

GRIST

January/February 1978

Volume 22/Number 1

Using Wood Stoves Wisely and Safely

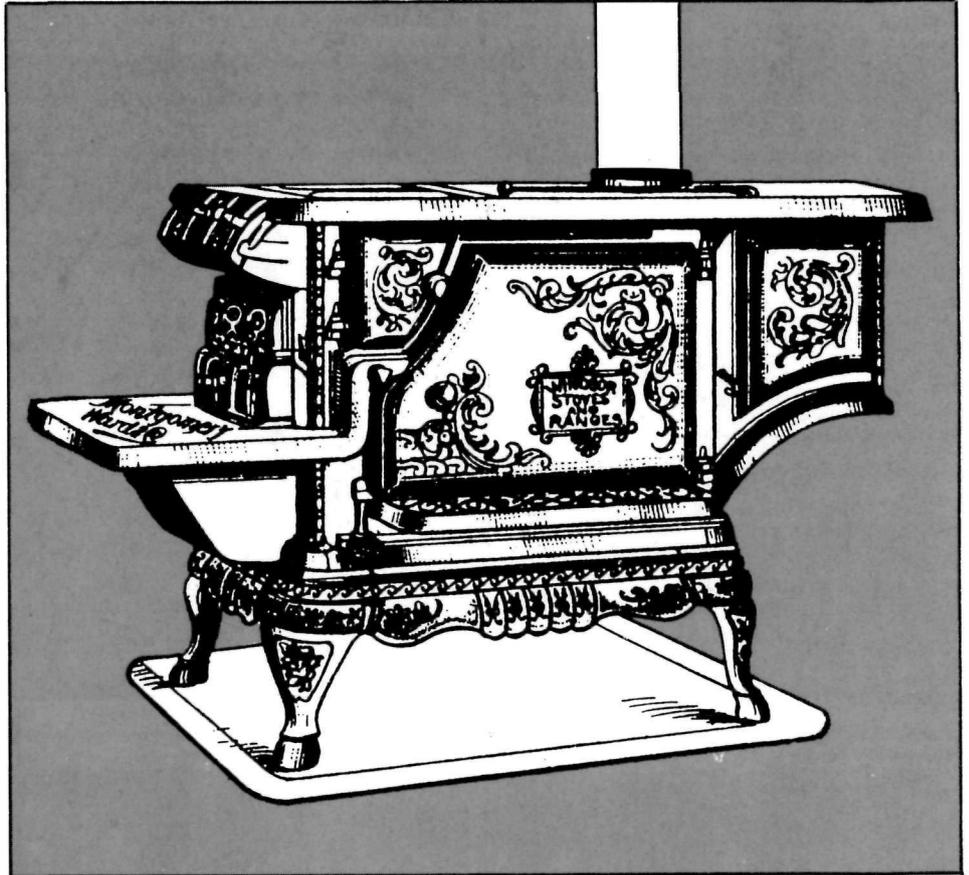
Wood stoves can be an economical source of heat. However, to avoid fire hazards and inefficient use of wood, which should be conserved like any other resource, certain precautions are necessary. *The Old-House Journal* recently offered the following tips.

Air flow is the key difference between burning wood and heating with wood. When buying a stove, choose the model with the most effective control of air-flow. The amount of cast iron is also important. Generally, the more cast iron, the greater the heating capacity of the stove. Especially good are stoves with cast iron chambers and baffles.

Most stove fires result from faulty chimneys. Be sure your chimney is lined. You can buy straight, sectional metal liners, or use a tile liner on chimneys that have bends or doglegs. The "thimble," where stove pipe enters the chimney, should be tight; cement any openings which may cause the pipe to wiggle. And make certain the stove pipe is ventilated adequately where it passes through the wall or floor. Hot stove pipes coming in direct contact with any combustible material can easily start fires. To cool gases and give you better control of the draft, it is good to have your stove pipe travel vertically as far as possible before entering the chimney.

When selecting stove pipe, buy the heaviest gauge metal available. The more expensive, metal-asbestos pipe is well worth your investment. It is far better and lasts longer than sheet metal. Whatever system you choose, however, be sure to have it checked out by a home-heating expert, fire marshal, or other qualified person.

Clean your stove pipe periodically; dangerous fires can start in dirty pipes. Tap the pipe. If you hear soot falling, it's time for a cleaning. Pipes jiggle apart easily, but be sure your fire is com-



pletely out before disassembling the pipes for cleaning. To tackle long lengths of pipe, stuff an old burlap bag with rags and newspapers, tie the bag to a rope, and pull through the pipe. Ash builds up quickly in the elbow. Scrape it out every few weeks to maintain a good draft.

Burning only dry, seasoned hardwood cuts down on the need for cleaning. Commercial soot destroyers also can be used. A note of caution: be careful about using a vacuum cleaner inside your stove; the airflow-suction will ignite even the smallest spark that makes its way into your machine.

Keep your stove and stove pipe 3' (0.91 m) from the wall or use asbestos sheets to protect the wall. Keep the stove 10' (3.05 m) from furniture so the dry

radiant heat won't crack the wood or loosen veneer. Put something like bricks, slate, or metal-covered asbestos pads under the stove for floor protection; and extend it at least 1' (0.30 m) beyond the stove on all sides.

The wood you use affects the efficiency of your stove. Softwoods like pine, spruce, and poplar burn more quickly and give less heat than hardwoods such as maple, oak, or beech. Pine and spruce also have a lot of sap which means creosote—a fire hazard—in your stove pipe or chimney. Generally, the greener the wood, the greater the creosote for both soft and hardwoods. Use wood that has been seasoned for not more than one year. After a year, the wood begins to rot and attract bugs.

Ingenuity

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.

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The Park Practice Program includes: *Trends*, a quarterly publication on topics of general interest in park and recreation management and programming; *Grist*, a bimonthly publication on practical solutions to everyday problems in park and recreation operations including energy conservation, cost reduction, safety, maintenance, and designs for small structures; *Design*, a quarterly compendium of plans for park and recreation structures which demonstrate quality design and intelligent use of materials.

Membership in the Park Practice Program includes a subscription to all three publications and a library of back issues arranged in binders with indices and all publications for the remainder of the calendar year. The initial membership fee is \$80; annual renewal is \$20. A separate subscription to *Grist* is \$15 initially and \$7.50 on renewal. Subscription applications and fees, and membership inquiries should be sent only to: National Recreation and Park Association, 1601 North Kent Street, Arlington, VA 22209.

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 the editors.

Articles, suggestions, ideas, and comments are invited and should be sent to: Park Practice Program, Division of Federal and State Liaison, National Park Service, Washington, DC 20240.

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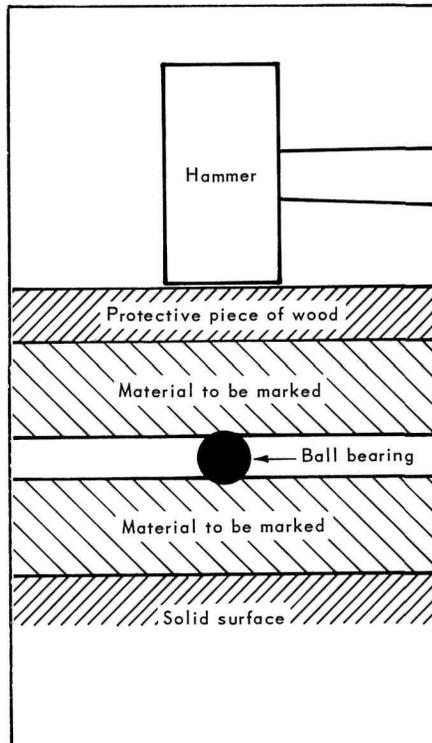
The following helpful hints will make your job a little simpler, a little more efficient. Send in your ideas to us at *Grist!*

Marking for Matching Holes

Marking holes for drilling in any "blind" location, where matching is needed in mating objects is always a problem. But Glenn L. Hartman, manager of Black Canyon State Park, Emmett, ID, has a clever solution.

Temporarily attach a very small steel ball bearing to one of the objects to be drilled, locating it directly over the center of the desired hole. According to the material it can be attached with scotch tape, a small dab of grease, a small "dike" of granulated substance such as salt, dirt, sugar, etc., or simply laid to rest in a center punch mark.

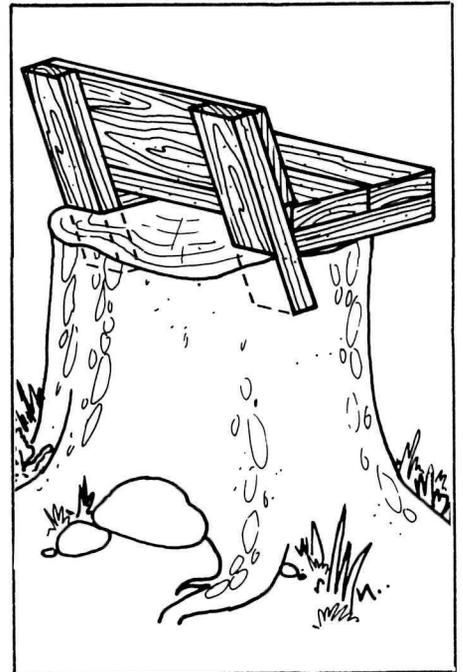
The second object to be drilled can be lowered carefully to its aligned position just touching the bearing . . . then pushed, hammered, rapped, mauled or pressed as needed to cause the ball bearing to indent a mark on each of the objects to be drilled.



Build a Stump Bench

No stump remover? Need a few more benches? James Montavon, an employee at Russell Forest Preserve in DeKalb, IL, found one solution to these two problems that many park and recreation managers face. His solution: stump benches.

Using a chain saw he squares the top of the stump for a flat surface, then makes a lengthwise groove in the stump for a back support. He nails a board seat to the stump and the back support to the board seat. The result: a cheap, sturdy park bench!



Portable Information Display

Visitors to Crooked Creek State Park in Pennsylvania make good use of this portable display brought to our attention by Park Superintendent Douglas V. Hoehn.

The display is made of three 24" x 72" (0.61 x 1.83 m) pieces of ¼" (.625 cm) ply-

wood, framed with ¾" x 2" (1.875 x 5.08 cm) wood strips for rigidity. The three sections are joined with short pieces of piano hinges.

The display can be folded into a triangular shape or opened for one-side viewing. When the time comes to move the display or use it in a different format, it is easily disassembled by removing the hinge pins.

The Crooked Creek display includes a

map of park facilities lighted by a six-volt battery. The two side panels contain "Whatsit" boxes—holes in the plywood through which little, and sometimes big, fingers can poke in unseen examination of various natural objects. Other seasonal displays and park handouts on camping, hunting, fishing, and boating complete this "information center."



"Boonie Buggy"

How can you provide at least some of the comforts of home to large groups of horsemen, backpackers, and Scouts, yet leave the wilderness intact? The staff of the East Bay Regional Park District in Northern California have solved this dilemma with their "Boonie Buggy."

Yankee-rigged with old and new parts, this sturdy trailer carries toilets, a cooking brazier, trash cans, and fresh water. When the overnight campers move on, the trailer is hauled back to the Corporation Yard (the maintenance center) for convenient cleaning and re-supplying.

Further queries on the "Boonie Buggy" should be addressed to Tom Lynch, Superintendent of Maintenance, EBRPD, 11500 Skyline Boulevard, Oakland, CA 94619.



Storage and

An Original Design for Slide and Postcard Display Rack

Michael L. Fortin, maintenanceman at Minute Man National Historical Park, Concord, MA, has come up with an attractive and functional display rack for slides and postcards. Without his ingenuity, the North Bridge Visitors Center would not have such a rack, for nothing like it is available commercially.

Like all good ideas, Fortin's is simple. Overall, the rack measures 24" x 26" (0.61 x 0.66 m) and is four inches (0.10 m) deep. It consists essentially of a light box in the center—for display of two strips of slides at a time—surrounded by areas for stocking and displaying additional slides and postcards.

The unit presents an attractive appearance, being framed and enclosed with shelving material, pre-finished walnut formica with vinyl finish. The display panel is made of 1/8" (.3125 cm) masonite with blue pastel finish. Material and labor costs for the rack were substantially less than a unit custom-made by a showcase company.

Fortin won a \$75 Incentive Award for his functional design.

Wall mount, 3/4" x 18"
(1.875 x 45.72 cm),
fastened by screws.

Overall size: 4" x 24" x 26"
(0.10 x 0.61 x 0.66 m)

Light box: 3 5/8" x 6" x 13 3/4"
(0.09 x 0.15 x 0.35 m)

Component parts:

2 pcs. pre-finished shelving,
3/4" x 8" (0.02 x 2.44 m),
walnut formica w/
vinyl finish.

1 pc. 1/8" (.3125 cm) masonite,
30" x 30" (0.76 x 0.76 m), w/
blue pastel finish.

1 pc. 3/8" (.9375 cm)
plywood backing, glued,
26" x 26" (0.66 x 0.66 m)

1 pc. 3/4" (1.875 cm) pine
strut, 3" x 18" (0.07 x 0.46 m)

1 ea. 25 watt bulb w/
candelabra base; snap
switch; 5' (1.52 m)
electric cord.

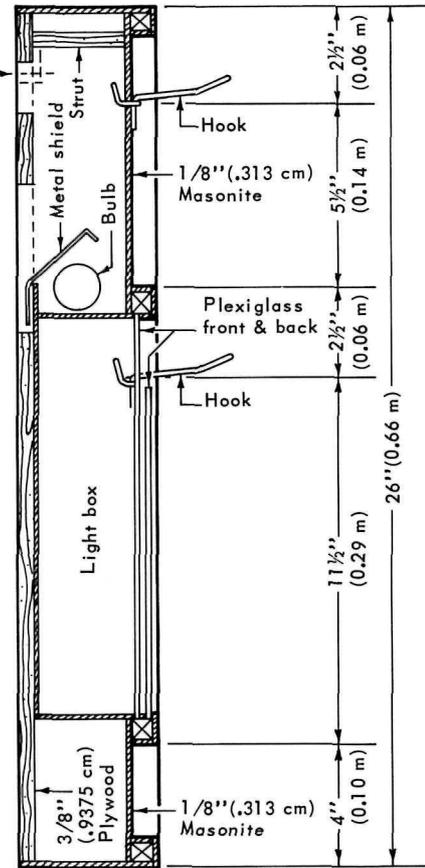
1 pc. plexiglass w/solvent

1 pkg. peg board hooks

5 ea. wood screws

1 ea. descriptive plate,
plastic w/screws (a sign)

1 ea. metal shield, 6" x 6"
(0.15 x 0.15 m)



SECTION



Standardized Console for Patrol Vehicles

Searching and fumbling for the radio or emergency equipment switches can be dangerous, especially during pursuit driving. Much of this fuss can be eliminated with the standardized console for patrol vehicles suggested and designed by George Neusaenger and Harvey T. McDaniel of Natchez Trace Parkway (AL, MS, TN).

The console, measuring approximately 15" x 15" x 12" (0.38 x 0.38 x 0.30 m), is made of 16-gauge steel covered with a leatherlike material. It standardizes the location and type of all emergency equipment including the federal



Security

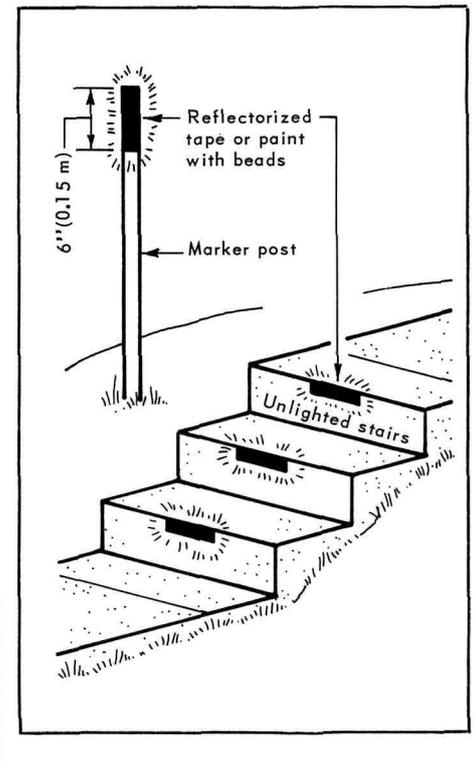
Night Safety Markings for Park Structures

Culverts, signs, steps, railings, and other park structures pose potential nighttime hazards to visitors who are almost always unfamiliar with the area.

D. W. Clewell, superintendent of French Creek State Park, PA, suggests using inexpensive reflective tape or even less expensive white paint and glass beads to mark these hazards.

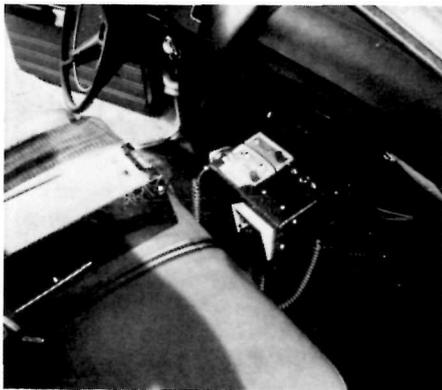
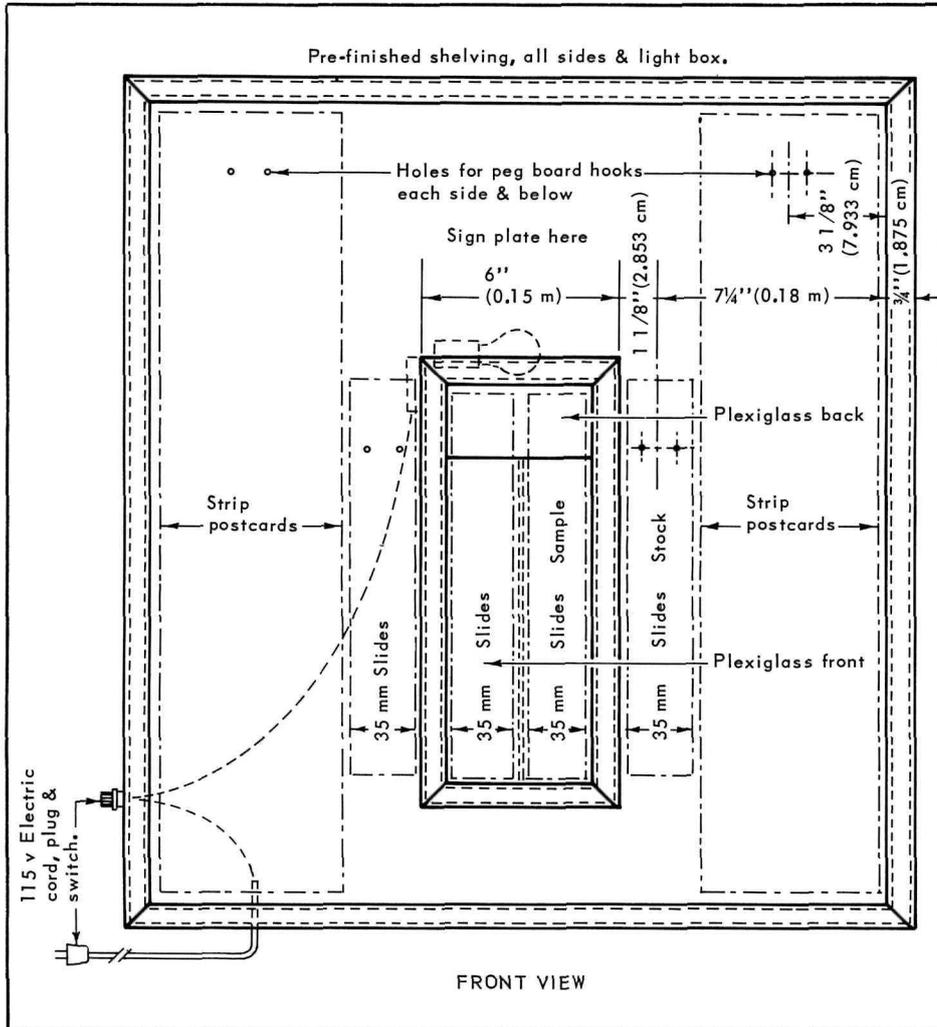
The reflective tape manufactured by the 3M Company is self-adhesive and will withstand all weather if applied properly on a dry surface. The white paint and glass bead markers are easily made. Clewell suggests using two coats of paint. The glass beads are applied—using a salt shaker—while the second coat is still tacky.

Either type of safety marker will pick up the beam of a flashlight or car headlights and possibly save visitors from nasty accidents.



within the folds of the blankets, ready for marking as evidence and shipment to the FBI or to some other lab.

Larger containers of water and deeper layers of padding should be used when testing beyond the .38 caliber size.



control unit and the radio.

The console was designed to fit in all vehicles. Rangers at Natchez Trace Parkway have installed it in three different makes of automobiles. They report that those patrol vehicles equipped with the console already have proven to be safer and easier to operate.

Do-It-Yourself Bullet Specimens

Chief Park Ranger Larry E. Hanne-man at Badlands National Monument, SD, has come up with a do-it-yourself method of obtaining specimens from seized weapons.

In the bottom of a large galvanized trash can he places several tightly folded blankets, old jackets or other soft materials. Next, he fills the can to its brim with water. The test weapon is then held several feet above the surface of the water and fired straight down into the can.

The water absorbs the bullet's energy and the undamaged bullet is recovered

Maintenance and

Longer Slats Solve Semi-Circular Bench Problems

The National Park Service's National Capital Region is now saving both time and money in replacing the slats on benches laid out in circles and semi-circles—such as at the Washington Monument—thanks to an idea of Frank E. Toth, Jr., in Central Maintenance Operations.

Rather than installing short slats between each set of two concrete bench legs, Toth's suggestion calls for long sec-

tions of slat material made up by connecting several long slats with bolts and $\frac{1}{8}$ " x 1" x 10" (.3125 x 2.54 x 25.4 cm) steel plates. In 32' (9.75 m) to 48' (14.63 m) lengths, the slats are easily bent; this eliminates the planing and special fitting required when short slats are used.

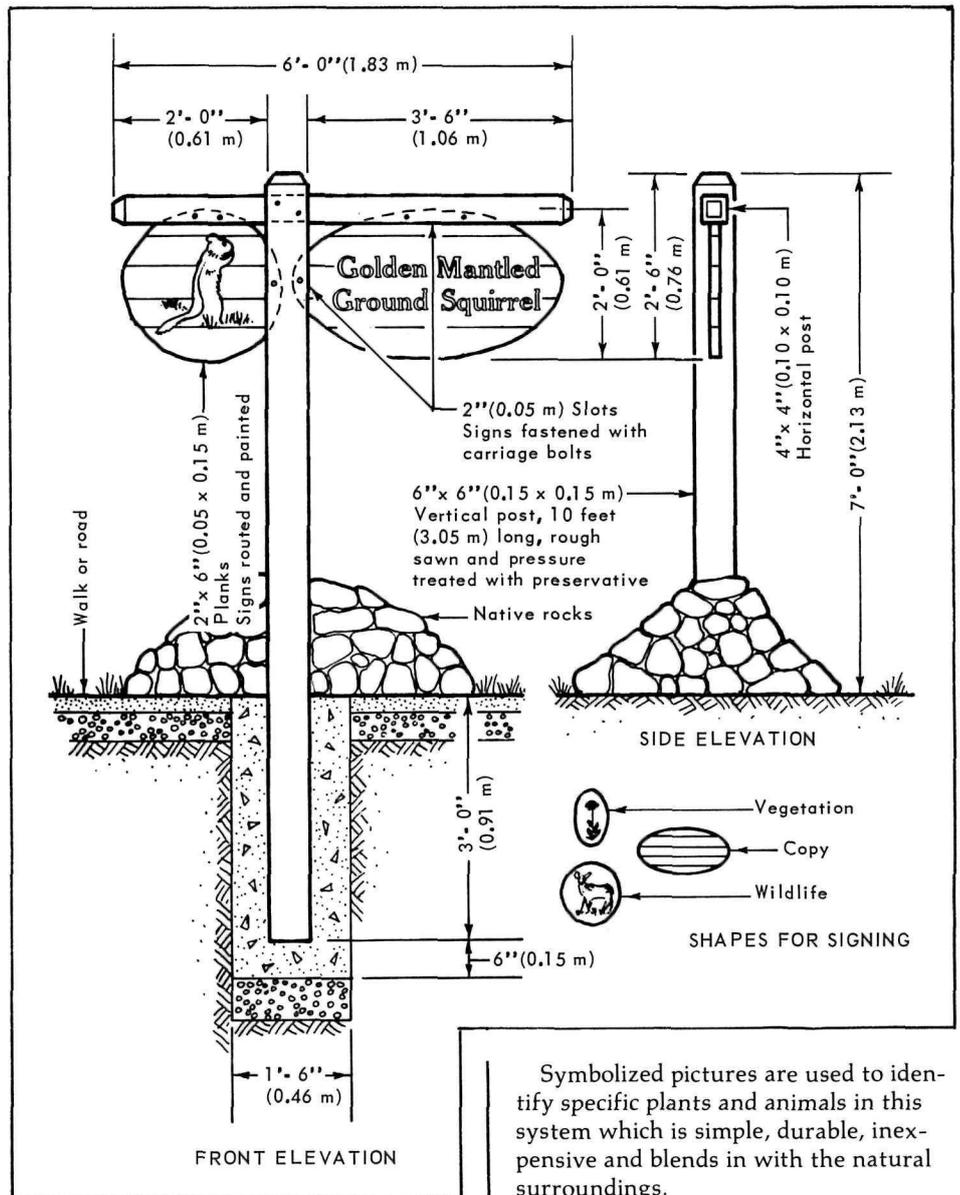
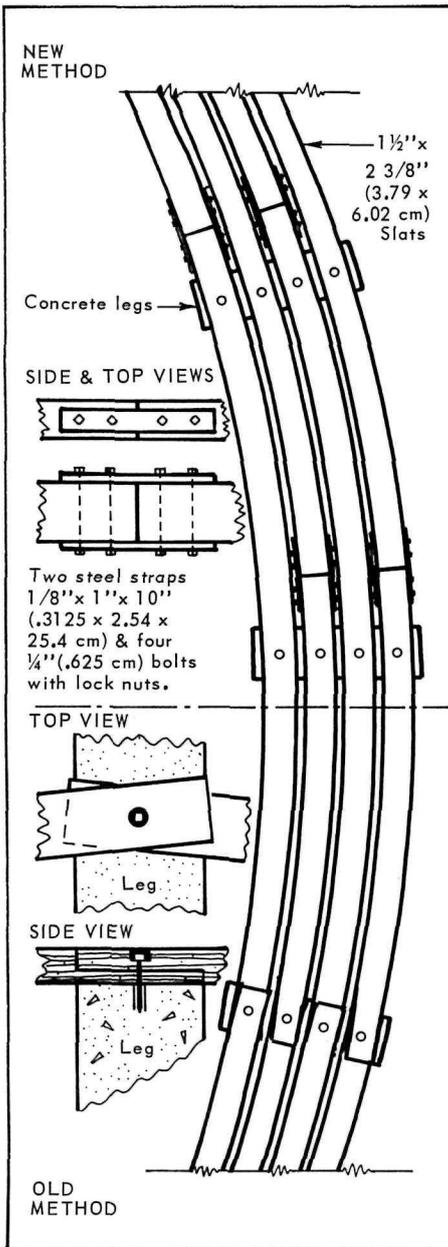
The slats installed under Toth's method also are stronger and more weather-proof and vandal-proof due to the elimination of lapping joints at each leg required in the old, short-slat method.

Mr. Toth has been awarded \$200 under the Government Employees' Incentive Award Program for his useful suggestion.

Life-Zone Identification Sign System

Paul Semmer, a graduate student in outdoor recreation resource planning at Colorado State University, has sent this idea—developed for a class project—for a life-zone identification sign system.

Unlike many other sign systems meant to be read by hikers and other park or wildlife refuge visitors exploring on foot, these signs are designed to be read from inside a vehicle traveling through a biotic community. The sign or "message panel" is uniform throughout a given life zone. A change in the sign shape tells the visitor that he or she has entered a different zone.



Symbolized pictures are used to identify specific plants and animals in this system which is simple, durable, inexpensive and blends in with the natural surroundings.

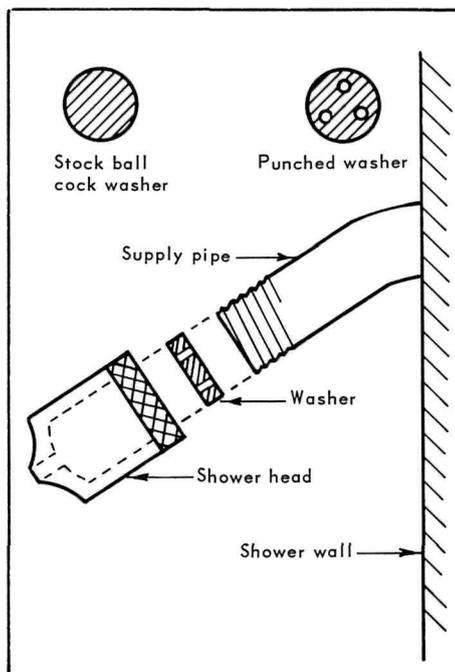
Safety

Save Shower Water . . . and \$'s!

To conserve water, an increasingly precious resource, many parks and public agencies have installed special valves on shower heads to restrict the water flow.

Gordon H. Sears, maintenance specialist at District 1, California Department of Parks and Recreation, suggests an economical alternative to these valves which can cost up to \$5.00 each, plus installation.

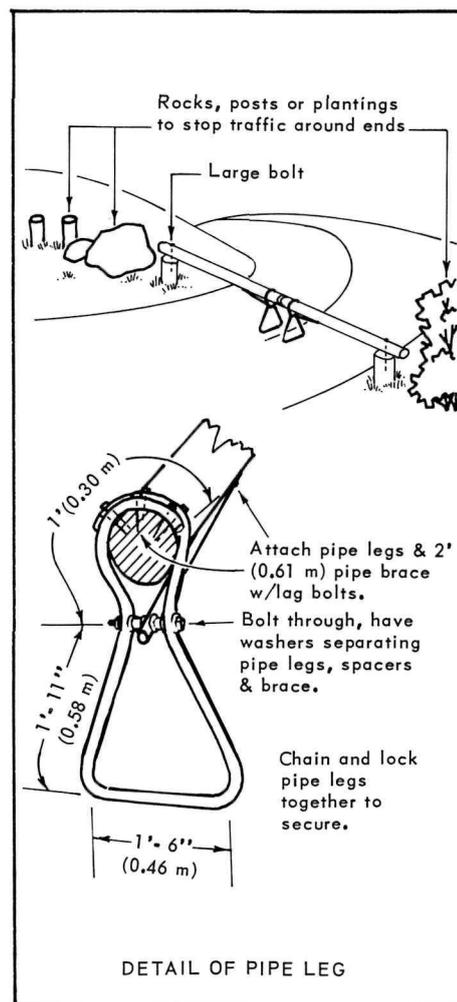
Sears uses a 10-cent ballcock rubber washer with holes drilled or punched in it. The number and size of the holes made in the washer will determine the water flow and the spray of the shower head. Sears has found that three $\frac{3}{32}$ " (.23475 cm) holes will result in a flow of approximately two gallons (7.6 l) per minute.



Two-Way Log Gate

Need an inexpensive, functional gate for an interior park road? This design from Karin Teller, park planner for Washington State Parks and Recreation Commission may be just your answer.

Ms. Teller bolts two 14' (4.27 m) logs, $5\frac{1}{2}$ " (0.14 m) in diameter, to two 2'-6" (0.76 m) logs, 8" (0.20 m) in diameter, sunk into the ground. Pipe legs, attached to pipe braces with lag bolts, support the road end of the long logs and can be chained or locked together for added security.



LIST OF MATERIALS

- 2 - Logs, 8" (0.20 m) dia., 2'-6" (0.76 m) long.
- 2 - Logs, $5\frac{1}{2}$ " (0.14 m) dia., 14' (4.27 m) long.
- 2 - Pipes, $\frac{3}{4}$ " (1.875 cm) dia., 7'-4" (2.23 m) long. Bend to shape shown.
- 2 - Pipes, $\frac{3}{4}$ " (1.875 cm) dia., 2' (0.61 m) long.
- 4 - Pipe spacers, $\frac{3}{4}$ " (1.875 cm) dia., 1" (2.54 cm) long.
- 12 - Bolts, washers & nuts
- 1 - Chain & padlock

Portieres: A Heat-Saving Idea from Our Past

The *Old-House Journal* suggests you take a heat-saving cue from our 18th-century American ancestors and use portieres this winter.

Portieres were the heavy curtains or drapes that were hung over the arches and doorways of the Victorian-style houses with high ceilings and generously-proportioned rooms popular in the 1900's. The portieres served a two-fold purpose: they kept the heat from the fireplace inside a room and kept drafts out.

The idea is still functional today, particularly in light of the present energy conservation thrust and rising fuel bills. By drawing a heavy curtain across the door of a heated room, you will retain heat within the room and keep it out of hallways. This measure also allows you to leave unused rooms unheated and thus save fuel.

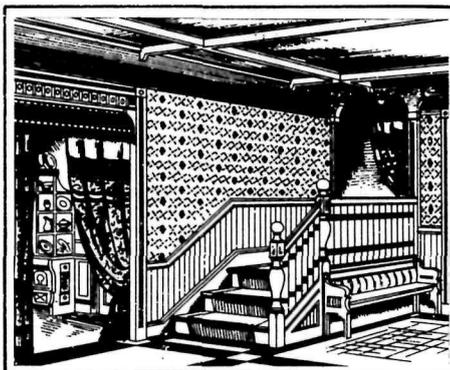
Victorian portieres were highly decorative, often made of velvet and elegantly trimmed. Oriental rugs and double-woven carpets were also used. While today's portieres could be made of almost any material, it seems wise to fol-

low our ancestors' example. Use heavy fabrics and have the portieres lined.

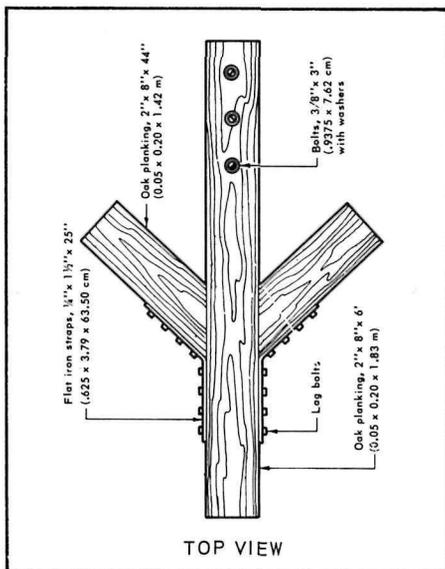
If velvet is not to your liking, you might try the dacron fillers that are used to make comforters. In contemporary England, where portieres are still in use, cotton flannel linings are popular. Not only do these linings insulate for heat, they also help soundproof.

You can hang the portiere from rings strung on a pole set inside the door frame—or from brackets mounted on the face of the door. While the Victorians used wooden rings and poles, many other materials are available today.

Whether you heat with fireplaces or use a more modern system, portieres still are a good old heat-saving idea!



1977 AWARDS



Mr. Breeden's first prize contribution

NSPR Awards for outstanding contributions to GRIST

The National Society of Park Resources (NSPR) has announced the following 1977 Park Practice Awards:

1st Prize: \$100.00 awarded to Russell C. Breeden, track operator at Shenandoah National Park, VA, for his "Picnic Table Picker Upper." Published in March/April 1977 *GRIST*.

2nd Prize: \$50.00 awarded to Robert Caddock, carpenter and John Magill, welder, of Monmouth County Park System, NJ, for "Watch Those Fingers" (suggesting a blade guard for radial arm saws). Published

in January/February 1977 *GRIST*.

3rd Prize: \$25.00 awarded to George Stephen, regional architect, North Atlantic Region, National Park Service, Boston, MA, for his "Mobile Display Unit." Published in September/October 1976 *GRIST*.

Criteria for these awards is based on outstanding original ideas that save money and/or time and increase efficiency of park management and operations. The ideas must have been published in *GRIST* between July 1, 1976 and June 30, 1977.

The editors of *GRIST* extend congratulations and thanks to the winners for their valuable input to this publication.

NPS Awards for outstanding contributions to the Park Practice Program publications

Three outstanding articles, submitted by National Park Service personnel, have been cited for their contribution to park and recreation management. An advisory committee to the Park Practice Program reviewed all three publications: *TRENDS*, *GRIST* and *DESIGN*. Based on their recommendations, the following Awards of Excellence have been made.

John Dennis for his article, "The Special Challenge of Endangered Species and Natural Resource Management," which explores the requirements and further implications of the 1973 Endangered Species Act, and includes practical guidelines for park management compliance with it. The article appeared in the April/May/June, 1977 issue of *TRENDS*. Mr. Dennis is a natural resources management specialist with the National Park Service. National Capital Region Architect Tom Herr for his circular ramped overpass bridge design, featured



Tom Herr's circular ramped overpass

in the January/February/March, 1977 issue of *DESIGN*. This gently sloping bridge crosses a heavily traveled roadway adjacent to the Chesapeake & Ohio Canal in Maryland, protecting scores of hikers and bikers.

Ramon Sanchez for his "Low-Lying Tire Changer" suggestion appear-

ing in the May/June, 1977 issue of *GRIST*. Mr. Sanchez designed a jack which lifts low electric or gasoline driven vehicles high enough off the ground for convenient tire changing. Mr. Sanchez is a maintenance worker at Fort Davis National Historic Site in Fort Davis, Texas.