

GRIST

VOLUME 14 NUMBER 4

JULY/AUGUST 1970

GRIST AWARDS ANNOUNCED

Top awards for the most original, time and money saving ideas published in GRIST last year have been selected by the National Conference on State Parks.

First place winner was Ed Williamson, ranger at Folsom Lake State Recreation Area, California, and former marine maintenance man at Oroville Reservoir SRA. His \$100 award is based on his description of a low-cost buoy which appeared in the July/August 1969 issue. Used to mark water recreation hazard and control areas, the buoys are made from inexpensive and easily accessible materials: a 16-gallon grease drum available from local gas stations or distributors; an exhaust pipe obtained from a muffler shop; and coffee cans and cable from a dump or salvage.

Second place went to Theodore H. Schaefer, commissioner, Broome County De-

partment of Parks and Recreation in New York for his charcoal disposal barrel which was shown in the January/February issue. Made from two oil drums, the barrel was devised to overcome the problem of hot charcoals left in parks by visitors who bring their own portable grills for cookouts. Schaefer received a \$50 check for his suggestion.

Third place was a tie between Eugene T. Downward, garage foreman mechanic with the New Castle County Department of Parks and Recreation in Delaware, and William Manning, assistant supervisor at Indian Lake State Park in Michigan. Each received a check for \$25 for his suggestion.

Downward designed and constructed a water drag rake which appeared in the January/February 1969 issue. Pulled from shoreline by boat, the rake cleans ponds and beach areas.

Manning's description of an outdoor peg board at Indian Lake was in the Nov./Dec. 1969 issue. The board is used by rangers to note their daily work locations, saving much driving time as the units they supervise are widely scattered around the lake.

FUNNEL SHIELD FOR FILE

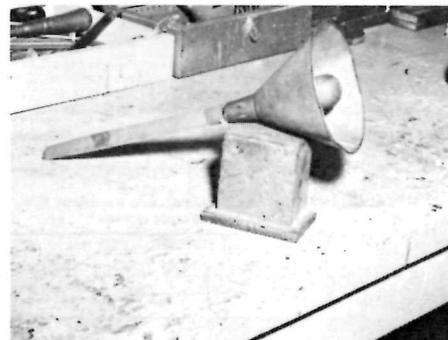
Sharpening the cutting edge of tools can be hazardous even though the workman is wearing gloves. Superintendent W. H. Glover, Fort Frederica National Monu-



Ranger Ed Williamson from Folsom Lake State Recreation Area receives his first place award from William Penn Motts, Jr., director of the California Department of Parks and Recreation, and District Three Superintendent, Clyde Newlin.



Broome County Executive Edwin L. Crawford presents Commissioner Theodore H. Schaefer, Jr., with his award check.



ment found a ready-made way to provide added protection.

Make a shield for the worker's hand by placing a metal funnel over the handle end before the file is inserted into the handle.



Eugene Downward, garage foreman, receives his third place award check from Superintendent John M. Bunton (left) and Director Ralph S. Cryder, Director of Parks and Recreation, New Castle County, Delaware.



William Manning, Indian Lake assistant supervisor, receives his third place award check from Grant Wykhuis, regional park supervisor for Michigan's Region I.



In the photos the shielded handle is shown close up in one and in the other Jim Riley is using the funnel-shielded file to sharpen an axe blade.

PARK PRACTICE GRIST

a bimonthly publication of the nonprofit, educational Park Practice Program cooperatively conducted by the National Park Service, U.S.D.I., the National Conference on State Parks, and the National Recreation and Park Association as listed hereafter.

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NATIONAL PARK SERVICE, U.S. DEPARTMENT of the INTERIOR
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RENEWAL (all publications as issued thru calendar yr.) . . . \$ 15.
GRIST only renewal . . . \$ 3.50
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Same, but with new hard plastic binders, 1 set of four . . \$ 7.75 (separately, \$ 3.75 each)

Subscription applications and fees, and membership inquiries should be sent ONLY to: Executive Secretary, National Conference on State Parks, 1700 Pennsylvania Avenue, N. W., Washington, D. C. 20006.

Printed by District Creative Printing, Inc., Washington, D. C.
Not printed at Government expense.

Speaking of Interpretation

SLIDE STORAGE & SELECTION

Selecting slides to accompany a talk is accomplished faster for him, Park Guide Leslie E. Downer, Fort Smith National Historic Site, finds, if the slides are stored in plastic slide sheets and kept in a 3-ring loose-leaf binder.

Each 9 1/2" x 11 1/2" plastic sheet holds 20 slides which can be viewed simultaneously. The slides are held firmly, but can be easily removed without bending. (Sheets with plastic inserts proved to be unsatisfactory as the slides are often bent in the process of insertion, and condensation causes mildew.)

Number each slide book and each slide sheet to assure that the sheet will be returned to the proper place if removed. Place a sheet of paper between each slide sheet and give it the same page number as the following slide sheet. Number it from 1 to 20 and following each number give a brief description of the slide.

For example:

1. Indian Chief (Creek)
2. Indian Campground (Osage)
3. Indian War Dance (Plains Indians)
4. Indian Peace Conference (Ft. Smith, 1865)

A quick look at this subject matter list will indicate whether you need to scan the slides.

Place a number tab on each slide, corresponding to guide sheet, book, and slide numbers. Put the tab in the same place on all slides. Les uses upper left corner. These number tabs also are an

aid to putting the slides in the projector properly, not upside-down or backwards, another time saver. Number tabs of a different color should be used for each major slide category. For example, Reproductions, Archeology, Buildings, and Other NPS Areas are the categories used at Fort Smith. Five colors are available: red, green, blue, orange, and black.

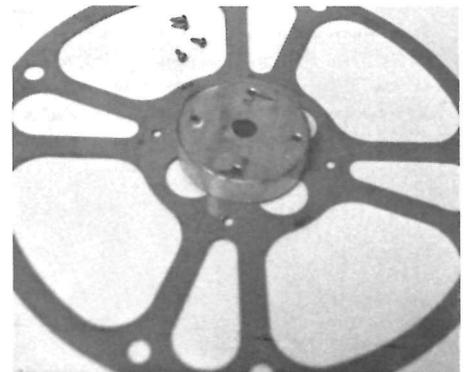
When a slide is removed, the number should be recorded on a locator sheet on which is indicated the tray number to which it has been removed, the type of program, and the approximate length of time it will be out of the file. Slides used for both permanent and temporary programs may require duplicates.

The slide sheets were purchased from Plastican Corp., P.O. Box 157, Butler, New Jersey. The cost was seventy-five cents per 20-slide sheet, if one box of 12 sheets were purchased; and sixty-seven and a half cents per slide sheet, if two to five boxes were purchased.

The number tabs were purchased from the Saunders Co., P. O. Box 111, Rochester, New York. For 500 number tabs in one color, the cost was one dollar and fifty cents.

SMOOTHER RUNNING PROJECTOR

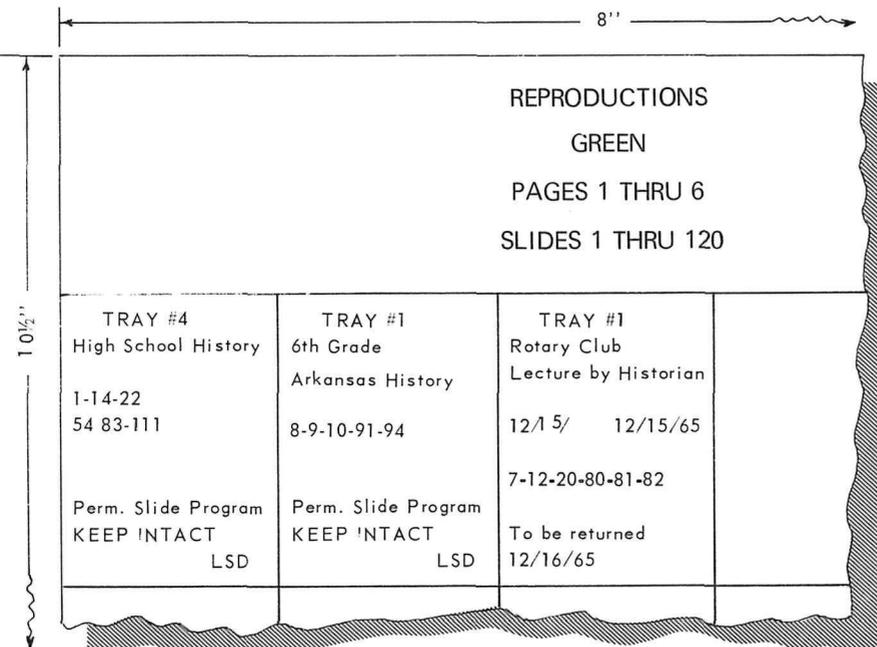
To smooth the running of your Kalart Victor projector, take apart a regular size reel for film being shown by removing four rivets. Throw away the center part. Take a good piece of wood 1 1/16" thick, lathe it to a circle 4" in diameter. Bore a 7/16" hole in the center. Insert this wooden circle in place of the part that was thrown away and secure it with 4 1/2" wood screws on either side (more holes



will have to be bored in reel) and mount. Rewind film on this reel as shown in the sketch.

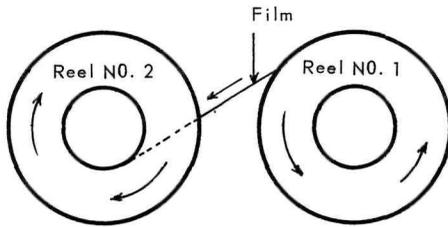
Rewind to mount on automatic in this manner: perforated edge next to you on No. 1 and from you on No. 2; use beginning end of film on reel No. 2.

LOCATOR SHEET



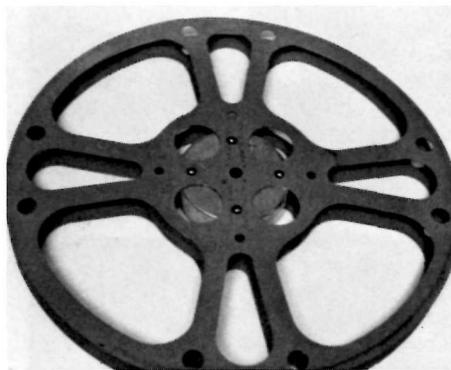
After the film is rewound on this reel, take the reel apart by removing the screws, one side only, and remove top half of reel. Now turn film upside down on automatic projector disc, perforated edge down. When film is in proper place on disc, there should be 1/8" from outside of film to edge of disc if you are using about 1,200 feet of film. If you are using less film it will be

Rewinding film on demountable reel.



Arrows indicate direction reel is moving.

more. In any event, the guide or stabilizer rollers under the plate covering the film should be adjusted to about 1/8" away so as not to bind, yet act properly to stabilize the film while the disc is in motion. Also there should be 1/8" between film and hub of disc on which film rests. (While doing this you are, almost, facing the projector screen.) Unwind about two feet of film from the inside and about two feet from the outside. Bring inside end of film, the beginning end, under first idler roller, twisting film a half turn so that the perforated edge, after coming through idler, will be next to you. (No twist between first idler roller and the projector.) Idler may need some adjustment. Now place plate on over the film. DO NOT TIGHTEN PLATE SCREWS TIGHT—JUST SNUG. You are ready to splice ends together and thread film through the projector.



In threading the projector, make bottom loop of film as directed in the Kalart Victor instruction book and leave top loop plenty loose. "Check all points for accuracy, press starter button, and let 'er roll," says Park Guide Robert A. Barlow, Shiloh National Military Park, whose suggestion this is.

**CORRECTION—
FILMS ON ENVIRONMENT**

In the March/April 1970 issue of GRIST, the film, The Concession was listed as being available from the wrong source. It is available from

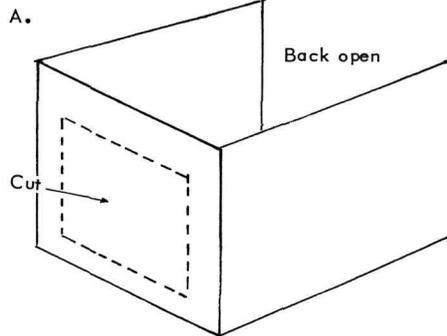
Independent Film Prod. Co.
P.O. Box 501
Pasadena, Calif. 91103

Also source of the film, The Squeeze, should have been Newenhouse-Novo (instead of Henk Newenhouse). The address is correct.

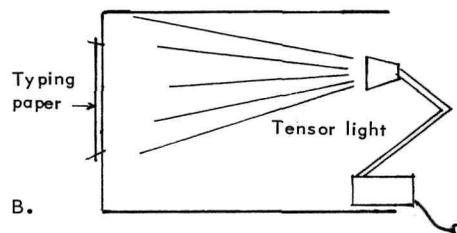
**SOME FUN & FANCY FOR
YOUR SLIDE PROGRAM TEXTS**

If you can't draw, or don't have the time, Historian Shirley A. Keathley, Stones River National Battlefield, has a method you can borrow for shadow-illustrating the text for your conservation or safety talks, sing-alongs, or what-have-you.

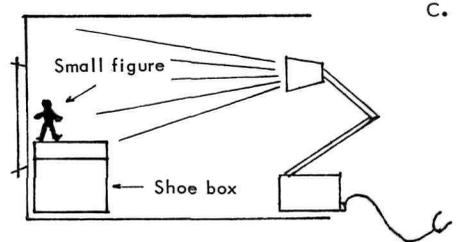
Construct a backlighting box from any cardboard box with ends larger than a sheet of typing paper. Make a hole in one end (front) slightly larger than the typing paper; cut the opposite end (back) away completely as shown in sketch A.



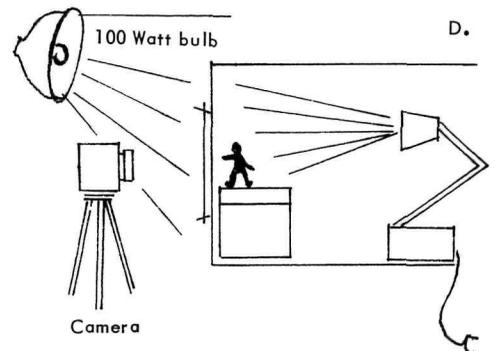
Place a tensor lamp at the back, directing the light on the hole in the front. Use plain bond paper for typing your text, and be sure to clean typewriter keys and use a new carbon ribbon or the type will break down when projected. Pin the text to the front end of the box over the hole as shown in sketch B. Small plastic or rubber fig-



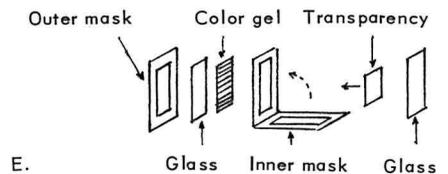
ures, 1 to 4 inches tall can be used to cast the shadows. If a flexible figure is needed, the "Gumby" figure is ideal. With other dime store toys such as cars, houses, and farm animals, you can give your imagination free flight. A shoe box placed behind the front end hole is just right as a stand for the figures, giving a horizon and putting the figures at the proper place in the picture as shown in sketch C.



Place a 35mm camera loaded with black and white positive film in front of the box. Illuminate the front of the typing paper with 100-watt bulb to eliminate paper flaws, watermarks, etc. as shown in sketch D. Use a light meter for proper



settings. The black and white positive film can be developed inexpensively, even in an amateur dark room.

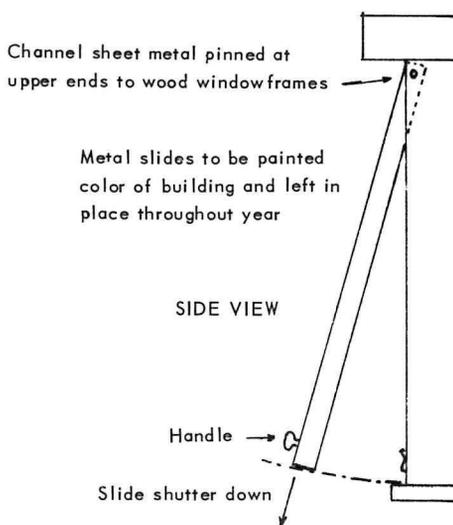
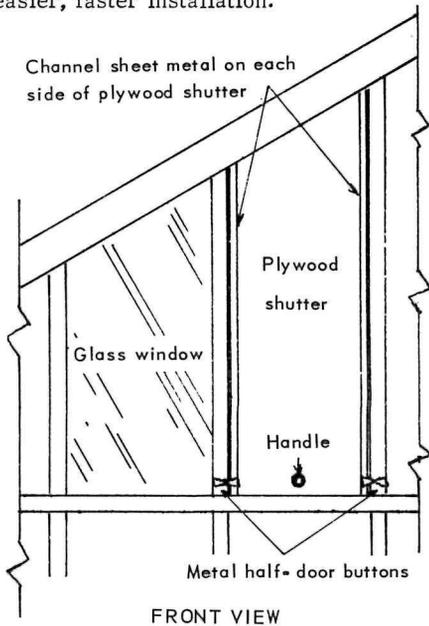


Color gels, listed as: Color Filter Sheets, Book of 44 . . . entire color range, size 5"x8", \$8.00 Ppd., are available through Edmund Scientific Company, 600 Edscorp Building, Barrington, N.J. 08007. These will emphasize, highlight, or just color the black and white slides to make them more effective as in sketch E.

What is the use of a house if you haven't got a tolerable planet to put it on?
—Thoreau

SLIDING SHUTTERS FOR WINTER CLOSE-UPS

Closing buildings in seasonal-use areas usually meant attaching plywood shutters to window casings with screws at Rocky Mountain National Park. After several installations and removals, screw holes became enlarged, making it necessary to relocate them. Installation had its dangers for workmen, too. Alpine Visitor Center is located near a rocky cliff, and on one side of it men work on a platform between 20-foot ladders right over it. Carpenter Frank Miller made the following suggestion for easier, faster installation.



Fasten strips of 1/8" x 1" channel iron, cut the length of the window, to the top of the casement with a screw (see sketch). To hold the strips in place at the bottom, install a half-door button for each strip. To install the shutters, turn the half-door buttons, swing the hinged metal strips out, insert the plywood in the channels, return to position against the window casing, and turn the half-door buttons to fasten. In the spring, it is only necessary to slide the

plywood out of the channel iron strips which are then returned to their permanent position against the window casing. If the out-facing edge of the channel iron is painted the color of the building, it will be unobtrusive. Frank says there is about a fifty percent time saving on installation and removal of shutters using these holders.

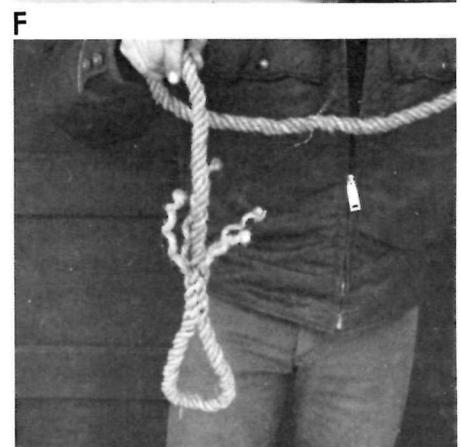
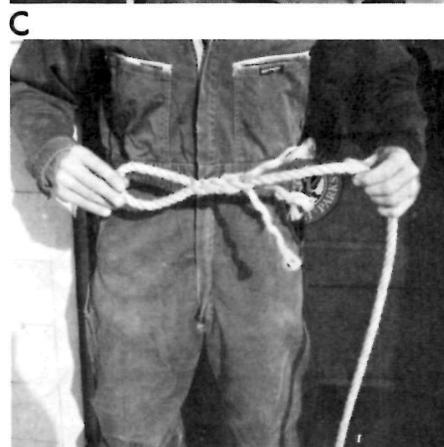
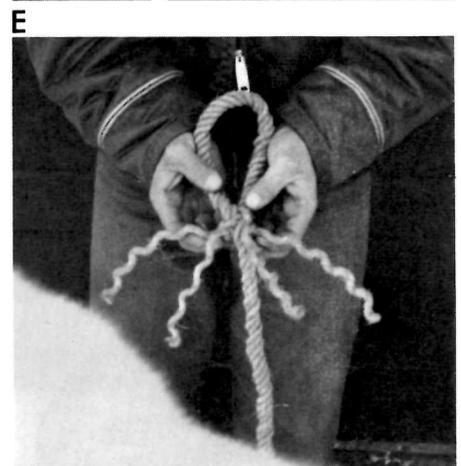
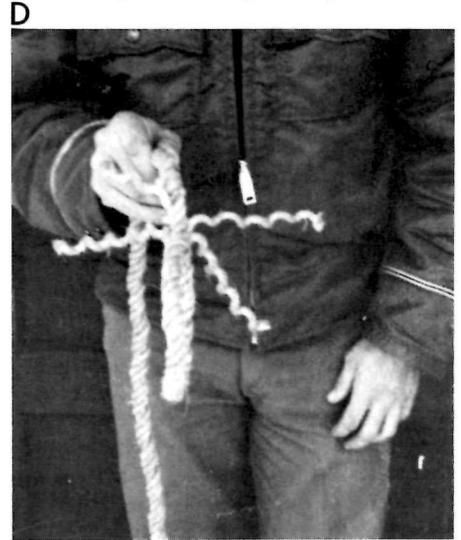
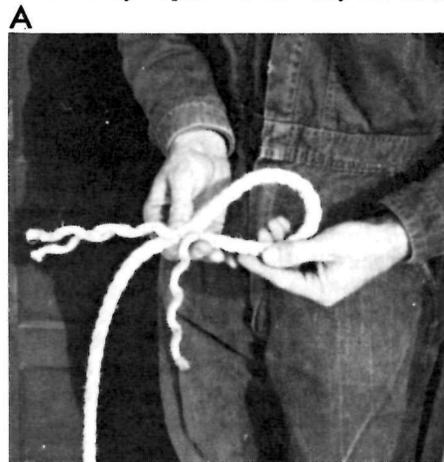
MORE ROPE TRICKS

Here it is—line splicing made easy by Senior Park Manager Ed Fahey, Cherry Creek Recreation Area, Denver, Colorado.

Eye Splice (three strand line). Unlay the end of the line about 12 inches. Bring the line back to form a loop the size you want the eye splice to be. Lay the three

strands on top of the line at that point (photo A). Put the top loose strand under the top strand of the standing part (photo B). Now you have one tuck. Put each of the other two loose strands under each of the two remaining strands. This gives you one complete tuck. Working away from the loop, you have only to go over one strand and under one strand until you have made three complete tucks (photo C).

Eye Splice (four strand). Unlay the line as above. Put the first tuck under two strands (photo D). Put the second tuck in between the two strands that the first tuck went under (photo E). Now, under one strand, over one strand until you have three complete tucks (photo F).



WEATHER PROOFING PAPER SIGNS

To make your paper sign waterproof, why not use a transparent "Contact"? It is available in most dime stores, hardware stores, and large department stores and comes in rolls 18 inches wide and costs about fifty cents a yard.

The sign can be completely encased or just the exposed surface may be covered. If you are covering only the exposed surface and placing the sign on a backing, leave an overlap of about 3/4 inch on all sides. This will seal the sign to the backing and eliminate use of staples or thumb tacks.

The suggestion comes from Robert Palowoda, Assistant Park Supervisor, Proud Lake, Michigan.

WINDPROOF, MULTIPURPOSE EMERGENCY WARNING SIGNS

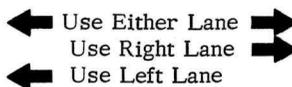
In areas of high winds, temporary signs are constantly blown over, creating safety hazards. A road crew may be depending on a sign just around a corner to warn on-coming traffic of the presence of men and equipment. Another problem in the use of temporary signs is having at hand a sign with the proper wording to fit the particular situation. It is impractical to carry around 25 or 30 signs, just in case, and on the other hand it is expensive to make a trip back to shop or station for the right sign.

Park Ranger Fred J. Wood, Glacier National Park, designed the windproof, multipurpose sign shown here. It is the portable type used in temporary, emergency road situations by road crews and rangers. The stand consists of four 2-foot lengths of standard 3/4" water pipe which are screwed into two 90-degree elbows welded on the sign frame. The frame can be made of either angle iron, water pipe, or iron rods. The center of the frame is hardware cloth. Fred says that angle iron is perhaps a little better for the frame since it is easier to attach the hardware cloth to it. It also gives a better reflective surface for the border of the sign.

The wording is placed on aluminum strips, or tabs, which are affixed in the desired position to the hardware cloth with cotter keys.

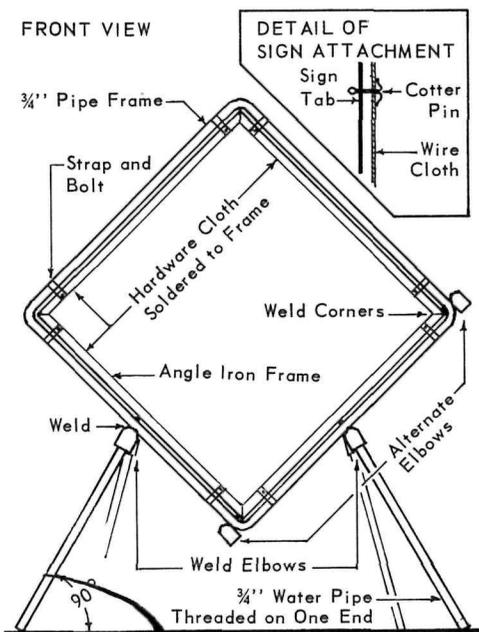
Here are some of the warnings which Fred suggests making up on the aluminum tabs. Slow, Wash Out, Icy Road, Loose Gravel, Survey Party, Detour Ahead, Rough Road, Low Shoulder, Accident Ahead, One Way Traffic, Rock Slide, Soft Shoulder, Bump, Ice On Bridge, Barricade Ahead, End Repair Zone, Stop Ahead, Parking Lot Closed, Road Machinery Ahead, Road Repairs Ahead, Watch For Trucks, Men Working, Fresh Oil, Pavement Ends, Danger Ahead, Keep Left, This Loop Closed. And here are some possible Entrance Station tabs. Station Closed, Pass

Closed, Chains Recommended on Pass Ahead, Caution Low Clearance, Keep Right, Visibility Poor On Pass.



The signs are compact, light weight, and inexpensive. There is need for only a few sign frames. They can also be used as two-way signs. For example, one side could read, "Road Repairs Ahead", while the other side would read "End Repair Zone". The diamond warning shape can be converted to a square informational or guide sign shape by simply welding two additional elbows on two adjacent corners as shown in the sketch.

Kits for the tabs, which could also carry the legs of the signs, could be made up according to the needs of the area or division. Road crews might have in their kits tabs reading "Mowers Ahead," "Fresh Oil," "Stop for Flagman," and the like, while ranger patrol vehicles might carry tabs reading "Avalanche Danger Ahead," "Rock Slide Ahead," "Icy Road," "Accident Ahead," etc. Twenty-five to 30 tabs could be carried in a small space. In making up the tabs, thought should be given to word combinations which could be made if some words were on separate tabs, for instance, in three of the signs above, word combinations could be made if the word "Ahead" were on a separate tab.

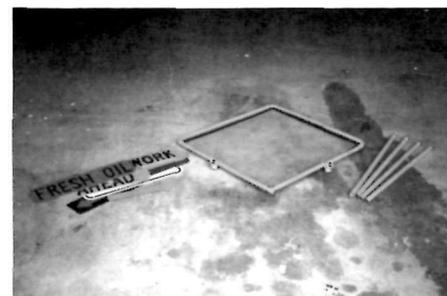


Materials Needed for Construction

- (1) Frame. Either angle iron (preferably, as indicated above), water pipe, or iron rods.
 - 1 - 8 ft. length of angle iron
 - 1 - 2 ft. x 2 ft. hardware cloth, 1/4 in. mesh or larger

2 - 90-degree elbows 3/4 in. (water pipes)

- (2) Legs.
 - 1 - 8 ft. length of 3/4 in. water pipe cut into 4 equal lengths and threaded on one end.
- (3) Tabs.
 - A supply of sign aluminum, reflectorized material, supply of pre-cut letters, and cotter keys.
- (4) Paint.
 - The sign should be painted with reflectorized paint. The wire mesh when painted with reflectorized paint shows up well at night.



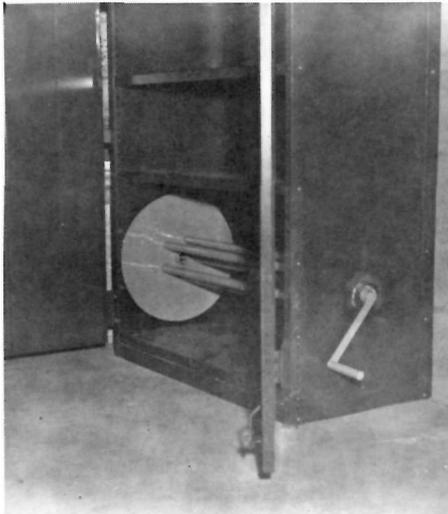
Construction

- (A) and (B). See Construction sketches.
- (C) Cut four 2 ft. lengths of 3/4" water pipe, threaded at one end.
- (D) Cut 2 ft. x 2 ft. square of hardware cloth. Fold edges over to make a strong edge, then bolt inside angle iron frame, using small bolts with washers, or solder to frame.
- (E) Make tabs from 18 to 12 gauge aluminum. Tabs should be about 4 1/4 in. wide and long enough to accommodate letters desired. Drill 2 holes along top edge for cotter keys.
- (F) Paint frame and legs with reflectorized paint.

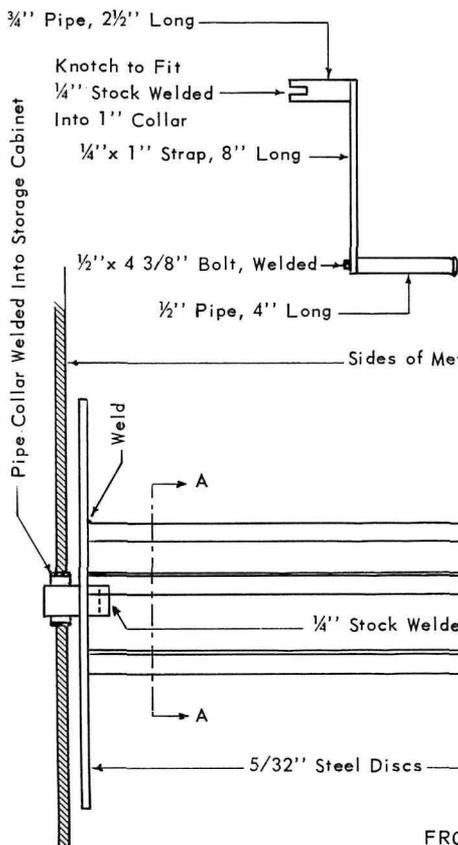
REEL SPACE-SAVER FOR GARDEN HOSE

No more lifting coils of hose onto hooks or stumbling over piles of hose at Navajo National Monument. Maintenance man Herbert L. Norton changed that by mounting a hose reel inside a standard GSA metal storage cabinet as shown in photos and sketch.

This provides safe and dry storage where space is at a premium, prolongs hose life, and makes for good house-keeping. One man can drain and store or remove hose from the cabinet. Material came from the scrap pile, and it took a day to construct.



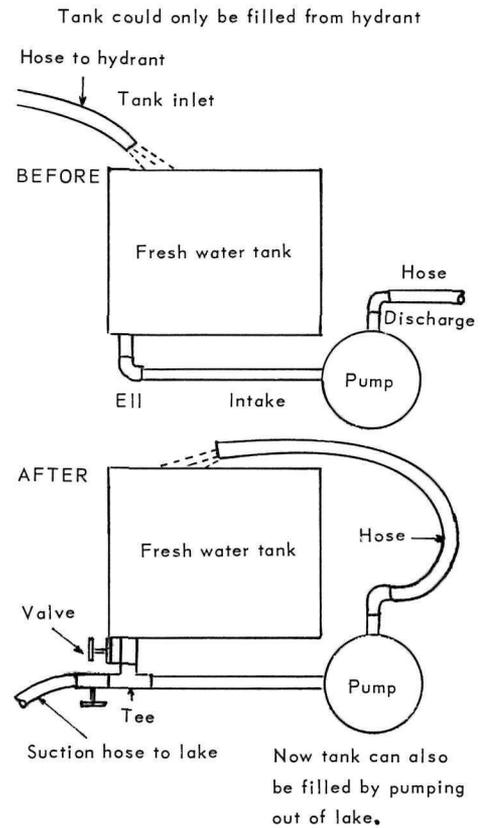
DETAIL OF CRANK



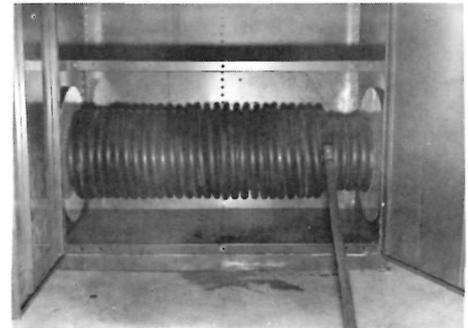
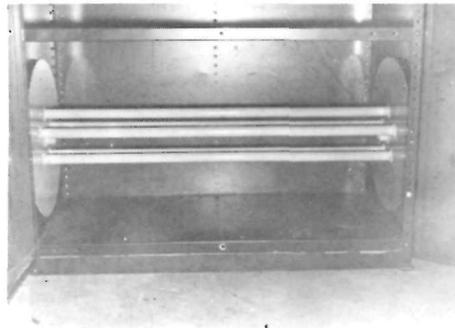
WATER TANK CONVERSION TO FILL FROM LAKE

A Boardman chemical toilet service unit, truck mounted, Model CTS-65, used at Sanford Recreation Area has a 100-gallon fresh water tank which was designed to be filled from a hydrant with a hose. That created a problem because some of the areas to be serviced were as much as thirty-six miles away from the nearest hydrant at Sanford-Yake. With thirty-four chemical toilets in the picnic and camping areas around the lake, each requiring about fifteen gallons of water to wash down and refill, and the tank therefore servicing only about six, frequent trips over sand-hill roads to the hydrant at Sanford-Yake were necessary.

Caretakers Walter L. Biglow and James B. Guy converted the fresh water tank piping to enable them to fill from the lake as shown in sketch. The water pump that forces water out of the tank now also drafts water into the tank from the lake. They installed a valve between the tank and the pump and replaced the eil with a tee to which they attached a valve and thirty feet of hose with a suction screen on the end. When they want to fill the tank from the lake they close the valve from the tank, put the end of the intake hose in the lake, put the end of the hose from the discharge of the pump into the fresh water tank intake and start the water pump engine.



The result was a considerable saving in time, gas, oil, and wear on the truck—and on Walt and Jim, too.



FRONT VIEW

SECTION A A

TOOL AND SUPPLY BOX FOR POWER MOWER

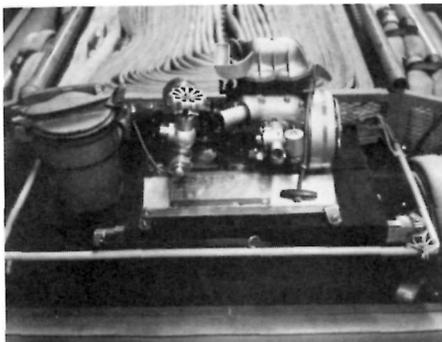
Fire ants and mosquitoes attack workers and visitors alike at Chalmette National Historical Park, and measures must be taken against both pests. Caretaker Alvin R. Williams concluded that if he had a carrying box on his Gravely power mower he could combine some operations and save some time.

The box was made of sufficient size (18" x 9" x 9") to carry a hand sickle, other tools, a can of insect repellent, an oil can, and a can of bait for red (fire) ants. By having the sickle and fire ant bait available as he mows, ant hills can be treated as he comes across them, and areas around sign posts and wall edges can be trimmed. This eliminates the need to send out another worker to trim and then to seek out the ant hills.

The mosquito repellent is, of course, for Al. The pests are plentiful, hungry, and vicious at Chalmette.

PERMANENT MOUNTING FOR PACIFIC MARINE PUMP

The Pacific Marine Type 5A7 pump shown in the photographs used to be carried on top of the hose laid toward the rear of the Forest Service Class II pumpers at Sequoia and Kings Canyon National Parks. This resulted in unnecessary wear on the hose, and the pump was difficult to reach in that position.

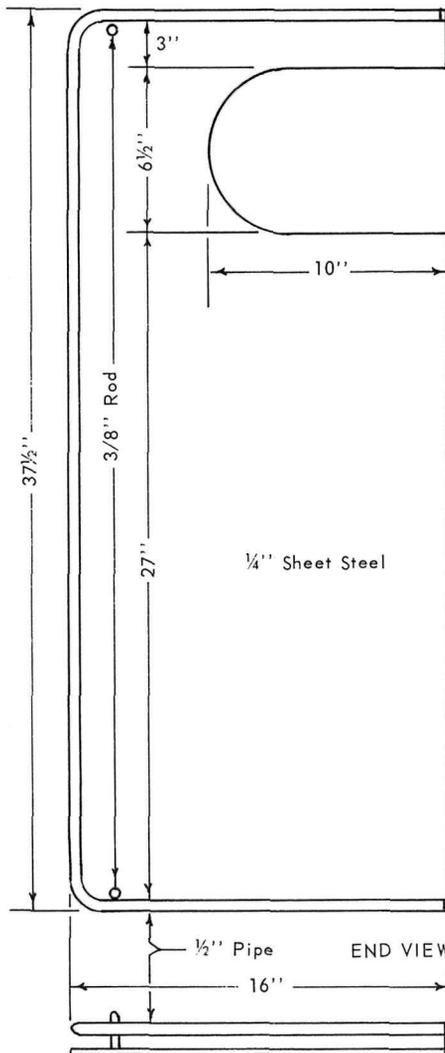


Forestry Foreman Bruce W. DeSimas designed the platform shown in the sketch and photographs which provides for permanent mounting and easy access to the pump. The platform was installed close to

the operator in front of the water tank, as the photographs show.

Construction details are shown in the sketch. With minor changes, the tray can be adapted to accommodate the larger Type Y pump.

PLAN



GETTING A RIDING MOWER TO MOUND SUMMIT

The sides of Great Temple Mound at Ocmulgee are too steep to get a tractor or riding mower to the top, so a small, push-type mower had to be used. That way the job of mowing the flat summit took about six hours.

Charles Thomas, maintenanceman, devised a way to get the Yazoo riding mower to the top safely. First, a 3-foot length of 3 1/2-inch pipe was buried on the mound summit with the top flush with the ground surface. A 6-foot length of 3-inch pipe with an "I" beam welded to one end was inserted in this sleeve. Two swivel mounted pulleys were attached to the crossbar, one at each end, and a rope run through them was attached to the mower. The other end of the rope was attached to a tractor at the base of the mound which then pulled the mower to the top. Each time,

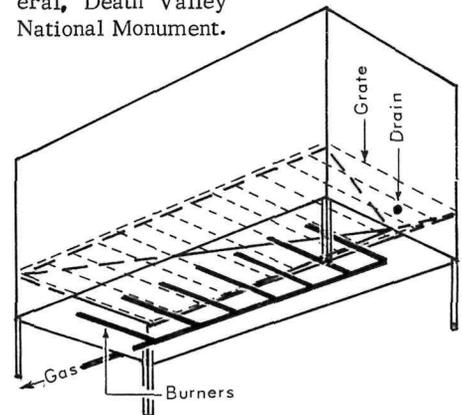
when the job of getting the mower to the summit is finished, the "T" post is removed and the 3 1/2-inch sleeve is capped.

Mowing time, including time required to get the machine on the mound and down again, has been reduced to 1 hour.



HOT TANK FOR CLEANING METAL PARTS

The tank shown here can be used to remove scale and travertine from pads and coils of evaporative coolers. It can also be used in the shop to clean radiators, heads, blocks, and other machine parts (except aluminum). It was designed by Raymond J. McGillivray, operator general, Death Valley National Monument.

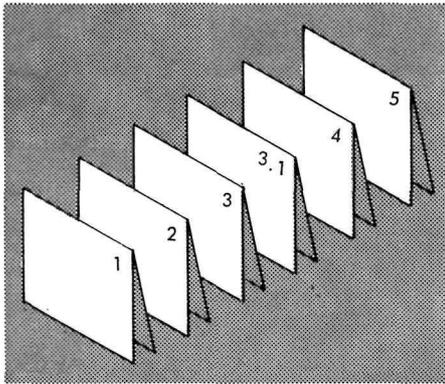


Build the hot tank large enough to accommodate the largest pad. The substance to be used in it (such as "Tusko") is available from a steam cleaner supply store. This is a caustic, not an acid (which was formerly used).

CATALOGING BLUEPRINTS

How do you bring order out of the chaos that a mass of blueprints of park structures and systems usually is? Tired of losing valuable time searching through a disorderly stack of them, Harold Becker, Manager, Camden State Park, Lynd, Minnesota, devised an efficient cataloging system.

The blueprints of sewage, water, and power systems; development plans; topographic maps; park structures and the like were organized under certain areas or systems, such as headquarters area or water system, and each blueprint under a given category was given a number, for example:



Water System, campground

1. Water line extension to campground
2. Water lines, main
3. Reservoir, campground
 - 3.1 Reconstruction of water reservoir
4. Profile of water mains
5. Water system, toilet building

The prints were folded, a code number was assigned and placed in the upper right corner close to the folded side (see sketch), and filed numerically with the folded side up. Make up your own code, set up a file card guide, and you'll find you can locate any blueprint among hundreds in seconds.

TELL IT TO THE MARINES—TALKS ON DESERT SURVIVAL

Concerned about safety during desert recreational activities, employees at Death Valley conducted campfire programs on the subject. They presented the program at Joshua Tree National Monument on one occasion, and in the audience was an officer from Headquarters & Service Battalion Marine Corps Base, Twentynine Palms, California. He asked that the talk be given at the Base to men, especially to the greenhorns from non-desert areas, who go to the Base for two weeks of reserve training in the June-August period.

In 1966, Donald M. Black of Joshua Tree revised the talk, emphasizing human safety

in desert training, especially directed toward individual survival. Since then more than 11,000 officers and men have heard the talk. In 1969 Marine officers and non-coms were trained to give talks to the troops. To date, 137 members of the permanent staff have received the one-hour training program.

Recently the Superintendent at Joshua Tree received a letter of appreciation for Don's talks from the Base Commandant, and in it he indicated a decline in casualties due to heat.

Several local organizations, especially retirees many of whom are rock and bottle hounds who roam over the desert, sometimes alone, in search of "finds," have requested the talk. After hearing it, many admit to having done some very foolish things which they now know better than to repeat.

WORDLESS BOAT SAFETY SIGN

The public will get the message without having to read a word! The photograph shows how Ranger Robert E. Woody, Everglades National Park, silently, wordlessly, educates the boating public concerning safety.

This sign which is 7' x 4', painted navy or marine gray, has mounted on it the actual



pieces of minimum equipment required for boating safety. That equipment includes: a rope, an oar, a fire extinguisher, a United States Coast Guard approved floatation device, a bailing bucket, a compass, a chart of the area, the necessary tools and equipment for minor repairs, and a light.

DOMELIGHT SAFETY SUGGESTION

The dome light at Federal Hall must be lowered to the rotunda floor by turning a crank handle when it is necessary to replace burned out bulbs. The socket is the plug-in type and very often a bulb would slip out and crash to the floor, splattering glass everywhere. Sometimes a light bulb would fall from forty or fifty feet—a hazardous situation indeed.

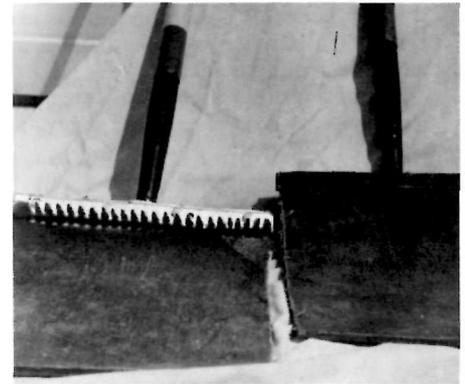
There is a grill on the bottom of the fixture, but it was fastened only on one

side by a chain. James Barbieri, janitor at Federal Hall, suggested that a chain or hook be placed on the opposite side to secure the grill and prevent the bulb from falling out of the fixture. This successfully eliminated the hazard.

MODIFIED FIRE FLAPPER

The fire flapper could be a more useful tool, Edward R. Carlton, supervisory park ranger, Everglades National Park, decided, if a raking device were attached to the underneath side of it. Turning the thought into action, he took the following steps.

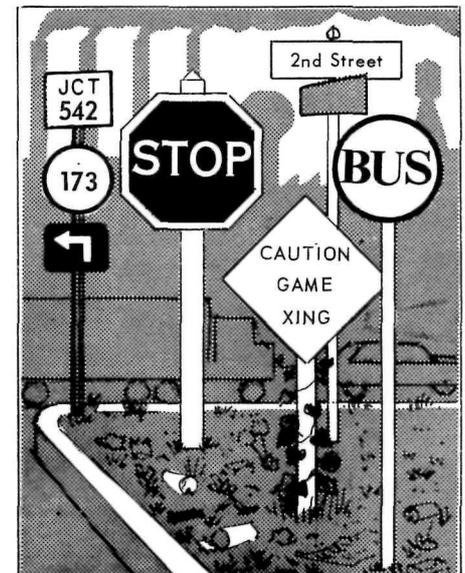
Drill out the rivets which hold the rub-



ber flap to the handle. Make wedge-shaped teeth in the 1 1/2" side of a 1/2" x 1 1/2" x 3/16" piece of angle iron and attach this rake to the flapper with bolts (see photo).

The modified flapper has proved to be practical in duff in grassy areas as well as in pine forest litter, and the additional weight of the rake has not been objected to by users. The tooth design is self-cleaning, and the heavy iron makes it very durable.

THE SURVIVAL KIT



Jim Burnett