



# PARK PRACTICE

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# Grist

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in cooperation with DEPARTMENT OF THE INTERIOR, National Park Service  
and NATIONAL RECREATION AND PARK ASSOCIATION



### Commentary

#### LET'S RECAPITULATE

The name GRIST was taken from Webster's. It's first definition: "(a): grain or a batch of grain for grinding, (b): the product obtained from a grist of grain . . ." We use the grist mill in our heading. Webster's second definition is "something turned to advantage" or as used colloquially in the United States meaning "a lot; a quantity." Together these two definitions characterize the material presented bimonthly on the eight pages of GRIST.

What subject matter interests GRIST subscribers? They want to see your original ideas and devices that have been helpful in your park, recreation area or reserve which includes every aspect of interpretation, maintenance, protection, operation and administration. They want to see how you solved your park problems. Do you have a new method? They want to read about your better service offered to visitors. Dimensions and fabrication of your device are interesting. They all want to know how to do the job better, faster, or in a "pinch." If local talent was used? Did you use a new or unusual product?

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GRIST was first published with strictly field-level operating personnel in mind. Then, early in it's young life, park and recreation managers found that by routing copies among employees—in the field and in the home offices—all possible benefits were considered. Now, GRIST goes much farther. It's readers include a broad assortment of individuals from the most

sophisticated executives and planners to the "green" newcomers. College professors and students, interpreters, Job Corps instructors, forest rangers, Army engineers, camp directors, campground operators, businessmen and researchers use their copies of GRIST to advantage. Personnel from large metropolitan parks, as well as, men assigned to remote jungle or mountain parks where "make-do" or "do-without" is a way of life, scan the pages of GRIST. All of these readers glean the pages for new ways to save time, money or to find a better way to serve the public.

GRIST is an exchange. The readers are givers as well as the receivers. A contribution to GRIST is also a way of letting the world know that your park has dedicated personnel trying hard to serve the public in the best possible way. By presenting an employee's accomplishment for publication, you reward originality and expertise. This recognition will encourage the park staff to submit their ideas for consideration, and instill a sense of team pride.

Send to us a snap shot, a quick sketch if necessary to show dimensions, and a few lines to let us know the "What, Why, When, How, Who, and Where", and we will write, illustrate, and publish your ideas in GRIST for all to share. Forward your ideas to Chief, Park Practice, 1100 Ohio Drive, S.W., Washington, D.C. 20242.

— Ed.

#### SAND TRAP ON THE WATER LINE

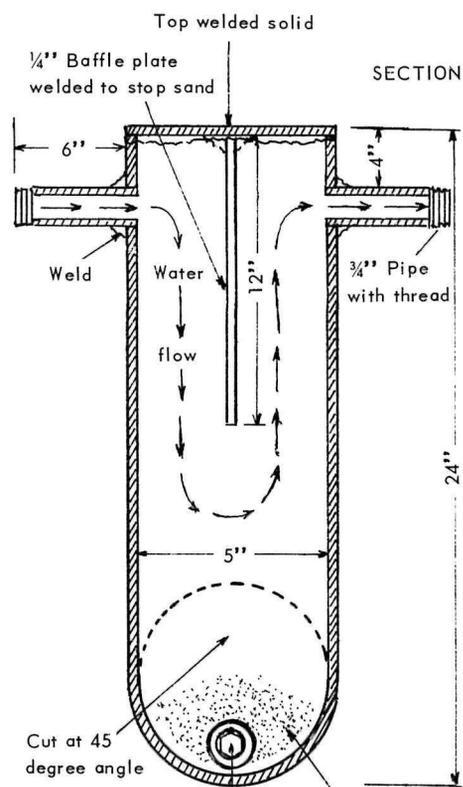
Sand in the water going to the campground washer? The problem didn't baffle Ed Fahey, Senior Park Manager, Cherry Creek Recreation Area, Colorado Game Fish and Parks.

Getting right to the nitty gritty of it, Ed constructed a filter (see photo and sketch) designed to trap the sand. Here's how.

Use a 24" piece of 5" pipe. On opposite sides of the pipe, 4 inches from the top, insert 3/4" pipe nipples and 6" long pipe threaded, for in and out flow.

Cut the bottom of the 5" pipe at a

45-degree angle. Insert at the low end of the cut 3/4" clean-out plug. Close the bottom with a true fit and solid weld. The filter must be watertight to maintain pressure. Cut the line, insert the filter. Reducers can be used if necessary. A garden hose can be used to flush out the sand.



Sand drops to bottom  
3/4" Clean-out plug (Use garden hose)



**PARK PRACTICE GRIST**

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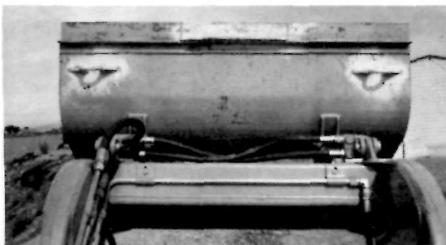
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**PROTECT THAT NEW TRACTOR**

When you get a new tractor give it some protection from the hard use it's going to get during pick-up jobs.

Here's the suggestion of Edward J. Fahey, Senior Park Manager, Southwest Colorado Game Fish and Parks Department. Reinforce the lip (see photo) with a piece of angle iron which has a slot cut in it for inserting a link of chain when picking up something. This will prevent tearing the metal when the operator hooks a chain on it.

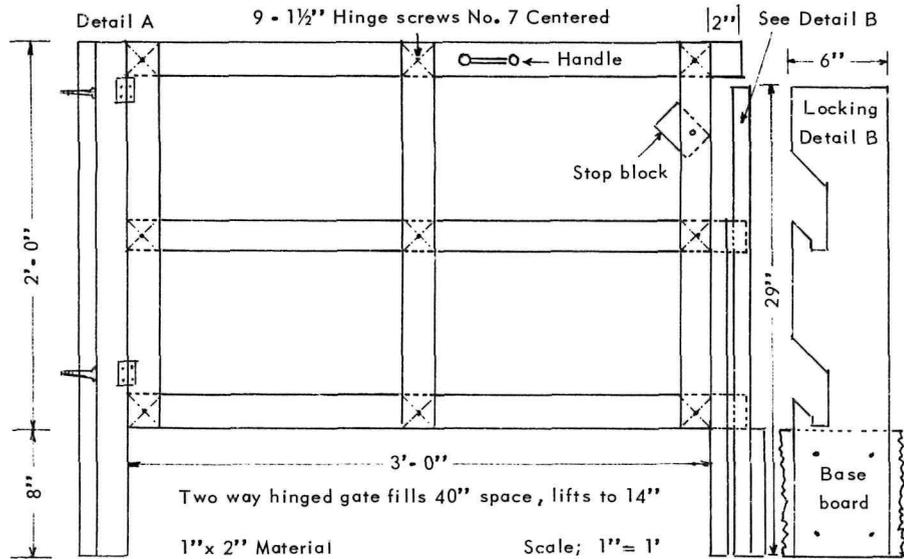
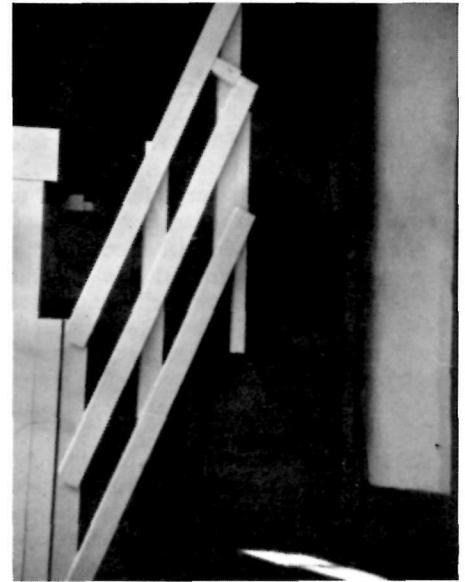
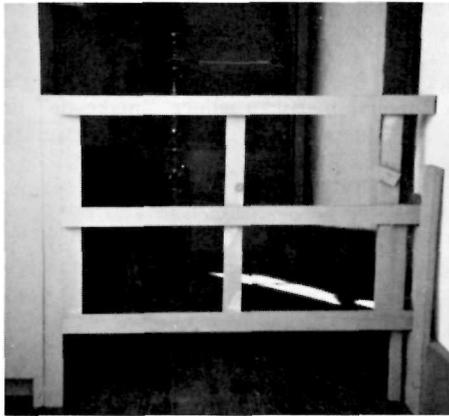
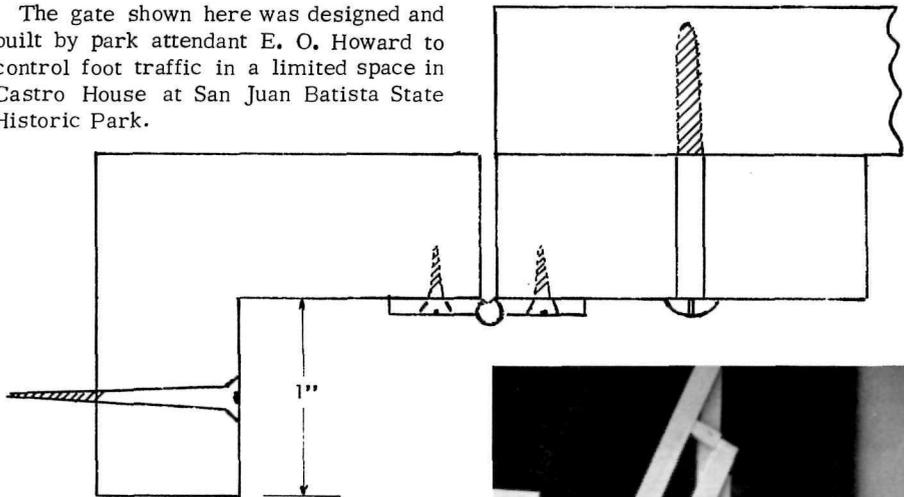
In the photo you can see the pad eyes that are used for pick-up.



**FOLDING GATE**

The gate shown here was designed and built by park attendant E. O. Howard to control foot traffic in a limited space in Castro House at San Juan Batista State Historic Park.

Anchor Detail A  
 Scale; Full size



The three parallel bars are so mounted that they will fold vertically and swing back horizontally on hinges. When closed, the gate fills a space three feet wide and two feet high. When open, it folds vertically to a height of about four and one-half feet in a space approximately ten inches wide. It measures about three inches in the third dimension.

The locking bar (see diagram) is 5/8" plywood cut in such a manner as to catch

the protruding ends of the gate. A small spreader bar is attached to the middle panel of the gate to prevent complete folding, which could cause injury to the operator. A small brass cabinet handle attached to the top panel makes the gate easier to open.

Material used in the Howard gate is white pine and a few pieces of 5/8" plywood.

FLOAT A "NO SWIMMING" SIGN

Signs which warn against swimming, usually posted on trees or poles, have a way of disappearing. That loss can be serious, for the presence of such a sign can provide legal protection in case of a tragedy.

Robert O'Brien, Aquatic Supervisor, East Bay Regional Park District, Oakland, California, found a way to make that kind of vandalism a bit more difficult—the vandal will at the very least have to get wet to do his deed.

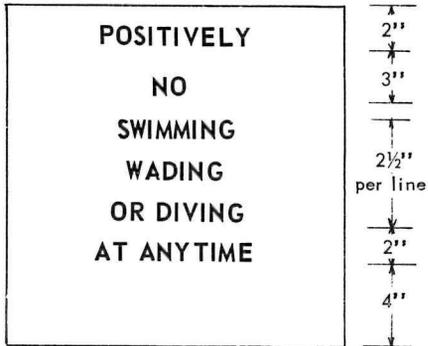
Make a sign; make it big. Paint it red and letter it white. Float it and anchor it well.

Here is the list of materials required to make the sign shown in the sketch.

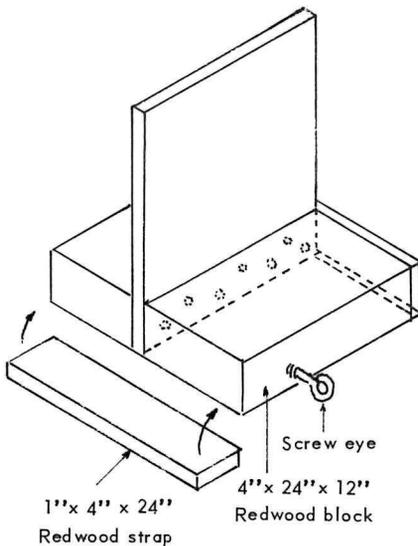
- 24" x 24" x 1/2" exterior plywood painted red, both sides, with 2" to 3" white letters
- 2 pieces 4" x 24" x 12" redwood (blocks)
- 2 pieces 1" x 4" x 24" redwood (straps)
- 1 screw eye, #4, 2"
- 2 cable clamps, 1/2"

link chain or cable cut to extend the required depth

2-pound coffee can filled with concrete, and with a 2" U-bolt inserted, for securing chain or cable



PERSPECTIVE VIEW



Note: Use 10d galvanized nails

# Speaking of Interpretation -

## AID TO CAVE GUIDING

Chief Park Naturalist John A. Tyers, Wind Cave National Park, suggests using a direction-signaling flashlight with removable wand when cave guiding.

This device commands attention when lighted and is useful when pointing out a mineral decoration on a cave wall or ceiling, or other phenomena.

## TILDEN TELLS THE NATIONAL PARKS STORY

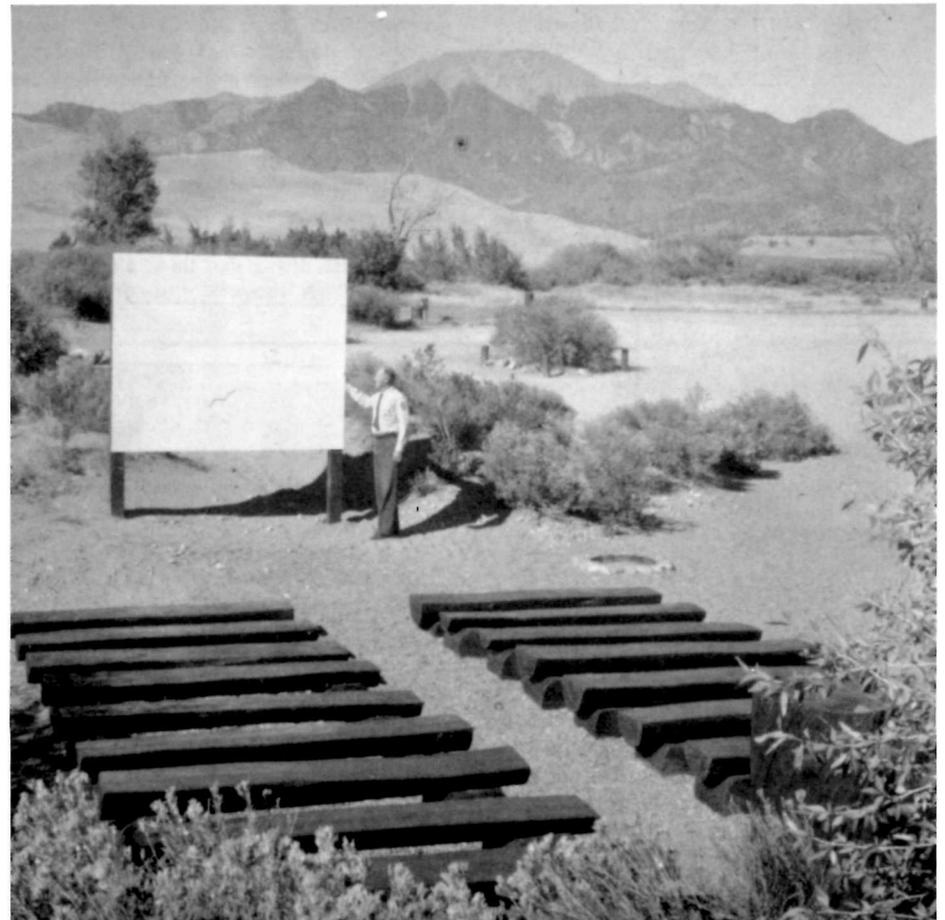
Freeman Tilden's new book, "The National Parks", is a large and elegant publication, 7 1/2" x 10 1/4" with 600 pages and 225 photographs. It is beautifully designed and bound, printed on quality paper, and evidencing careful, expert graphic workmanship. Most of the photographs were taken especially for the new edition,

and rich black and white effects have been achieved in the printing.

This book, as no other, dramatically describes the broadening reach of the National Park Service concept. You are sure to want a copy for your own, especially at the publisher's special offer to National Park Service employees when ordered in quantity. The retail price of the book is \$15. On a combined order of 10 or more copies a 40-percent discount is allowed, which makes it available to you at \$9, plus a 50 cent shipping and handling charge for each book.

## OUTDOOR AMPHITHEATER SEATS

Harold Schaafsma of Great Sand Dunes Park in Colorado has offered this picture of outdoor amphitheater with seats made from split logs. This is a practical and rugged outdoor installation.



## GAS CHLORINATOR GEARED FOR REMOTE AREAS

Neither power nor water pressure is needed for operation of the new Model 605 pressure feed-type, cylinder-mounted gas chlorinator, available from Capital Controls Co., Ind., Colmar, Pennsylvania. This means it can be used in remote areas or emergency sites where there is no water pressure differential and no electricity to operate a booster pump.

Model 605 is designed to use at remote reservoirs, gravity type sewage systems, stream water supply locations, and for emergency service in municipal and industrial water and wastes treatment plants where there is sudden loss of power.

This new chlorinator is the only pressure feed-type unit that will operate continuously or start up immediately without problems after long periods of standing idle. The unit will operate without power or heat.

Design provides direct connection of the chlorinator to the cylinder valve which eliminates connectors and other high pressure piping and fittings. There are no extra valves and special pressure reducing

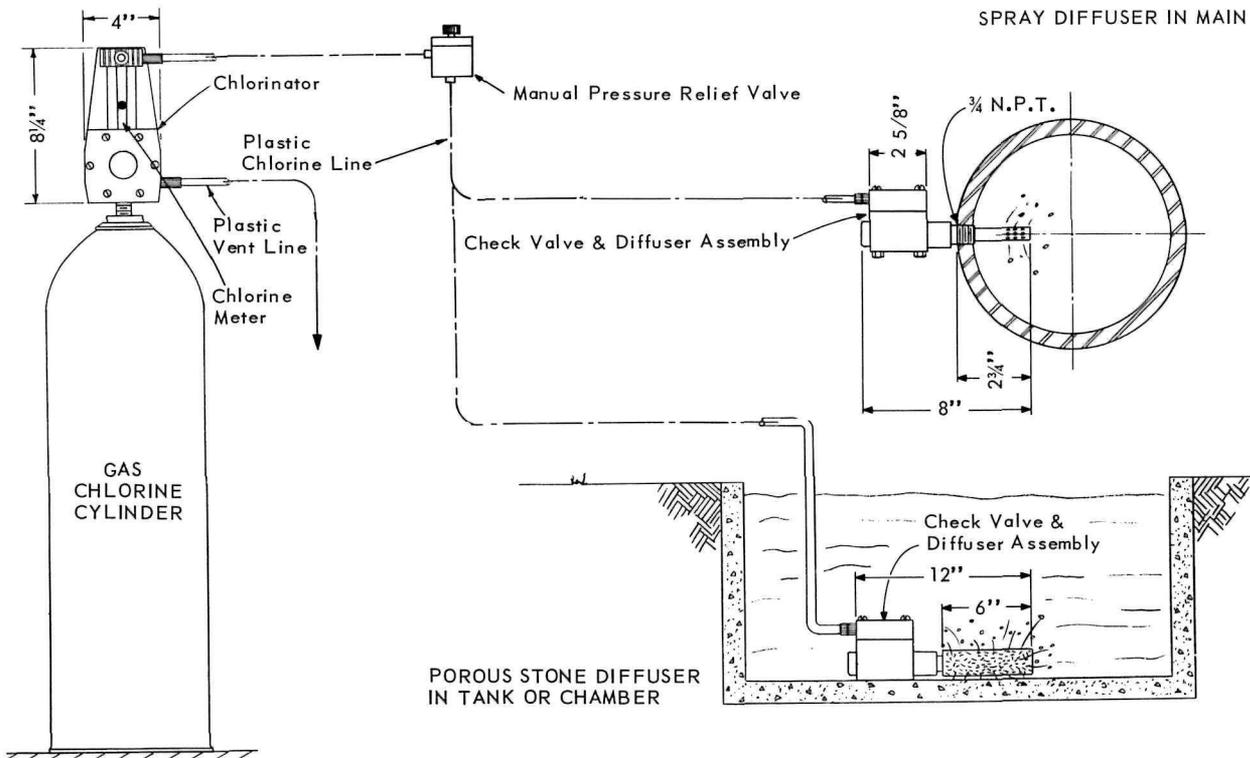


pushes open the valve. After passing through the valve, the gas enters the water being treated through a diffuser.

An emergency vent valve is incorporated in the chlorinator body to prevent excess pressure. A manual pressure relief valve allows pressure to be relieved to the vent line prior to removing the chlorinator from the cylinder valve.

Model 605 provides high chlorine feed accuracy, easy installation, and requires little maintenance. Point of chlorine injection can be right at the chlorinator or several hundred feet away, wherever convenient. This model has five feed ranges from .1 to 75 pounds per day chlorine.

Richard C. Shurtz, Marketing Manager for Capital Controls, shares this information with GRIST readers believing the Model 605 to be ideally suited for remote park areas. He notes that since the 605 feeds gas chlorine (the cheapest form of chlorine—about 15 cents per pound) from 100- to 1500-pound cylinders, operating personnel eliminate the mess and bother of powdered chlorine and liquid bleach.



valves to corrode. Temperature changes which result in gas pressure changes do not affect operation of the system down to as low as 20 degrees F. Pressure involved is so low that reliquification does not occur in pressure lines.

The 605 specification sheet includes the illustration used here to show how it operates.

The chlorinator body contains a spring loaded diaphragm regulator with the spring compressed to a value equivalent to 20 psi pressure on the opposing diaphragm.

Chlorine at cylinder pressure (75 to 90 psi at room temperature) enters through the inlet valve where the pressure is reduced to 20 psi and is regulated at this pressure.

The gas then flows through the chlorine flow meter where the position of the ball in the tube indicates the flow rate. The gas then passes through a rate valve which can be screwed in or out to decrease or increase the flow. The chlorine then leaves the chlorinator and goes through a plastic tube to the check valve where the pressure

*It is natural to believe that the resources of nature are inexhaustible. The wish is father to the thought. The theory is comforting, because it helps to salve the conscience of the man who commits high crimes against wild beasts, and birds and forests.*

—William T. Hornaday.

*Beauty, spiced with wonder, is the greatest lure to travel.*

—Confucius (591-479 B.C.)

#### FIBERGLASS REFINISHING

Was there any way to refinish the darkened and "frayed" fiberglass used in greenhouses without reducing the transmission of light? Having read a report by K. L. Goldsberry on research and evaluation of plastic coverings for plant growth conducted at Colorado State University, Jerry Langworth of the Moline Park and Recreation Department, Illinois, began a search for such a refinisher.

From a paint manufacturer, Sandstrom Products Company of Port Byron, Illinois, he obtained a clear finish with an acrylic resin base. In accordance with instructions the fiberglass surface was cleaned thoroughly. By experimentation it was found that pure ammonia applied with a stiff bristled brush removed stains and embedded dust better than "sudsy" type cleaners. When the cleaned surface was dry, two coats of the finish, approximately one mil thickness each, were applied with three-inch brushes. (One gallon covers about 300 square feet, and the finish dries in about 30 minutes. Lacquer thinner can be used if dilution is necessary.)

This acrylic finish is said not to darken on exposure to sunlight, and should allow light transmission nearly equal to that of new acrylic fiberglass.

Here is the K. L. Goldsberry research report.

#### STURDY, QUICK-HEAT CHARCOAL GRILL

Cast iron construction of the two "Miracle Grills" shown here is said by the maker to increase their durability over that of conventional steel units. Easier fueling and lighting as well as quicker and more even heat are also claimed.

The Model NP is all cast iron, 5/16" thick, with malleable iron top grates. Model P has a heavier, 3/8" thick cast iron fire pot, heavy steel ash pan, and rectangular malleable iron top grates.

The grills have a 10"x21" cooking surface and are set at a no-stoop 37" height. They are mounted on a 2" tubular steel support which is imbedded in concrete and which cannot be turned or removed. A simple, hidden foolproof locking device attaches each grill to its support. The grill turns easily on the support and may be positioned according to wind direction to avoid smoke in the eyes. Grates swing to one side for easy fueling and cleaning. Maintenance and vandalism are said to be minimal.

You may obtain additional information by writing to Stacy Equipment Co., Modern Products Division, P.O. Box 422, Tiffin, Ohio 44883.

#### Light Transmission of Refinished Fiberglass

During the past six years the majority of new Colorado greenhouses have been covered with some type of corrugated fiberglass. The earliest of the materials contained a fiberglass mat embedded in polyester resin. After two or three years of weathering, it was apparent the material would have to be recoated to prevent "fraying" or "blooming" of the fibers. If "fraying" progressed, dust accumulated in the remaining impressions and light intensity was reduced. These fiberglass coverings were also noted to develop a yellowish color. This color change was apparently due to the accumulation of dust and perhaps, to some degree, a reaction caused by heat or some phase of the light spectrum.

The advent of acrylic modified materials has increased the longevity of most fiberglass coverings. The presence of at least 15% acrylic resin has retarded weathering and provided a material that will generally not need recoating for five to eight years. Some fiberglass manufacturers are applying additional coatings of various types to the surface to provide increased longevity.

From preliminary studies it was evident that weathered fiberglass panels can be effectively refinished to provide spectral transmission almost equal to that of new acrylated fiberglass. The slight yellow hue developed in the weathered fiberglass does not greatly affect light transmission when panels are recoated and probably has little or no effect on plant growth.

Several factors should be considered before refinishing:

1. Don't wait until the fibers have completely frayed. Application of

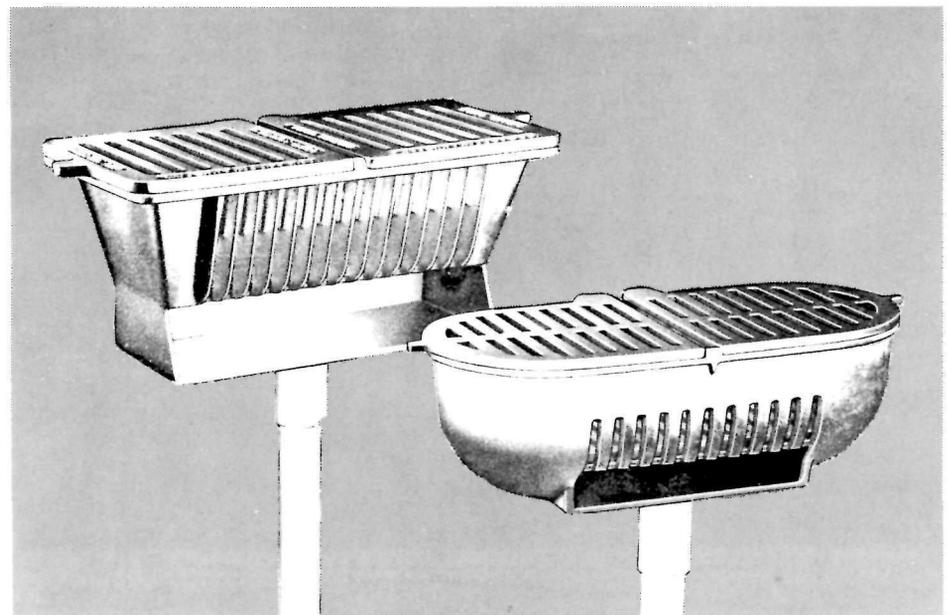
a refinisher before an excess of fibers is removed will be advantageous.

2. Use an effective known cleaning compound, and rinse well. It would be wise to "spot" test any unknown cleaner before it is used.
3. After rinsing thoroughly, make sure the material is dry before applying the refinisher.
4. Apply approved refinishers with an acrylic base. Applications should be done on a windless day, so that a minimum of dust will be involved. The better refinishers will dry in approximately 15 to 30 minutes.
5. Due to the rapid drying of some refinishers, it appears that brush application is superior to spray methods.

#### DEEP WATER MARKER

An easy way to mark the depth of water in swimming areas has been found by Ed Fahey, senior park manager, Cherry Creek Recreation Area, Colorado Game Fish and Parks.

Use a "Safe-T-Cone" (see photo), the kind used to divert traffic while road lines are being painted or other maintenance work is being done. Mount it on a styrofoam block, paint the water depth to be seen from the surface, and anchor it to the bottom.



**"JIFFY BOX"**

Park Ranger Marshall G. Gates of Yellowstone National Park has devised a 'box' for the front seat of patrol vehicles to accommodate any and all necessary materials carried by the patrolman. The "jiffy box" so named for it makes all these materials available in a "jiffy" to the patrolman and at the same time keeps the materials out of sight of the public and the front seat neat and uncluttered.

The 'box' measures 18 1/2" long, 10" wide and 8 1/2" high and is large enough to hold various equipment such as the patrolman's pistol, handcuffs, and binoculars and still has room for necessary papers and forms. The box is made of 3/8" plywood except for the top which is 3/4" solid wood. All of the inside corners

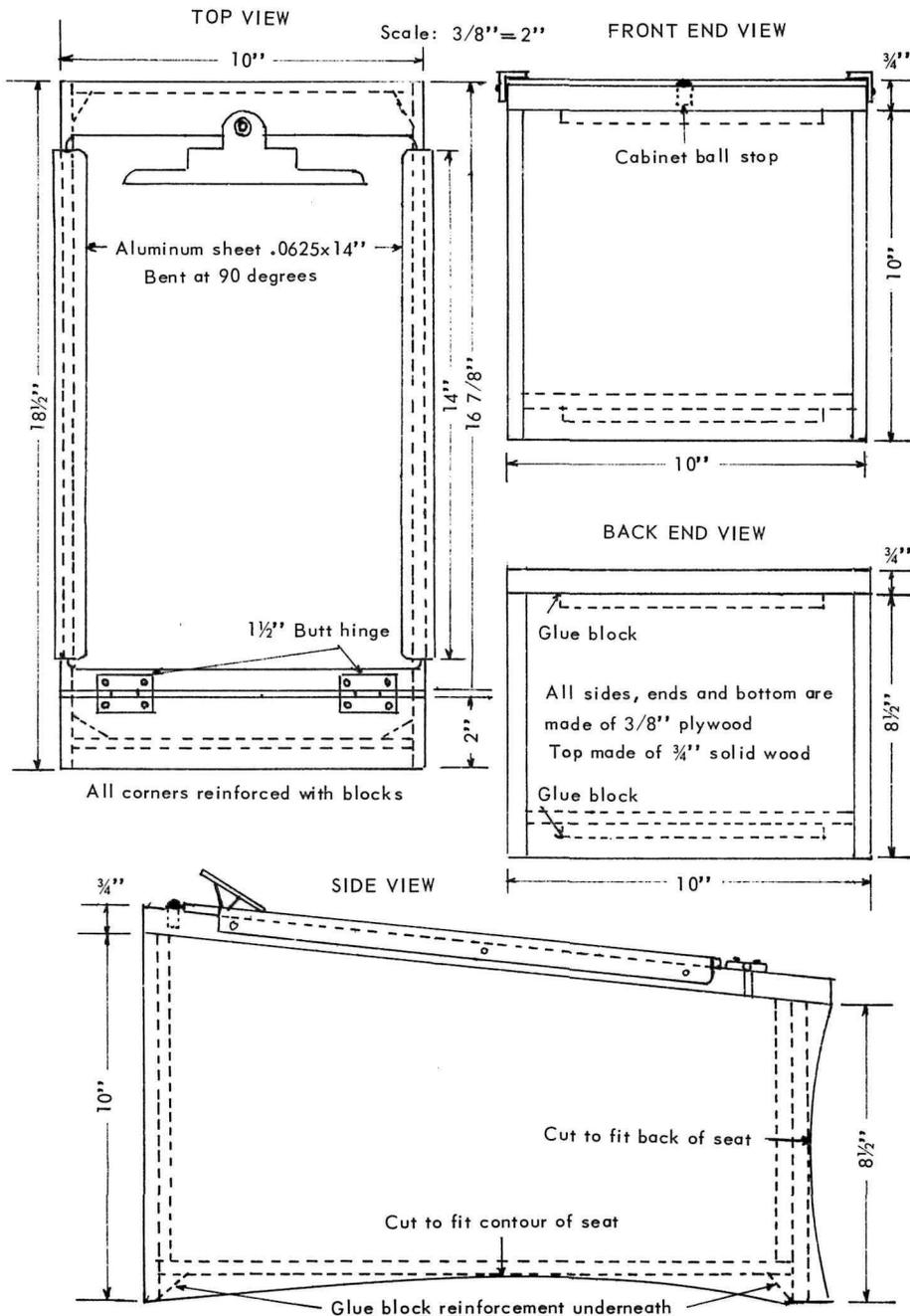
are reinforced with small 90-degree glue blocks as is the bottom front and back on the underside. As shown in the sketch, the back and bottom of the box are contoured to fit the seat so that the box will not wobble and slide easily when the vehicle is in motion.

The top is attached with two 1 1/2" butt hinges also reinforced with glue blocks placed under the 3/4"x2"x10" piece of wood to which the hinges are fastened. Two aluminum strips, 14" long have been fastened to the outside upper portion of each side and bent at a 90-degree angle up over the top so that a clipboard may slide in under the strips. Because the clipboard is readily removable, it can be taken to the scene outside the cruiser. To prevent the clipboard from slipping out of its holder, a cabinet ball stop is installed in the 3/4" top piece. The board comes

in very handy for copying radio messages and jotting down pertinent information as the patrolman cruises.

The "jiffy box" just sits on the seat and can be easily moved. However, if it needs to be secured, this may be done by fastening a canvas loop to the back of the box. The loop should be large enough to receive a one inch dowel or a piece of broom stick. The dowel or stick can then be tucked down behind the seat and will prevent the box from sliding forward.

The "jiffy box" has proved to be handy and is quite welcome as an arm rest on long tiring patrols.



**EASY WAY TO SECURE GARBAGE CANS**

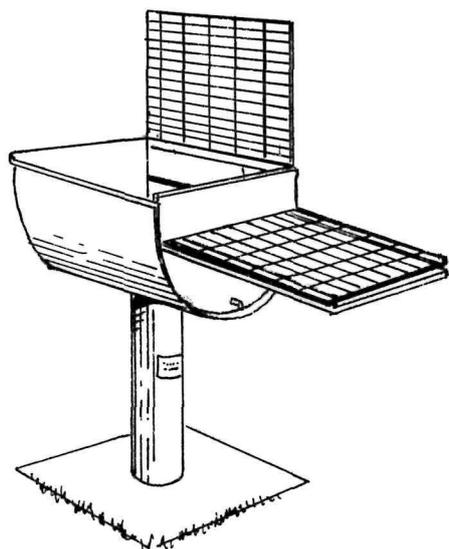
Ranger Orville F. Troffer, Brooks Memorial State Park, Washington, has come up with another of those "now-why-didn't-I-think-of-that" ideas. Orville says to put about 1 1/2 inches of water in each garbage can. The water keeps the wind from blowing the cans over and also helps to keep them clean, as garbage won't stick to the can.

**PARK MEN DESIGN A GRILL**

The unit shown here is both a wood burner and a charcoal grill. Designed by park men, it incorporates features which are important both to park personnel and to users.

It is sturdy. The heavy steel construction will take the hard and frequent use to which it will be subjected in a public recreation area. This construction, the maker says, makes it vandal-resistant as well. Also with vandals in mind, the grill is so constructed that parts cannot be removed. When wood is being used, the inner grate pulls out against a stop. When charcoal is used, the inner grate stays in and the outer grate is lifted.

A park man would be concerned about the fire hazard, and so the wood or coals



are completely contained within the unit to keep danger from sparks at a minimum.

The generous cooking area will make the cookout chef happy.

The unit is finished with aluminum paint. It is available from Brothers, Inc., Hermansville, Michigan 49837 for \$70.

*The public must be encouraged and trained to use the Parks properly as the first step in their conservation.*

—Eldridge T. Spencer

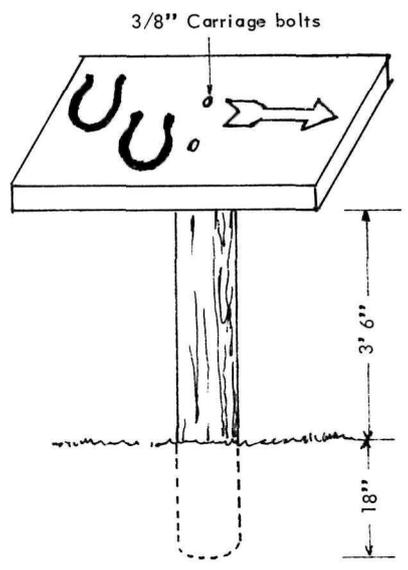
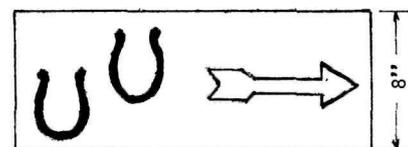
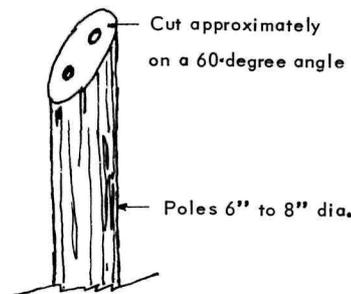
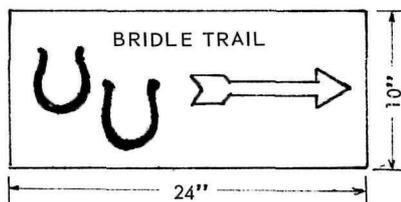
**HOOF PRINTS IN THE SIGNS**

What more appropriate way to mark a bridle path than with horseshoes?

If you were riding in Ridley Creek State Park Pennsylvania, you'd find your trail marked with two white horseshoes and an arrow. The horseshoe shapes are routed in 2' x 8" and 2' x 10" pieces of yellow pine. The background is stained brown and the routed portions, the horseshoes and the arrows are painted white.

You'd find it easy to see the signs from your saddle, too, because they are mounted on pieces of utility pole at about a 60-degree angle.

William E. Potter, park superintendent, shares the idea with GRIST readers.



← No. 1  
Obstruction spoils composition.  
No. 3 →  
Offers an excellent view and includes an identifying marker.

**AID TO THE VISITING PHOTOGRAPHER**

Through the use of post markers, visitors to Daniel Webster Memorial State Park in New Hampshire are informed as to the best place to stand while taking pictures.

The park people studied all aspects and discovered, with the aid of a nationally known magazine, the spot from which the best view could be seen for picture taking. Then they marked the location.

Photos of Daniel Webster's birthplace on left indicate how a visitor might take pictures, while those on right show results from standing by marker.

← No. 2  
White house disrupts historical setting and spoils background.  
No. 4 →  
Shows nice composition of the building in a sylvian setting.



SAVE-A-LIFE RESCUE BALL

Inside the plastic ball shown in photo A is a life preserver. The ball can be thrown with considerable accuracy farther than can the usual type life preserver (photo B). As soon as water enters the plastic shell automatic inflation begins. The shell opens and within seconds the 21" life ring is fully inflated with sufficient bouyancy to support a 250-pound person.



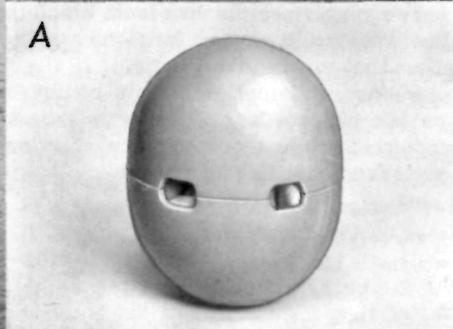
improvement, and consequently it has not been adopted as approved, acceptable, or required rescue equipment at this time. However, the experience at the Tidal Basin in Washington indicates that it does have applicability as an auxiliary device which can be carried in motor vehicles and stored where approved devices are not usually kept.

The Sav-A-Life Rescue Ball is a product of Inventors Products Co., 5309 Edina Industrial Blvd., Minneapolis, Min. 55435.



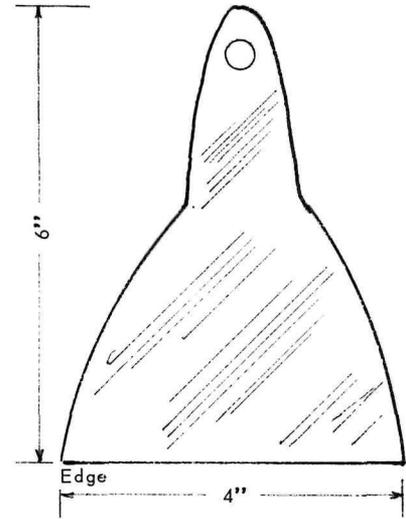
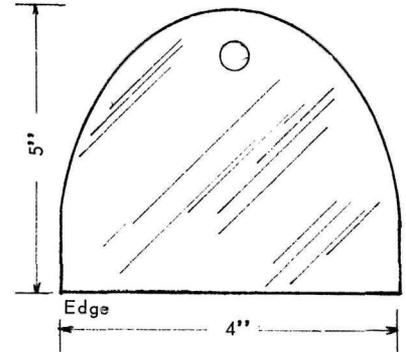
Field tests have been conducted in a variety of water-use areas by the National Park Service, Division of Safety to evaluate this device. In Washington, D.C., Sgt. William R. Kinsey, U.S. Park Police, had occasion to test the Sav-A-Life ball in a real situation. A canoe rented to three young boys overturned in the Tidal Basin. Responding to the call, Sgt. Kinsey recalled that he had placed a Sav-A-Life rescue ball in the saddlebag of his motorcycle. On the scene he threw the ball to within a foot of one of the boys in the water. It inflated automatically and was placed on the one boy who could not swim (photo C). The swimmers stayed with him until a rescue squad boat came and carried all of them safely to shore

The tests over the country show that the rescue ball needs some modification and



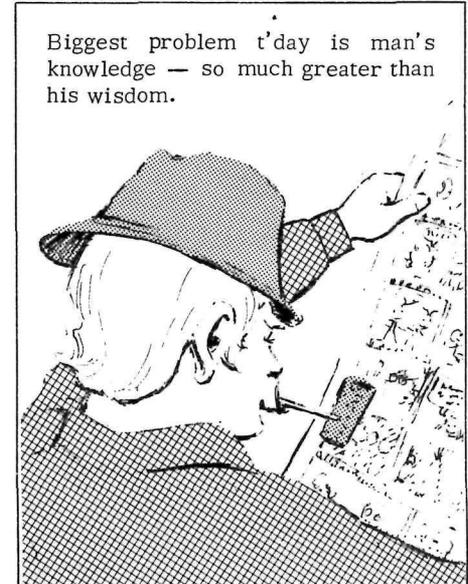
FROM SCRAP TO SCRAPERS

Trucks and other equipment at Cherry Creek Recreation Area, Colorado Game Fish and Parks, are well supplied with ice scrapers made from discarded fiberglass park signs.



Ed Fahey, Senior Park Manager, makes the scraper in a variety of sizes and shapes using a hand, sabre, or band saw.

RANGER 'RED' sez:-



Biggest problem t'day is man's knowledge — so much greater than his wisdom.

Jim Burnett & IBL