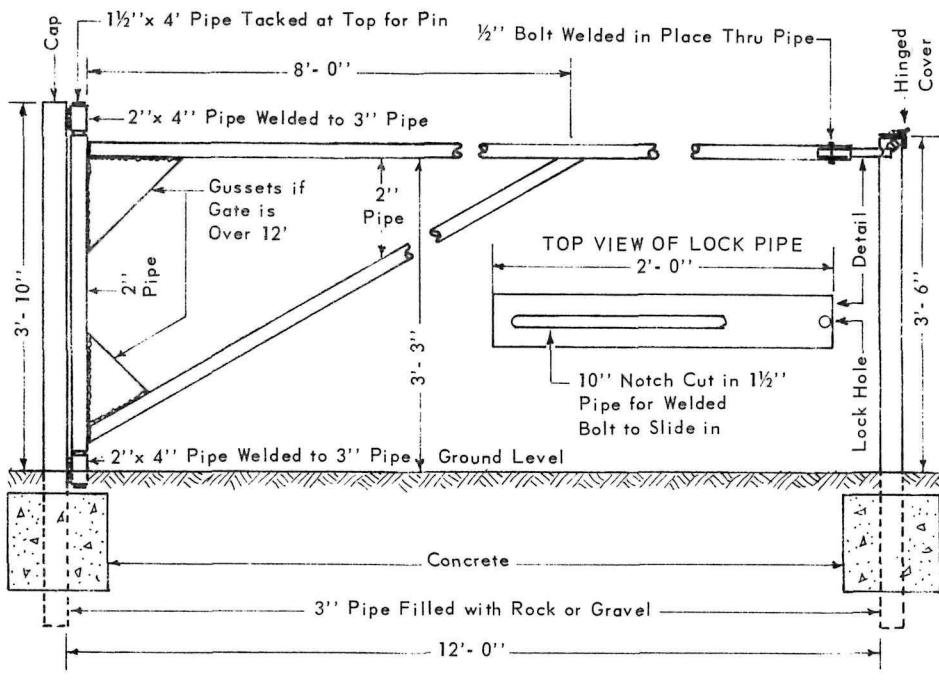
## A GATE TO THWART VANDALS

Paul Davidson, assistant park supervisor, Van Riper State Park (Michigan State Park System) designed the pipe gate shown in the sketch. It has proven to be effective against vandalism.

The drawing is self-explanatory, but

should you have any questions, write to Paul at the Department of Natural Resources, Champion, Michigan 49814.

G. Thomas Gregg, district parks supervisor, Michigan Department of Natural Resources, who sent the drawing to GRIST says there is just one drawback—if someone should fill the key hole with liquid solder or something similar, you've got yourself a job!



## SIMPLIFIED UNIFORM ALLOWANCE RECORD KEEPING

An improved and simplified system of recording uniform allowance payments was devised by Gladys R. Steele, general accounting clerk, at Natchez Trace Parkway where they process from 135 to 140

ments, both initial and replacement, the individual's card is pulled (or prepared if a new employee) and pertinent information posted thereto. When checks are received in the office the check number, date, and delivery dates are posted to the card.

A suspense file by months is set up and filed with the card file. Once each month the suspense file is checked and uniform allowance payment schedules are prepared

| October                                | November        | December                 |
|--|-----------------|--------------------------|
| July                                   | August          | September                |
| April                                  | May             | June                     |
| January                                | February        | March                    |
| <b>UNIFORM ALLOWANCE</b>               |                 |                          |
| Name & Title<br>Smith, John<br>Laborer | Sch.<br>10      | Sex<br>M                 |
| Period<br>6/16/70 - 4/16/71            | Amt.<br>\$45.96 | Check No.<br>76,907,820  |
|  | Date<br>6/9/70  | Delivery Date<br>6/12/70 |
| 5" x 8" Filing Card                    |                 |                          |

payments a year.

A 5 x 8 printed card provides place for the employee's name, title, schedule (type of uniform), sex, period covered, amount due, check number, date of check, and delivery date of check. When a schedule is prepared for uniform allowance pay-

accordingly. Any refunds which must be collected are also noted on the cards.

The card file is available to supervisors who may wish to check on their employees and to division heads and clerks who may wish to check monetary amounts for budget purposes.

## FREE FILM AVAILABLE FOR YOUTH ORGANIZATIONS

Mrs. Maxine Scarbro, director of women and youth activities for the West Virginia Department of Natural Resources, has the lead role in a new film called "Youth Can Save The Nation."

Slanted to elementary school children, the new film may be obtained free for showing from Walter Klien Co. Ltd., Carmel Road, Charlotte, N.C. 29211. Mrs. Scarbro, who is national chairman of the General Federation of Women's Clubs, said the film was jointly produced by the women's group and Sunshine Biscuit Co.

Another educational film "What America Is Doing About Conservation," co-sponsored by another bakery firm, may also be borrowed free from the same source.

## SELF-CONTAINED BUILDING CLEANUP VEHICLE

A three-wheeled vehicle adapted and equipped to improve standards of cleanliness and to reduce cleanup time and cost at Forest Service recreation sites carries its own 60-cycle, 115-volt power source. Most benefit is derived from use of the unit to clean comfort stations in large, compact developments with good access routes.

Detergent solution under high pressure, water for cleaning and rinsing, and a wet-vacuum unit for picking up excess water are provided.

The basic Cushman unit is not an all-terrain vehicle and should not be used for long distances over poor trails or cross-country. It is suitable for operation on secondary highways and forest roads, but transport by 7200 GVW pickup truck or trailer is more economical for any great distance.

Over a three-month period data were collected on 7400 fixture cleanings in more than 2500 comfort station cleanings at three locations. Comparisons were made between time required for manual cleaning and time required using the cleanup vehicle. At Flaming Gorge Recreation Area average time required to clean fixtures was reduced from 10.67 minutes to 5.31 minutes. Total time per comfort station dropped from 57.38 minutes to 29 minutes. Overall cost reductions at the three test locations varied from 0 to 60 percent.

Information in this item was adapted from Advance Report, Recreation Facilities Cleanup Vehicle, ED&T No. 2300-6, November 1970, U.S. Department of Agriculture, Forest Service, Equipment Development Center, 444 East Bonita Ave., San Dimas, Cal. 91773. A more detailed report of development and testing and latest information on plans, specifications and procurement may be obtained by writing to the Director at the preceding address.

## TRAILER-MOUNTED "SLIP-ON" FIRE PUMP

At Horseshoe Bend National Park personnel had tried loading a "slip-on" fire pump unit into a pickup when needed. This was found to be slow, hazardous, and particularly dangerous when loaded, since the unit could not be anchored firmly inside the truck-bed. The pump was permanently mounted on one truck, but this restricted use of the vehicle, or, as often happened, meant that the vehicle was in use for some other purpose and not reachable when needed for firefighting (not all park vehicles are radio equipped).

At the suggestion of Maintenance Foreman Billie S. Templeton, the fire pump was mounted on a small compact trailer. This shifted the park's position of dependence upon a single vehicle with the unit mounted on it, to a position which permitted any one of three park vehicles and two park tractors to pull the unit in an emergency. This allows the trailer-mounted unit to be kept at a central location from which it can be moved when and where needed by any of the park employees, using any available vehicle or tractor. No difficulty has been experienced with the trailer unit on the back-country fire breaks and lanes in the park.

In addition to making the fire unit more available, the new arrangement made it possible to dispose of one vehicle, thus saving depreciation and operation costs. It also has reduced repair costs on the truck on which the fire unit had been mounted (repairs necessitated by added weight of the fire unit).

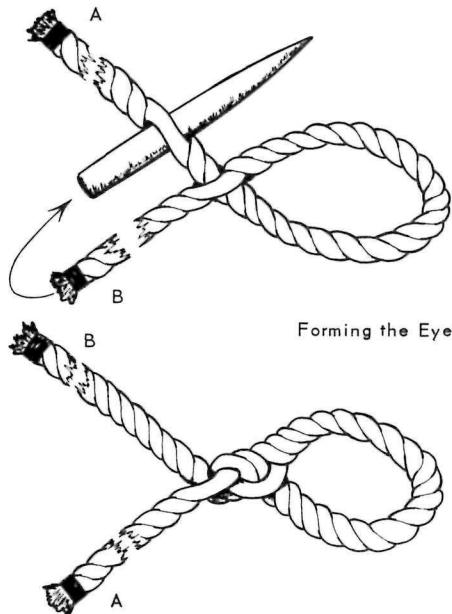
## INEXPENSIVE BOAT MOORING LINES

By incorporating three eyes and a side splice in a length of rope, a very effective and inexpensive bow mooring line for boats can be made. On permanent mooring, such as for patrol boats, high strength and safety are necessary requirements.

Harry A. DeLashmutt, supervisory park ranger, Great Smoky Mountains National Park, suggest 7/8" Nylon soft lay rope because of its high strength and the ease with which it can be spliced. Rubber boat "snubbers" can be used to compensate for water levels due to tidal fluctuations.

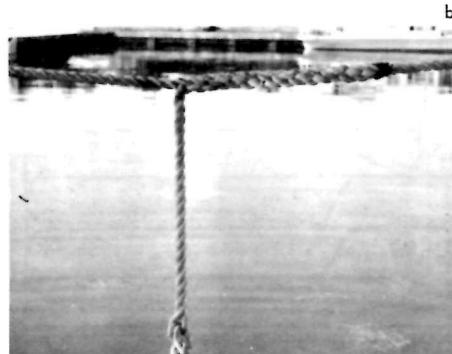
A cross-over line of 7/8" Nylon sup-

ports the main mooring line approximately 7 1/2 feet from the medium tidal level when extended between pilings in the boat slip (Photo A). At the mid point of the crossover, the main mooring line with the "snubber" is attached by a side splice



(Photo B). Connection to the cross-over should be the last operation in the project.

For the safety of the boat, a line should by-pass the rubber "snubber" and hold the boat fast if for some reason the "snubber" should give way. By the use of a halter eye worked into the line in two places this safety and mooring line becomes one unit of line without any breaks or splices. In forming the line (see sketch), one end of line is placed through a strand to form the eye. In order to "lock" the eye, the other end is taken through a strand on the opposite rope.



These eyes are strong, neat looking and easily made. The "snubber" can be placed between the two eyes by either a shackle or snap link of some kind (Photo C). Approximately one foot of extra length should be allowed in the safety line slack in order that the smaller "snubber" can work effectively.

At the end of the mooring line, a snap-hook secured by a thimble and eye splice finishes off the mooring in a quick attachment to a boat.

When a boat places a burden on the mooring line, the rubber "snubber" will stretch until it reaches a maximum point and the safety line will then take over the load with the strength of only one unit of line.

## HOW TO SPLICING A LOOP IN A LONG LINE

There are times when it would be convenient to have a loop in the middle of a long line. One might hesitate to tie in a loop expecting pressure on the line to pull the knot tight, making it difficult to remove. It could also permanently damage the rope fibers. John R. Davis of Shenandoah Na-



tional Park says a spliced loop will do neither of these things.

To tie the splice, unlay the line by twisting it back against itself. When enough line is spun out to take three tucks, make a loop of the desired size and splice in the three strands you have unlayed.

When the loop is no longer needed, the splice may be easily removed and the rope restored to its original condition.

## MECHANIZED TRASH LOADING

The Promenade, an attractive feature of Hot Springs National Park, is 1700 feet long. Along Bathhouse Row the sidewalk runs for an additional 2000 feet. This heavily used area requires frequent cleaning, and to reduce labor time a small street sweeper was recently acquired. Trash from cans and four restrooms along the way is also placed in the sweeper as it is not easy to take a truck into the area.

A central collecting point was established and the sweeper would dump the trash load on the ground at that point. It required 45 minutes a day for a worker to shovel all of the accumulated trash into a

dump truck, getting liberally sprinkled with dust and filth while he did it.

Foreman Lewis A. May has mechanized this step of the clean-up process by running the sweeper up a little concrete ramp at the collection point, where it empties its load into a bin (photo #1) attached to a hydraulic lift (photo #2). A dump truck is backed under the bin and the trash emptied into it (photo #3). Next, the bin is lowered onto the load of trash to compress it (photo #4). The trash is then hauled off to the dump. Loading time per year by the old method was 273 hours; by the new 61. Lew figures a saving of about \$550 a year.

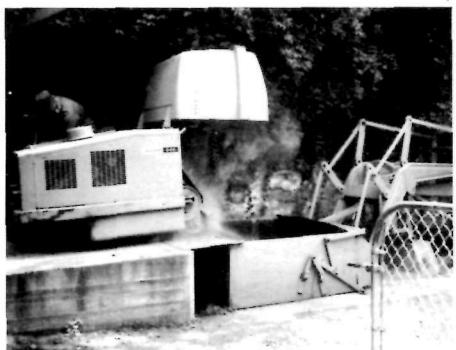
Maintenanceman Robert J. Butcher, Lassen Volcanic National Park, designed the tool, which he calls a channel hawk, to be used with a 1 1/4-inch putty knife instead of a trowel. The bottom of the 18-inch long channel hawk is a little wider than the putty knife to be used, and the



1



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2



3



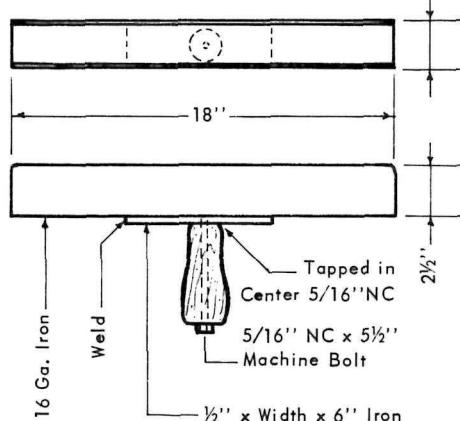
## NEW GROUTING TOOL

Using a hawk and pointed trowel in grouting weathered joints and cracks of ruins or other rock or concrete facilities, requires a considerable amount of masonry experience, particularly perpendicular surfaces and deep cracks.

Unskilled maintenance or stabilization personnel can do an expert job, and skilled workers will find the job easier to do, using this grouting tool (see photos).



1/8" Wider Than the Putty Knife to be used as a Trowel



channel is 2 1/2 inches deep. A handle is attached in the manner shown in the sketch.

Circular gaps left after removal of vegetation, cracks in concrete walls, cisterns and other constructions are deeply and quickly grouted, using the channel hawk.

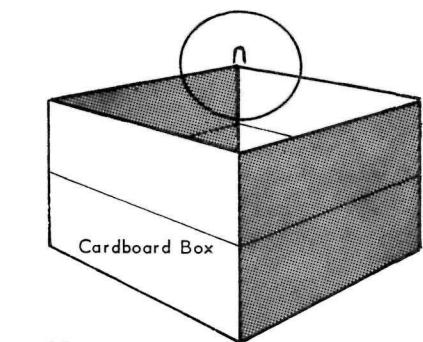
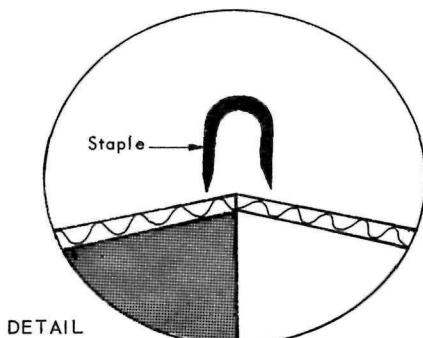
## FACT SHEET ON VISITOR CENTER DISPLAY

The enlarged photographs of plants and special park features which decorate the visitor center at Yellowstone National Park evoke many questions. John E. Casstevens, caretaker, suggested that a fact sheet be made available which would tell visitors where in the park photos were taken.

Such a sheet would be helpful to temporary and new permanent personnel and would increase visitor satisfaction.

## HOW TO KEEP CARDBOARD CASE OPEN

Did you know that an ordinary wire staple (the kind we use to build fences) is very handy to keep a cardboard case open while being used? All you do is



DIAGRAM

slip the staple down the side when the top is open. This information comes from Ed Fahey, senior park manager at Cherry Creek Recreation Area in Denver.

## COLOR GUIDE

Documentation on a master color chart of the actual color of every paint on parkways has been suggested by James T. Swindle, Natchez Trace Parkway, Tupelo, Mississippi. The chart would include interior and exterior colors, oils and latex paints.

For procuring GSA paint it is necessary to keep all the data possible on this chart. Every sample would have the intended use, stock number, type of paint, place acquired, and any other useful information. If a paint has been discontinued, the color would be available for matching instead of written formulas.

The Master Chart could be placed adjacent to the paint shaker so anytime a new color is introduced, a sample can be made on the spot.

Every color, including that for cannons, signs, quarters, comfort stations, and visitor contact stations should be available on this chart. This would save time and manhours when a distinctive color is needed, where many different colors must be added together to achieve the desired look. The chart will have the proper color pigments on file for easy mixing.

*No problem is so big or so complicated that it can't be run away from!*

From "Charlie Brown" by SCHULTZ.

## LOVEGRASS FOR ACID SOIL

Forest Service scientists, searching for ways to restore vegetation as quickly as possible on strip-mined coal spoils, have tested response of plants to varying degrees of acidity.

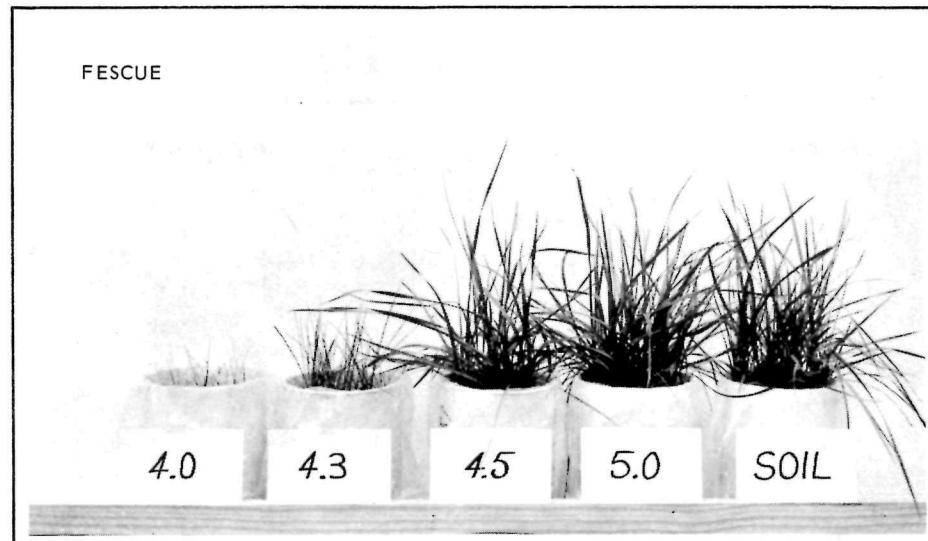
Weeping lovegrass is one answer to this type of revegetation problem. It has been shown that lovegrass can provide cover faster on more kinds of mine spoil than any other of the types tested, is more tolerant of acid conditions, and will establish cover on dry sites and withstand summer stress better than other grasses and legumes normally planted in such areas.

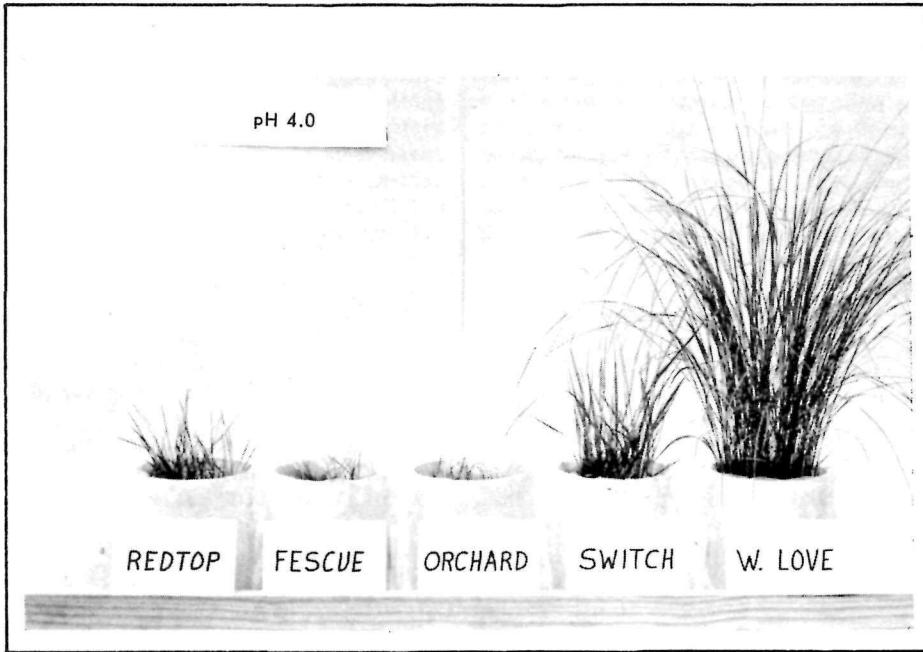
Soil amendments are often needed in such locations, and scientists recommend application of nitrogen fertilizer as stan-

dard procedure. Many spoils require application of phosphorus, too, and on some extremely acid soils liming is needed. Even acid tolerant grasses like weeping lovegrass normally will not establish good cover on soils more acid than pH 4.0.

Scientists feel that simultaneous planting of grasses and trees would be advantageous. Quick initial cover and overall site protection would be provided by the grasses, and trees would give long-term cover and site protection and be a commercial investment as well. They point out difficulties in this combined planting, however, for the initial herbaceous growth of the area often competes and impedes growth of young trees. Studies still underway seem to indicate that weeping lovegrass competes less with young tree seedlings than do some other species.

Information in this item was taken from Forestry Science Photo Story No. 12, Northeastern Forest Experiment Station, Upper Darby, Pa.





### MODULAR WASTE TREATMENT PLANT

Development and apartment builders can now locate their units without regard to sewer mains. A new patented modular waste treatment plant developed by Aquanox, Inc., utilizing controlled oxidation, meets all Federal, State and local specifications for suspended solids reduction, BOD and COD removals and disinfection.

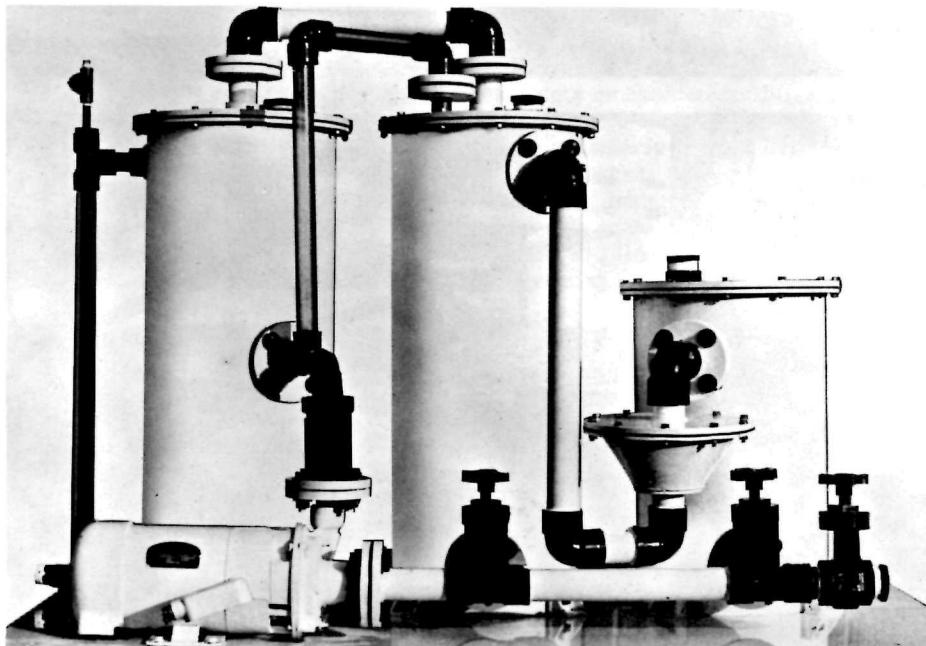
The unit is automatically controlled, eliminating the need for plant operators. In addition to its accelerated process time (over 50% faster than standard microbiological systems), initial cost and installation charges are low, and it occupies 30% of the space required for other types of similar flow capacity. Operational

economy is assured by minimal power requirements.

The treatment process utilizes the basic principle of instant delivery of excess oxygen and provides for rapid assimilation of the oxygen to hasten the bio-chemical and chemical oxidation of the wastes. At the same time biological organisms and raw suspended solids are hydraulically prepared to accept the oxygen under these accelerated conditions.

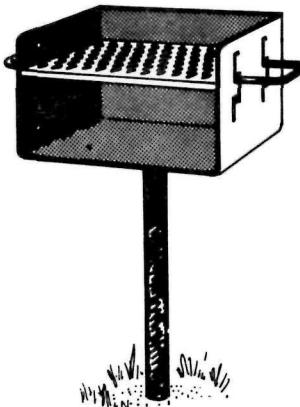
The process accepts BOD loadings in excess of 1900 ppm, and solids loading in excess of 8000 ppm.

For further information contact: F. Maurer, AQUANOX, INC., 140 Sylvan Ave., Englewood Cliffs, N. J. 07632 or J. Winterstella, THE STUART COMPANY, 300 Main Street, Orange, N. J. 07050.



### STURDY, PEDESTAL BAR-B-Q GRILL

Sturdisteel Company, Division of Central Texas Iron Works, P.O. Box 949, Waco, Texas 76703, makes this strong, simple Bar-B-Q grill (Model 53).



The fire box, which is 3/16" plate, 11" high with three sides closed, rotates 360 degrees. The one-piece cooking grill is 288 sq. in. and made of heavy duty 1/4" flattened walkway expanded metal. It is adjustable by simple means to 4, 6, 8, or 10" above the firebox. The pedestal pipe allows for 15 inches into pier or ground and 25 inches above, making it waist-high for comfort. It is permanently connected to the firebox.

The entire grill is painted with heat resistant (up to 600 degrees) non-toxic paint.

Prices are \$25 for 1 unit, \$24. ea. for 6, \$23 ea. for 13 or more. For additional information write the company.

### BUCKLE-UP WITH COLOR-CODED SEAT BELTS

You get into the car with the commendable intention of using the seat belt. Then the search begins. Which two among that jumble of straps and buckles are the right ones for your seat? You try a couple—so, they don't belong together. Well, hang on to one and try it with another. So that isn't right either. Oh well, you've still got a couple of choices. But now your patience has run out—put any old two together. Somebody with a bay window must have used the belt last. Try to adjust it down to your size. By this time the driver has pulled in to your destination and it's time to unbuckle anyhow.

Is there any way to avoid that kind of frustration? Sharon A. Harned, personnel assistant, Western Regional Office, NPS, suggests a way. Using paint, enamel, or other easily applied marking material, in as many colors as there are seat belts, put the same color on the matching units of each belt (either on the strap or on the buckle).

Not only is the confusion eliminated, but greater protection is provided if the matching units are together and properly adjusted.

## DECALS FOR EDUCATION AND AS TRAIL SIGNS

A great spider was silk screened on some of the trail signs at Joshua Tree National Monument. Before destroying the stencil, Donald M. Black experimented, running some copies on decal paper and adding the name of the park and identification of the spider. The idea was to offer the decals for sale.

The white 5" x 5 1/2" decal square should be first mounted on a light background if the decal is to be placed on a dark surface, otherwise it can be mounted directly on a light surface.

Don suggests that the decals might also be used as replacement signs on trails and elsewhere. Cost-wise, masonite is about half that of decal paper, but storage-wise the decals require only a fraction of the space required for masonite, and the cost in time and materials for mounting is much less for decals than for masonite. Metal photos can't even enter the competition where vandalism and replacement are high factors, Don says.

## A GARDEN OF WORMS

For fishermen who would like to raise their own worms, the Maryland-National Capital Park and Planning Commission notes this can be done by constructing and sinking a box in the ground, and coating the outside with wax or tar to preserve the wood.

Build a box large enough to hold a good supply of worms, leaving no cracks for the worms to crawl through. Bore two holes in the bottom for drainage and cover with a copper screen.

Select a well-drained spot and bury the box with a few inches above the ground. Fill the box with layers of sod or decayed leaves and soil; then drop in a few hundred worms. They will burrow down in the soil. Cover the soil with a damp burlap bag and keep moist by watering frequently during the hot summer, but cover the box in rainy seasons to prevent it from becoming flooded. In the winter cover the box with a heavy layer of leaves.

## POP-TOP PICTURE HANGERS

"Pop-Top" ring tabs from beverage cans can be used for hanging pictures, suggests John Davis, naturalist at Shenandoah National Park. Many times plaques, half models, etc., cannot be hung conveniently using picture-hanging wire tacked across the back. And in humid areas a glue-on hook will pull loose. A good substitute is the "Pop-Top" ring tab.

Simply pull off the portion that was ripped out of the top of the can, drill a 1/8" or 3/16" hole in the spot where the ring tab was attached and fasten the tab

with a screw or nail, to the back of the object to be hung.

If you want the object to lie flat against the wall, route or carve out an area large enough and deep enough to accommodate the whole tab and fasten it inside the routed area.

Those who don't use canned drinks should not despair. They can always pick up the rings in picnic grounds and parking areas.

## PAINT ROLLERS SAVE TIME

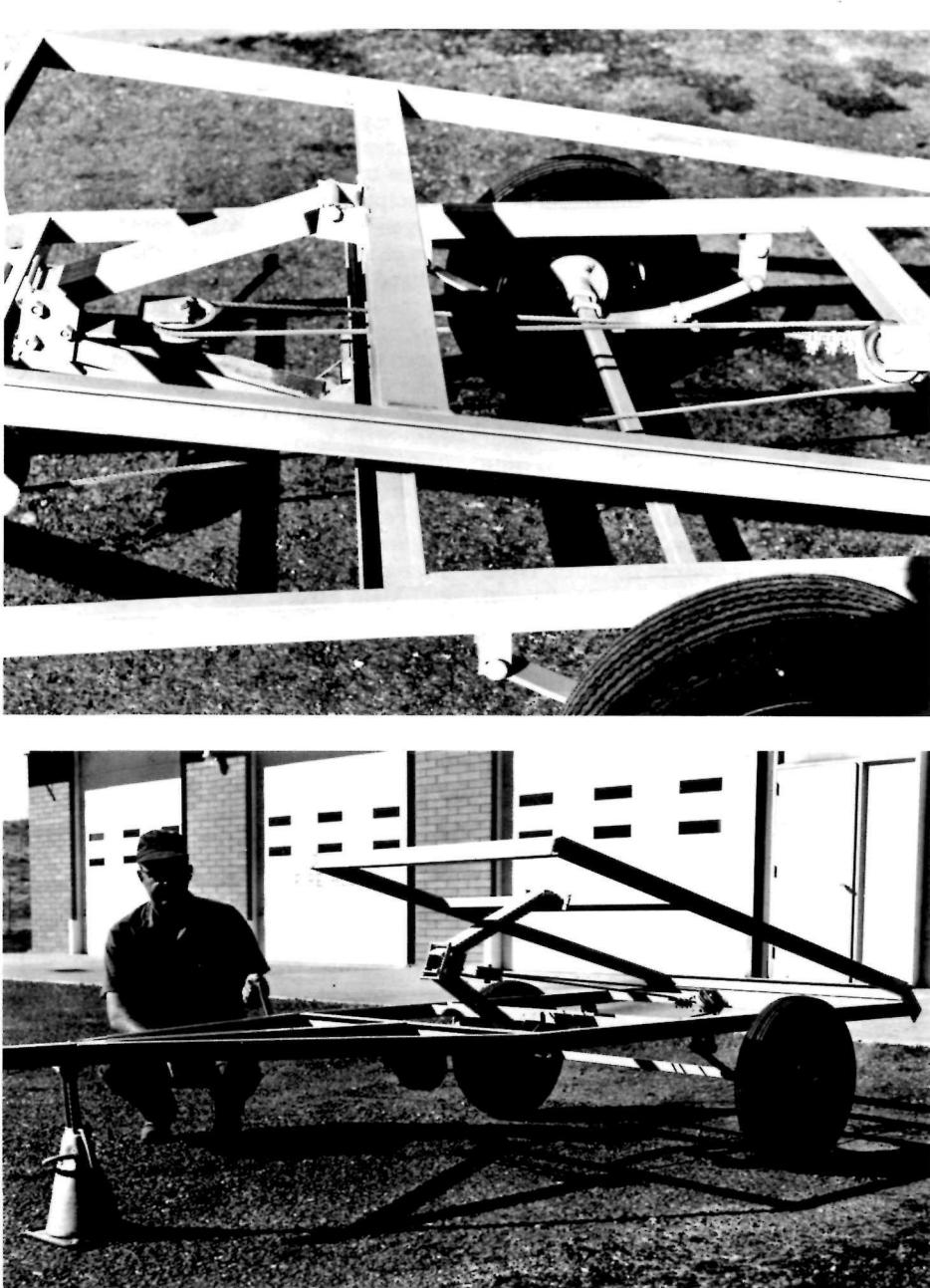
Ordinary paint rollers can be used to varnish doors in a building where several doors need attention. The roller saves time, according to Manuel V. Goodman, maintenance man, Dinosaur National Park, since seven doors can be done in the time it takes to varnish one door with a brush.

## TILTING LITTER

Use of a dump truck, similar in principle to a child's toy, for dumping litter into a trench has been suggested by James Joslen, automotive mechanic at Glen Canyon National Recreation Area.

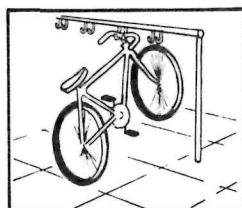
Since most park land fills are without slope, dumping from a non-tilt trailer required that litter be manually shoveled from the unit into the trench. Now, using a winch and dumping mechanism with a 45-degree angle ramp, it is possible for one person to dump the litter into any type trench.

At Glen Canyon, one half man-hour per day has been saved for each trailer in operation, or about 10 hours per week, with their four trailers in operation. At an average wage of \$4.00 per hour, the savings equal approximately \$40.00 per week.

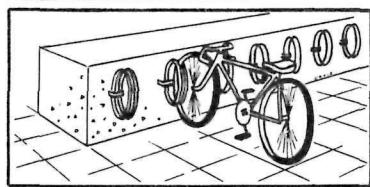


## BIKE PARKING RACKS

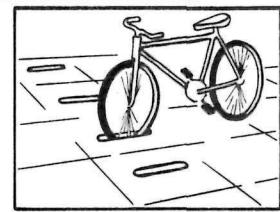
Bay Area Rapid Transit has provided bike parking at all BART surface and aerial stations, as well as at subway stations equipped with plazas, in the San Francisco-Oakland area, according to the area's "Commuter's Newsletter." "Along with the private automobile, the feeder bus and the foot traveler, we consider the bicycle an important element in the total BART transportation picture," said general manager B. R. Stokes.



Hook Rack



Ring Rack



Slot Rack

Twenty-seven of BART'S 34 stations will provide facilities on three basic rack designs illustrated here from BART architects.

One utilizes slots in a poured-concrete base, with the slots receiving the front wheel and keeping the bike in a standing position. A flush-mounted metal ring near the slot will allow chain and padlock attachment.

A second design consists of metal tubes that provide two hooks per bike, allowing it to be padlocked to the pipe support. A third utilizes two metal hoops fixed to a concrete block. The front wheel is locked between hoops.

## CANOE-A-CADE

At Everglades National Park, rangers have been leading Boat-a-Cades through the Mangrove waterways for a number of years. This visitor participation activity has been extremely popular and proves to be a very worthwhile ranger-visitor contact. However, it has been restricted to motorized boats for use only on larger rivers and bays.

Harry A. DeLashmutt and George E. Lehto, rangers at Everglades, have suggested canoe trips through the wilderness waterways. On a Canoe-a-Cade, there would be no problem with noise pollution so wildlife would not be disturbed.

Three canoe trails have been developed at Everglades. The Canoe-a-Cades have been a great help in familiarizing visitors with these new trails. Park concession rental canoes would make it feasible for any visitor, regardless of boating experience, to participate in a wilderness Canoe-a-Cade.

This suggestion was implemented on a trial basis at Everglades in spring 1969, with amazing success.

## BIKE CARRIER PLANS

A rugged cartop bike carrier holding 9 bikes in the forward portion and a collapsible box in the rear for all luggage (or more bikes) to fit station wagons has been designed by Sol Weber, 31-51 37th St., L. I. C., New York 11103. He offers plans (with photos) for 50¢ plus a stamped, self-addressed envelope.

## TEXTURED PANELS

Textured panels, having the look and feel of barnwood, are available now from Marlite. Colors included in the new "Habitat" line include Cannonade Red, Braid Gold, Commons Green, and Lexington Blue.

These 1/4" thick prefinished panels are available with harmonizing moldings. Marlite's Barnwood paneling is highly resistant to hard wear, stains, heat and moisture. The plastic-finished hardboard can be damp-wiped clean.

Barnwood comes in 16" x 8' planks, which are tongue-and-grooved to simplify fitting. Special wallboard adhesive and concealed metal clips assure a strong bond.

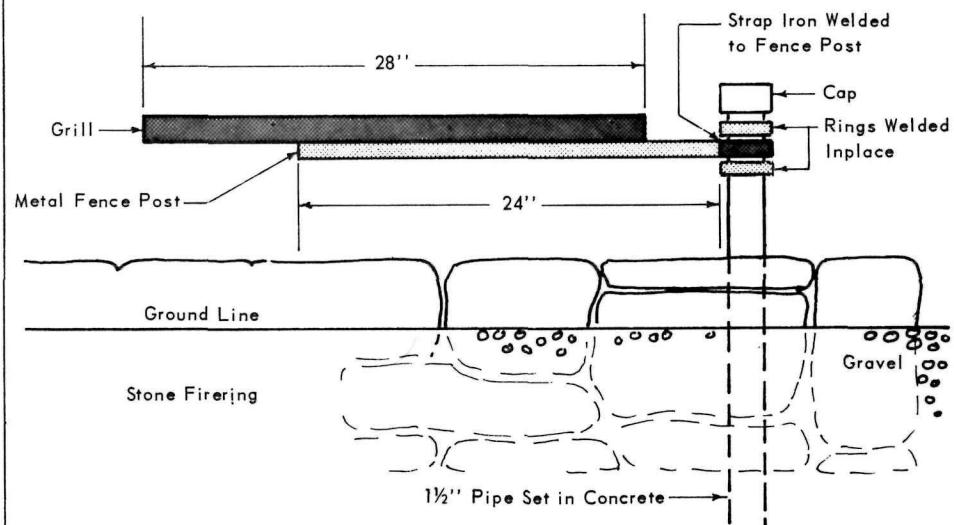
For more information on the new "Habitat" line write the Commercial Department, Marlite Paneling, Dover, Ohio 44622.

Weld grill or gravel screen to an old steel fence or sign post (see sketch). Attach this grill unit to a 1 1/2" pipe using two plates or rings which will slip down over the pipe. Hold the unit in place by welding a plate or ring above and below it.

The unit swings out of the way with a touch of a foot, leaving the pit aesthetically pleasing for a bonfire. Time needed to service the campground has been reduced since the need to clean up campers' random bonfire sites is eliminated.

## FIREPIT WITH SWING AWAY GRILL

When campers want a bonfire they often build it outside the standard cooking fireplace. That's what Maintenanceman Charles E. Zufelt found at Navajo National Monument. So, when it became necessary to replace the old fireplaces which had lift-up grills, Chuck designed a circular firepit with a grill which could be swung out of the way when not in use.

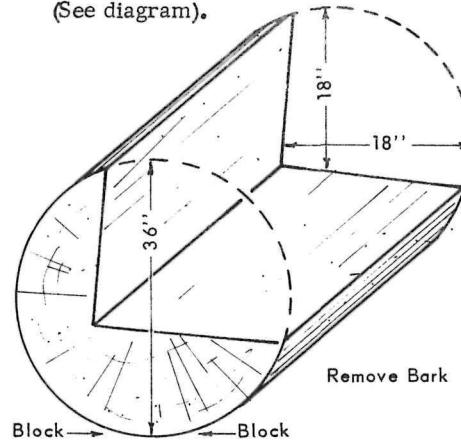


## RUSTIC BENCHES

If you have logs that are three feet in diameter or larger, with the help of a chain saw you can make a rustic bench, suggests Andrew Berry, camp ranger, at Camp Manatoc, Ohio.

The bench (or set of chairs) can be placed at a scenic spot beside a trail or at a lake shore. They must be blocked to prevent them from rolling.

Mr. Berry suggests use of logs 6 or 8 feet long for benches and 2-foot long logs for a chair. (See diagram).

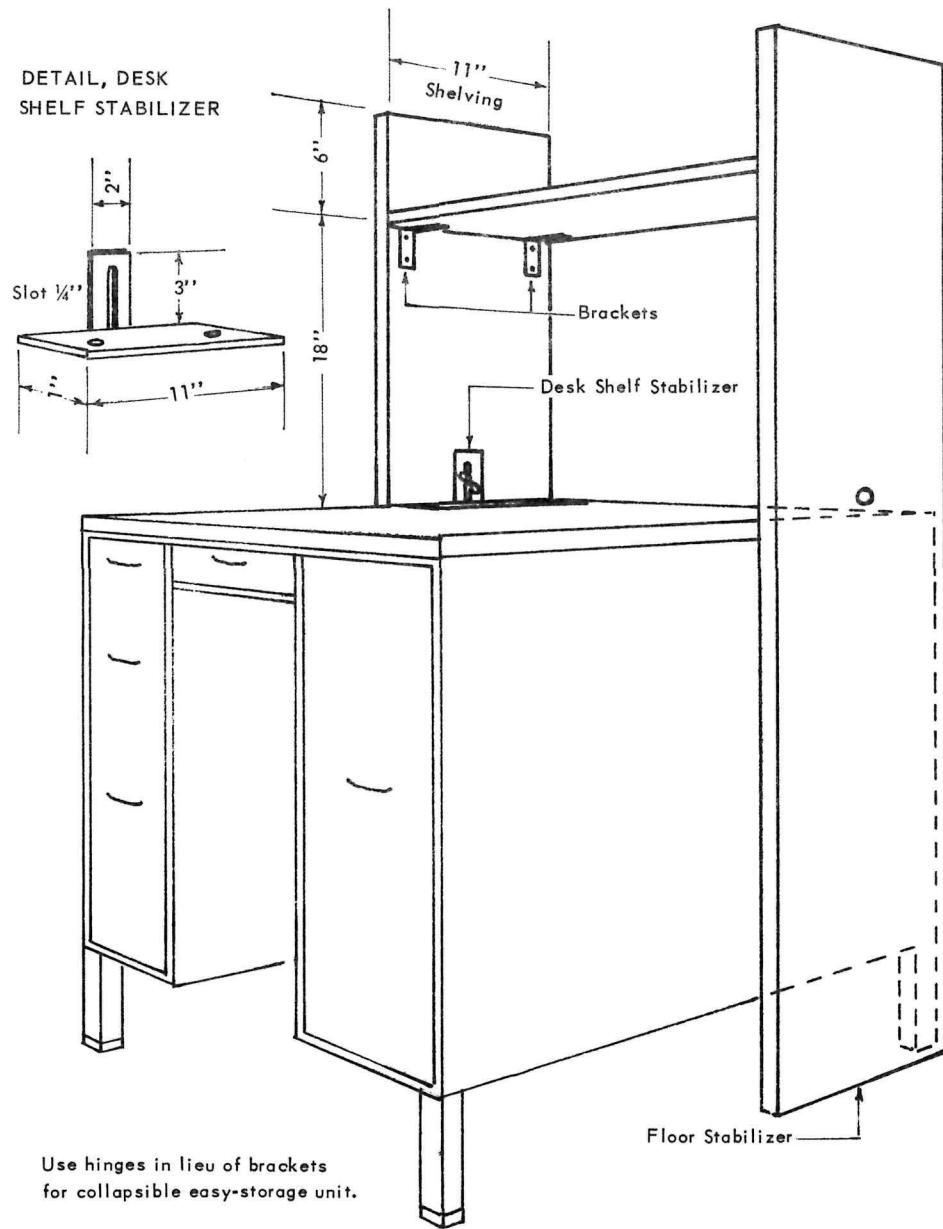


## SPACE-SAVING DESK SHELF

A space-saving desk shelf has been suggested by Walter O. Bremer, procurement and property management officer, Jefferson National Expansion Memorial. The unit, when attached to a desk would provide easy access to binders, books, purchase files, records or other often-used

reference materials now taking up desk space or located at areas away from the desk (see illustration).

The shelf would also be handy when two people, occupying opposite desks use the same references. Efficiency is increased through easy reaching of working data, more desk space and less leg work. Costs will vary with the length of the desk and the number of shelves.



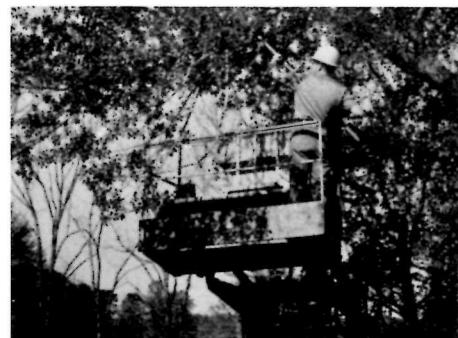
## LIMB REMOVAL WITH SAFETY

A protective work cage can be adopted for use in limb removal and tree care along parkways, says Herbert W. Adams, maintenance foreman at Natchez Trace Parkway, Tupelo, Mississippi.

This dismountable cage can be installed and removed from the bucket of a front-end loader in a matter of minutes. It permits safety and greater efficiency in removal and care of tree limbs.

A maintenance workman can be lifted to the immediate proximity of his work, permitting the use of a small chain saw instead of the long-handled limb saw. This eliminates some of the need for professional tree crew work and accounts for a monetary savings of some \$500.00 annually for each 60-mile sub-district using it.

Construction costs are negligible, consisting only of labor and scrap 1/2" galvanized pipe.



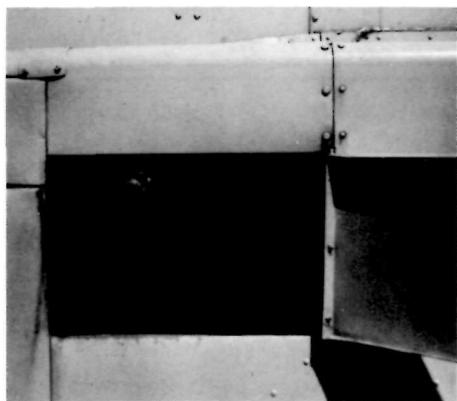
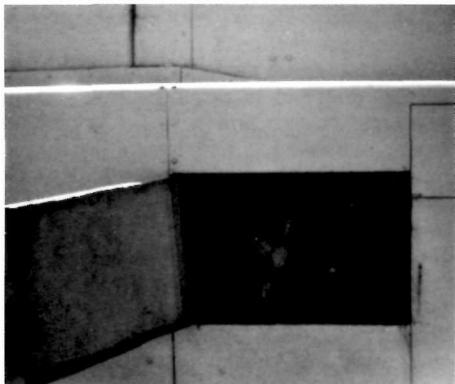
## MULTI-PURPOSE 2000-GALLON WATER TANK

In water-scarce Badlands National Monument, Maintenance Foreman Mayo O. Zabriskie has come up with a rolling 2000-gallon supply.

From the Air Force (Ellsworth Air Force Base, S.D.) he obtained a surplus alcohol-water tank used for refueling aircraft. Mayo redesigned it with the following features.



A spray bar attachment for road construction.



Two independent high-pressure water pumps, one mounted on the left side and one in the back compartment.

Five connections for high-pressure water outlet; two on the left side, two on the back, and one on the right side.

Storage for 500 feet of linen hose in the right side of the tank.

Two live reels in the back with two electric-powered hose rewind reels.

Night lights and spotlights in the rear for night use.

Two ways for leading the tank: (1) from stock ponds or streams with a selfpowered drafting hose and (2) pressure water system.

The tank can be used in many ways, the most obvious being firefighting. (A recent call from Pine Ridge Indian Reservation brought the unit into action against a 1000-acre grasslands fire, where it was used to reload six fire rigs in an area



virtually without water.) It is kept filled with water during high fire-danger periods, and is ready for dispatch simply by hooking it onto a 5-ton GMC truck-tractor. It is also used to water trees, shrubbery, and grasses and for earth compaction requiring watering down: road shoulders, road base repair, and the like.

The trailer surplus acquisition cost was \$6,702 and the conversion cost, \$350.

## NEW USE FOR OLD TAG

John Davis, naturalist at Shenandoah National Park, has a use for the old NPS uniform name tags.

Uniformed Park Service employees have recently changed the type of name tags they wear on their uniforms from one of routed plastic to a metal type. The old tags can continue in use as identification labels for suitcases, tool boxes, binocular and camera cases, and many other items.

Pull off the plastic strip on the back with the two metal posts through it; apply contact cement to the back of the name tag and to the surface on which it will be attached. After the cement dries, center the tag and press firmly.

## NEAT CORRECTIONS

When using work sheets in preparing budgets and other detailed information sheets, erasures tend to wear away the surface of the paper and make figures, and/or letters, almost illegible.

Patricia Flanigan, information-receptionist, Joshua Tree National Monument, California, suggests spraying the surface with a thin coat of spray fixative. When it has dried thoroughly, the surface will "tolerate" many errors. The product used by Patricia is LACQUER (Fixative) NITROCELLULOSE, 8010-598-5179 - Fed. Spec. #TT-L-0034.

## PLASTIC TENT FLY

The plastic tent fly available through GSA has been redesigned and improved. The new fly, constructed of two layers of vinyl laminated to nylon cloth, is very durable and weighs less than half as much as a comparable canvas fly. This material will not rot or mildew and cannot be damaged by pests.

The kit, including ropes and sliders, weighs approximately 20 pounds and measures 16 by 24 feet. A patching kit and instructions are included in the \$49.00 set. Arrangements are being made with GSA to stock stakes and poles.

## "MIRROR, MIRROR, ON THE WALL"

A full-length mirror, mounted to the back of the storage room door (off from the lobby) to give employees a chance to check their appearance before going in front of the public was suggested by Bernice R. Ketner, secretary, Colonial National Historical Park in Yorktown, Virginia.

The mirror would reveal to employees any missing buttons, runs, unshined shoes, rips in uniforms, or bulging pockets. A sign, "See yourself as the visitor sees you," or words to that effect could be mounted over the mirror.

## PROTECTION FROM POOL PERILS

Safety precautions for swimming pools must be taken from the time construction begins, the National Safety Council warns. Making certain that the pool itself is designed for safety is the first precaution. During construction the most important safety device is a temporary fence erected before the first spade of dirt is turned, warns the Council, because children frequently drown in excavations that have filled with rain water.

If permanent fencing of private pools is to give adequate protection, the following points should be considered, the Safety Council says:

1. Height is important; a minimum of four feet is recommended so that a young child can't grasp the top by reaching or jumping.

2. The fence should be built into the ground as well as above it, so that children can't squeeze through gaps made by water erosion or small animals.

3. Construction materials should not provide convenient hand or footholds and should be sturdy enough to prevent breaking through. Chain-link fences can be climbed by even small children, and if used should, therefore, be built with an outward-curving or angular barrier at the top.

4. Over-hanging trees or shrubbery provide a means of entry to the pool area and should be trimmed back to eliminate the temptation and hazard.

5. Any gate leading to the pool should be equipped with a self-engaging latch out of reach of children. In addition, it should have a permanent lock that only a person in authority is able to open. The combination or location of the key should not be common knowledge.

Alarm systems and most types of pool covers are secondary devices for further protection against accidental drowning, but should NEVER be regarded as substitutes for the primary safety precautions: adequate fencing and responsible adult supervision. One problem with pool alarms is the human factor: people often forget to reactivate them after each pool use. There is also the chance that by the time someone responds and reaches the pool the victim may have drowned. And, they are of little value unless someone hears them.

Pool covers are increasingly being promoted as safety devices, the sales pitch being that if a cover is kept on at all times when the pool is not in use no one will get in and drown. However, they are made of non-porous fabric or film which can trap rain, snow, and debris which collect and form a small pool in the middle. Someone

walking out on the cover can slide to the center as it gives under his weight, and the water depth may be great enough to cause a drowning. If this condition exists, a small pump (available from pool dealers) conscientiously used will keep the cover free of water. Some dealers promote an interwoven mesh type cover, saying that it will eliminate the problem of water accumulation. While it prevents the water accumulation, there may be enough give in the center to lower a person down into the pool water, thus creating the same hazard. Pictures may be shown by dealer or salesman of a mesh cover supporting a number of people. National Safety Council suggests that each person may be so located on the cover that his weight counterbalances that of another person. Make certain that one lone person when standing in the middle would not sink down into the pool. A legitimate dealer will arrange a demonstration.

## HELP YOURSELF WOODBIN

Instead of placing a supply of firewood at each campsite or picnic unit, Maintenance Supervisor Otis E. Robertson, Natchez Trace Parkway, designed a community supply woodbin.



The bins are easy and economical to construct using 6" x 8" timbers, one piece of 4' x 8' plywood for the top, four pieces of angle iron for the inside corners, and a few lag bolts, hinges, and so forth. The hinged top of the 4' x 8' bin has a hasp and lock, but the 6-inch cracks allow a camper or picnicker to remove his own supply.

While legitimate visitors can obtain their wood as needed, theft of quantities by others is discouraged. Protected by the bin, wood is always dry. Another advantage is about a 50% saving of caretaker

time formerly needed to distribute wood to each unit.

These woodbins have been in use on Natchez Trace Parkway for several years, and it has been found that each one will serve six to eight campsites and ten to twelve picnic sites. Saving in wood and labor is estimated at about \$125 a year.

## MULTI-MEDIA FIRST AID COURSE

Noting that most accidents among personnel in the Midwest Region happen to seasonal employees, Jean M. Gray, safety clerk, Midwest Regional Office, proposed that all employees be required to take the new Multi-media First Aid Course.

Jean felt that the usual first aid course consumed too much time in unproductive ways, required too much "read and remember," and provided too little practice.

The new course, which is approved by the American Red Cross, consists of four 16 mm color films, four small workbooks, and practice. Only 7 1/2 hours are required for this new course, including review and testing, as compared with 8 to 16 hours for the old. Performance is checked and evaluated at each step and errors are corrected by the instructor when they are made. Materials are available through the Red Cross.

Jean feels that there might be a psychological dividend in requiring everyone to take the course which would pay off in fewer accidents. Employees would be more aware of hazards, and perhaps more careful. The seasonal employee, particularly, might feel that his employer (the Government) is interested enough in his safety to require the training, and also feel reassured that, should an accident occur, his fellow employees would know what they were doing in caring for him until medical help was available.

## THE SURVIVAL KIT

Glenn O. Snyder



Get 'um while you can!