



# Grist



issued by *The National Conference on State Parks*  
in cooperation with the National Park Service, U. S. Department of the Interior

Commentary — OF WORDS AND PARKS

In the years since they have been called by the name "parks", these areas—dedicated to beauty, knowledge, and the refreshment of man's body and soul—have had volumes, almost without number, written about them.

But it has remained for the distinguished author and scholar, Freeman Tilden, to paint the most vivid, not-soon-to-be-forgotten word picture of this engrossing subject. It was this gifted writer who told us many years ago: "To do a 'best seller' is easy—all one need do is get a dictionary and rearrange some of the words." He has masterfully demonstrated his theory of word-rearranging in his latest book, "The State Parks", Alfred A. Knopf, New York, publisher.

Our considered advise is — RUN, do not walk, to the nearest book store for your copy!

In the foreword of this book, Conrad L. Wirth, Director, National Park Service, says: "Freeman Tilden was chosen as author because of his discerning mind and inimitable style. His human touch makes for reader delight. It is intended that this book will stand as a companion piece to his 1951 publication, *The National Parks—What They Mean To You and Me.*" Little could be added here to strengthen that statement.

While Mr. Tilden's lucid and compelling descriptions of a great many state parks across the nation will be remembered long after the covers of the book have been closed, it is the logic contained in Part I, particularly Chapter III titled "Principles, Policies, and Problems" which shall claim our first attention, for these matters have held our collective and individual interests for a long, long time. And here this knowledgeable author evidences an unusual depth of perception of those matters with which we have been so much concerned in our professional lives.

Ever hear of 'smoggery'? It has—or should have—a very real place in the lexicon of park men. Smoggery also presents a very real danger to the institutions we park people hold near and dear, and to which we have dedicated ourselves.

Mr. Tilden, in his inimitable way, defines and explains smoggery, and cites

a few notable examples of its subversive use against parks by selfish interests. He offers a few suggestions on detecting and combatting this insidious tactic, too.

We had long considered a commentary on the "spoils" system versus the civil service system in park management and operation for we have observed both at work down through the years and have drawn some rather firm conclusions. But there is very little we could add to Mr. Tilden's section on page 39 under the heading "Quality of Park Personnel", for his observations are shared by us without reservation. Moreover, his "word rearrangement" would make our attempts to chronicle our thinking seem amateurish indeed, by comparison!

And so to you we commend "The State Parks: Their Meaning in American Life" by Freeman Tilden, author, teacher, philosopher, friend of mankind; whose other literary contributions include: "The Fifth Essence" and "Interpreting Our Heritage". You could spend your time less wisely and, incidentally, less profitably, than by pursuing these pages whereon appear those matters of such vital concern to us all.

—Amisol

ANOTHER INTERPRETATION  
ISSUE PLANNED

The reader will recall that the March-April issues in both 1961 and 1962 were labeled 'interpretation issue' and the content dealt principally with this important subject.

We are pleased to report that both of these specialized issues met with wide approval and requests have been made for us to continue this practice each year. We will, of course, need some help in getting the proper material to publish. While we do have a number of items on hand which are being held back for the next interpretation issue, it is not of sufficient quantity for a make-up entirely on the subject.

We would welcome any items you may want to contribute on interpretation matters, such as museum techniques, way-side exhibits, campfire programming, slide mounting and storing, leaflet dispensing, nature walks, and so on—the list is almost endless, and you can probably think of many more items. Don't be too concerned if your material is not in

final publication form. We will see that it is properly written up. But we do want you to be certain that we are provided with suitable photographs (unmarked, please!) if they will help to illustrate the article. And if your item happens to concern some device which park interpreters can make, or can have made in the park shops, be sure that we get a rough sketch with accurate, essential dimensions. A final drawing, suitable for publication with the article, will be made by the illustrator on the GRIST staff.

Remember, contributions could bring you a monetary reward! National Park Service employees are eligible for the \$15 award reported in the September-October, 1962 issue on page 35. All others are eligible for the award money mentioned on page 41 of the November-December, 1962 issue in the article titled "A New Break For Park Men."

If you're an interpreter, look around you for one of those useful items you have always thought should be passed on to others, then send it in. If you're not an interpreter, perhaps you can show the professional man how he can do his job better with that little gimmick you dreamed up some time back! You could be doing far more good in this important field of interpretation than you've ever before imagined.

And while we're on the subject of interpretation, we plan to have future issues of GRIST carry a section to be titled 'INTERPRETATION HIGHLIGHTS'. This feature section will carry any and all items which relate to all types of field interpretation. NPS interpretive personnel are planning to use the section as an idea exchange media and invite material from all sources.

WE'RE SORRY - - -

that the supplement on the new paints promised with this issue could not be included. The assembling of information and illustrations from widely scattered parts of the country made it impossible to complete a supplement in time to meet the deadline. The proposed supplement on the new 'wonder' paints will appear in a spring issue.

### PARK PRACTICE



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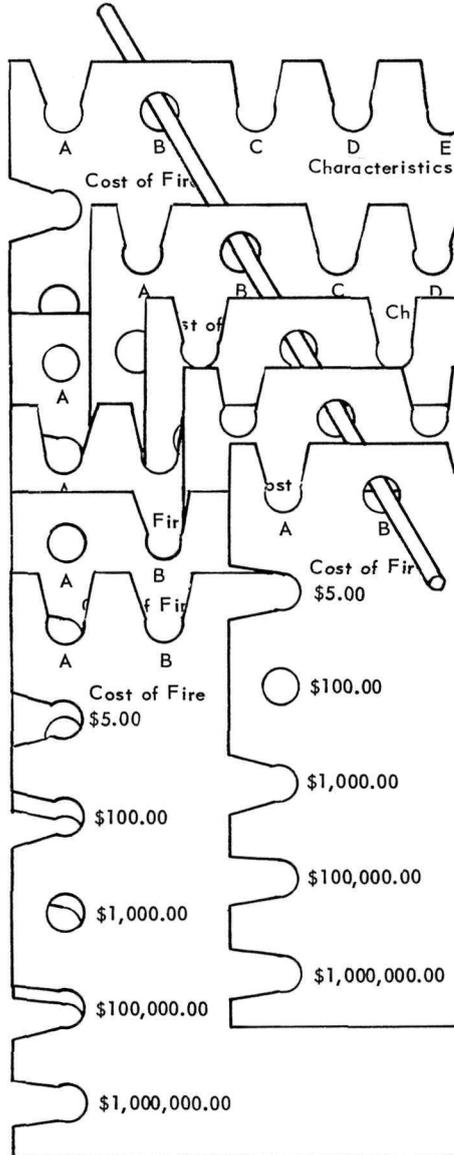
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Material for publication should be sent to: Chief, Park Practice, National Park Service, Dept. of the Interior Bldg., Washington 25, D. C.

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on unused portion of the card. Such a card is prepared for each fire and then filed in order of date.

Suppose, now, that you wish to make a tabulation of all smoker-caused fires. Each card for a fire so caused will have a punched hole at the position given to this characteristic. By running a piece of brazing rod or other suitable material through the cards at the position assigned to the "smoker-caused" characteristic, only those cards which have been hole-punched will be picked up by the rod. When the rod is raised, cards for those fires not having this characteristic will remain in place, because there will be a slot rather than a hole in that position. Cards are numbered to make their replacement in proper order easier, if they have been entirely removed from the file.



Use of a master key makes it unnecessary to have all cards printed with the general information. By referring to the key, the position assigned to the information you wish to pull out can be determined, and the rod then run through the cards at that position.

Dates, weather conditions, geographical

locations, manpower used, and many other general facts can be included on each card in a small space. Other refinements can be made, such as using different colored cards to indicate wildland fires in specific drainages or ranger districts. A removed corner may indicate use of a specific type aircraft, another corner might indicate burned land, including non-federal, etc.

This systematic cataloging of information and easy recovery can be widely applied to provide information in park planning, reporting, and general area management and administration.

In addition to the areas of use already mentioned, the system can well be applied to natural history (physical characteristics of nests, arrival and departure dates, individual wildlife measurements), snow removal information, individual building information, and visitation samples.

### GREASE FIRE? SHAKE IT OUT!

Just as you lift that steak from the broiler it slips off the fork with a splash and suddenly the whole oven is ablaze. Reach to the shelf above the stove and get that shaker marked FIRE. While someone else goes for the larger extinguisher, shake the dry type fire extinguisher chemical on the fire. This itself might do the job.

After seeing a demonstration of shaker-type, dry chemical extinguishers to put out grease, oil, and clothing fires, James F. Batman, Acting Chief Park Ranger and John W. Jay, Superintendent, Badlands National Monument, South Dakota, decided that if an inexpensive shaker could be devised, it would be a good thing to have one in the kitchen of every Government owned house, shop, and in vehicles or boats, or other locations where fire hazard exists. For trial purposes, Jim and Jay used pint screw-top glass jars, the lids of which they perforated with many 1/4" holes. They filled the jars with dry chemical and used stretch-on plastic covers to keep out the moisture. In red they labeled the container, "FIRE EXTINGUISHER", and below that in smaller letters, "Shake on Fires". (See photo)



The extinguisher is inexpensive (enough dry chemical to fill the jar, at 8¢ a pound, cost only 14¢), can be used by children as well as adults, and is right at hand. It does not scatter a fire, particularly oil or grease fires such as occur while cooking,

### POOR MAN'S PUNCH CARD FOR FACT GATHERING AND FILING

Francis H. Jacot, Assistant Chief Ranger, Crater Lake National Park, Oregon, submits a suggestion for using a fact collection method, which though not new, and not assisted by machinery, will provide you with a fast system for pulling together information. The method can be used for material which can be easily tabulated, for example, statistics on wildland fires, motor vehicle accidents, biological data on specific animal species, and possibly tabulated facts on specific park physical facilities.

The system uses cards with punched holes and slots around the border, indicating by position certain data which might apply to a subject. If cards are set up and kept up to date, facts can quickly be pulled out, and information compiled and analyzed on any time basis, from annual to day-to-day, or for an irregular time, such as a three, four, or ten year period.

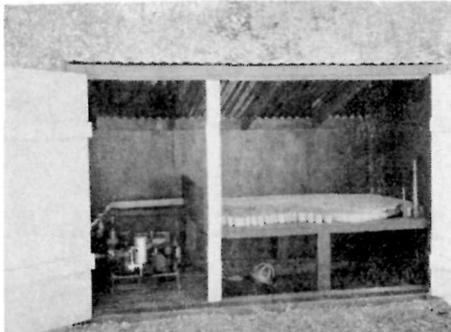
The sketch shows the way facts are recorded in this system. Using wildland fires as an example, you can see that of a large number of general characteristics which might apply to such fires, only those with the punched holes apply to the "Lost Cabin fire". All characteristics which do not apply are slotted rather than hole-punched. Special information is entered

as does the pressure type. It does not fill the room with large quantities of chemical powder, or gas or foam as pressure types do.

Jay saved his own car when the battery caught fire by using a larger commercial shaker type extinguisher. He also saved a truck loaded with elk by keeping under control a fire, which had been caused by gas leaking on the the exhaust pipe, until large foam extinguishers arrived.

Jim and Jay think the ideal small container would be made of non-flammable plastic with a perforated twist top similar to a talcum powder can lid. The consider it a sort of first aid measure, to be used until the heavier equipment and the experts arrive to be used if needed.

**FIRE-READY AND MILDEW-FREE**



The Area Maintenance Force at Black Canyon of the Gunnison National Monument, Colorado, have designed storage space for fire hose which discourages mildew and keeps the hose connected and ready for use at all times.

In a slant-roof shed with doors opening on the high side, the Force built a duck-board platform about two-thirds the length of the shed and two feet above the floor. At the other end of the shed they permanently mounted a pumping unit connected to water reservoirs. They coiled the fire hose, on edge, on the platform and connected it to the pump.

The under-platform space may be used to store small hand tools and other fire fighting gear.

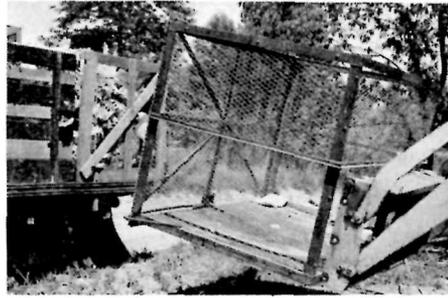
**TRACTOR TRASH COLLECTOR**

Because trash baskets along the beach cannot readily be reached by a wheel-type vehicle, Lyle McDonald, Manager of Warren Dunes State Park, Sawyer, Michigan and his staff designed a trash container for a crawler tractor. They used the fork lift attachment for the tractor to mount the collector which is made up of a steel plate bottom, angle iron corners and braces, and chicken wire covering.

Two steel stirrups were welded on the bottom steel plate so that the prongs of the fork lift would fit and so that the trash container would fit firmly. Bolts were used to fasten the basket to the fork lift prongs. The chicken wire used to line the inside of the frame and the swinging gate was held in place by tri-

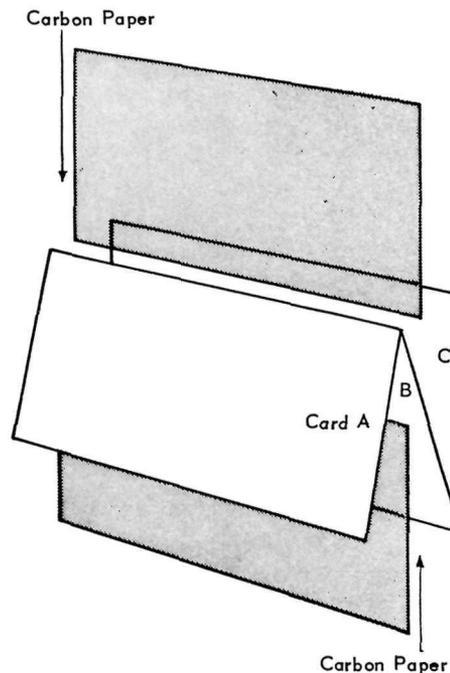
angular strips of wood fastened to the angle iron with bolts.

The tractor trash collector dumps quickly and easily into a truck or trash pile as the fork lift is raised and tilted.



**CAMP REGISTRATION TIME SAVER**

By using a three-fold card and carbon paper, the staff in camping areas of South Carolina State Parks are able to save time and eliminate errors, reports, C. West Jacocks, Director. (see sketch)



- Card A is the original Camper's Registration
- Card B the first carbon copy, is given to the camper as his receipt, and on the back of it are certain regulations
- Card C the second carbon, is the second office file copy

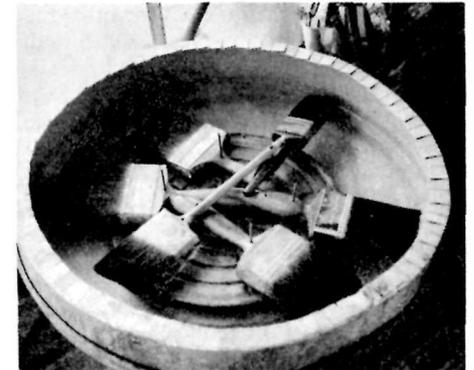
Card A is filed numerically according to space occupied. The "out date" is filled at the time of registration, so it is possible to see at a glance when the space will be vacated.

Card C is filed alphabetically, according to the registrant's name, serving as a "locator".

**MINUTE-DRY FOR PAINT BRUSHES**

Are you still back in the era of snapping cleaned paint brushes against a solid object to remove cleaning medium, and, you hope, speed up the drying so the brushes can be used next day? Chances are you've loosened many a handle that way, and that the brushes still dripped a little the next day anyhow. William H. Adams, Personnel Officer, Sequoia and Kings Canyon National Park, found that Milford M. Cook, Painter, had brought paint brush drying up to date with a spinner of his own design, and passed the information along.

The device is made with a garbage can lid, a phonograph turntable, and a small bench emery wheel sharpener (without the emery wheel). To make a protective edge, a piece of galvanized metal, long enough to circle the lid is scribed 5" and cut 6" wide. The 1" scribed is cut at 1" intervals to permit the bend-over which keeps the liquid from splashing out. The bearing of the phonograph disc (or other suitable device) will, of course, have to fit the shaft coming up through the center of the lid from the sharpener which is the spinning mechanism. To the outer perimeter of the disc are soldered six 8D nails. A hole is bored at the bristle end of each brush handle so that the brush may be placed over a nail.



As many as twelve brushes may be placed on the disc. With the typical sharpener gear ratio of 13 to 1, the brushes will dry in just one minute.

**BOBBY PIN BRAD PLIERS**

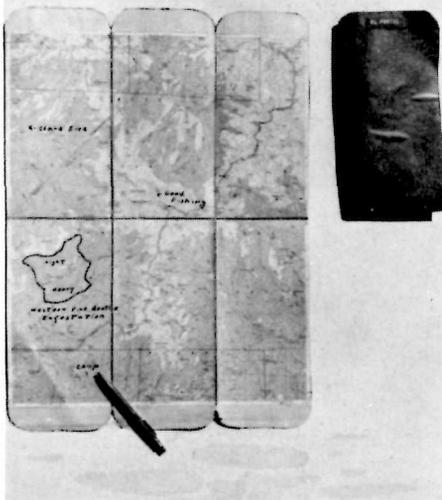
Borrow woman's ever ready tool -- the bobby pin -- and save thumb and finger from being hit when hammering those hard-to-hold brads, says Superintendent Ernest Jewell of Old Mill State Park, Argyle, Minnesota.

*It is good to know that we are a part of history.* —Anon.

## FIELD MAPS FROM FIFTEEN MINUTE QUADRANGLES

A method for bringing 15-minute quadrangle maps to coat pocket size and providing a surface for frequent marking has been devised by Clyde M. Fauley, Assist-Park Forester, Yosemite National Park.

The maps, from which the borders have been trimmed, are cut into six sections. The four sections on West are cut 4 7/8 by 8 7/8 inches, and the two East sections are cut 4 1/2 by 8 7/8 inches.



Chartex, an iron-on cloth backing is cut 15 by 22 inches. The map sections are then placed 1/8 inch apart (to make folding easier and avoid map wear at the fold) on the Chartex with their backs to the smooth, glued face. Place them so as to leave a border of Chartex at North and South. Now, to spot-hold the sections in place temporarily, hold the point of a warm iron on a corner of each section for a second. This will not damage the map face. The entire map can now be turned over and bonded to the Chartex by ironing.

The excess Chartex at North and South can be folded over itself about one inch and ironed together to form a handling tab.

Pressure-sensitive clear plastic, .002 gauge mylar, is used to cover the map. The plastic may be cut the same size as each section, which makes for easier folding, or in one piece to cover the entire map. Pressure-sensitive plastic is available to U.S. agencies from the General Services Administration (#9330-618-7214).

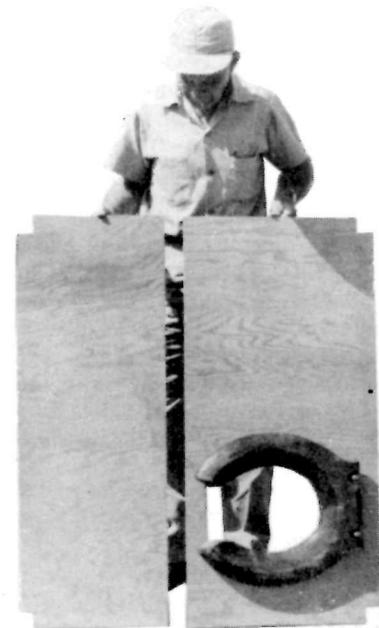
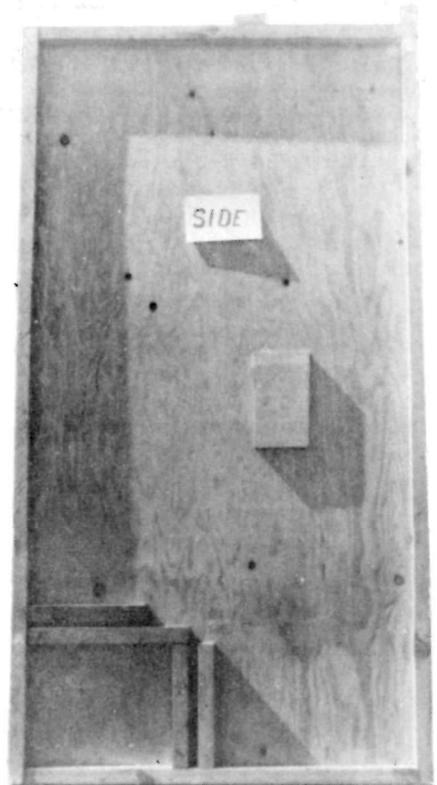
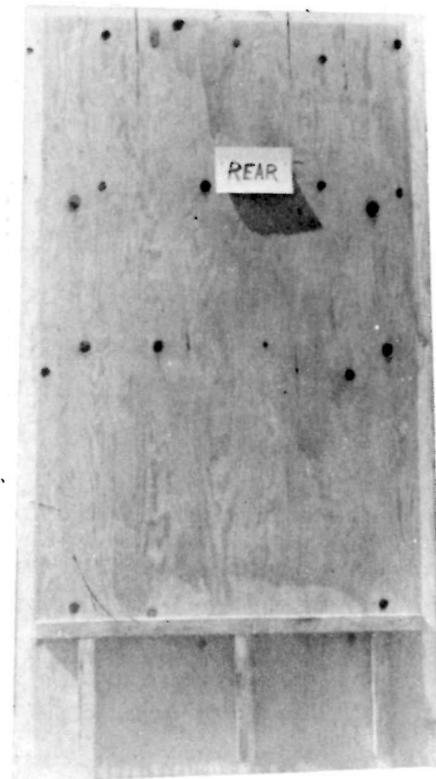
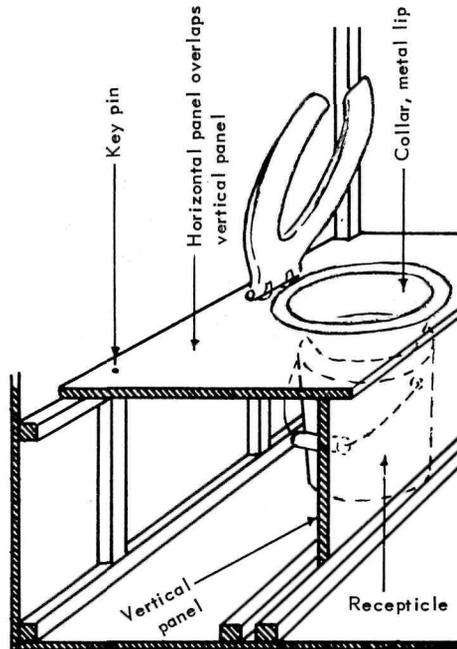
The map is now ready for folding. First, fold South to North, then East to map center. Next, fold West over center. The excess Chartex at top of the folded map can be trimmed to form pull tabs for easy removal from pocket or case. The exposed sections of the folded map can also be covered with the pressure-sensitive plastic.

Clyde used a Roover hand stencilling machine to make a tape stencil label for each quadrangle for quick identification.

A wax pencil (or "china-marking pencil") can be used on the plastic for marking park projects, boundaries, fires, and the like. The wax is easily wiped off, enabling you to use the map over and over.

## ENCLOSED PORTABLE CHEMICAL TOILET

Plywood, some lengths of 1 by 2-inch board, a plain toilet seat and a five gallon can with plastic liners have been combined to make up a sturdy yet portable enclosed toilet for park use where pit toilets or permanent plumbing cannot be used, says a report from Cabrillo and Channel Islands National Monument. Chief Ranger Thomas Tucker, assisted by Maintenance Foreman Hugh Smith designed the first toilet, shown in the sketch and photographs, for use on Anacapa Island. Park Historian F. Ross Holland, Jr. sent in the information.

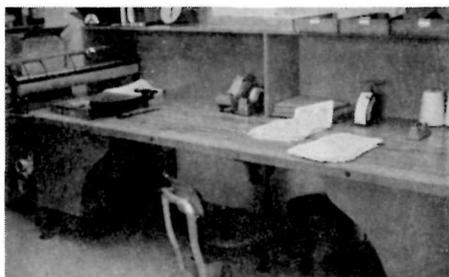


A piece of metal, fitted to the panel hole as a lip, rests under the seat and from it a collar, funnel shaped, extends down into the receptacle. The collar serves as a splash pan and also keeps the receptacle from tipping over.

The horizontal, or seat, panel is held in place by a key pin. Once the pin and the metal seat collar are removed, the horizontal panel just slides out. Since this panel overlaps the vertical panel, removal of the horizontal panel permits the vertical one to slide up and out. With the panels out of the way, the receptacle can be removed and the plastic bag liner taken out and buried, or, in the case of Anacapa, loaded with rocks and sunk at sea.

MAILING TABLE FROM  
DISCARDED DESK

When some laminated hardwood table tops size 3 x 10 feet by 1 1/2 inches were acquired recently at Death Valley National Monument, most of them were used in the construction of work benches for the shops. But the office force got their cotton-pick-in hands on one they wanted for a mailing table, writes Alfred P. Schwartz, Administrative Assistant.



Caretaker George H. Deardorff found a discarded wooden desk to serve as a base. This he sawed in half and spread to form a pedestal at each end of the table top, which was then fastened by inserting wood screws up through the old desk top. A back board (cork) with a shelf was attached. Postage charts and other notices pertinent to mailing and distribution can be tacked to the cork board.

By using surplus and worn out property, a useful piece of office furniture was constructed for about \$20—commercial cost—about \$100.

JIFFY BEACHCLEANER

All the litter on your park beach, right down to a dime, a bottle cap, or a cigarette butt will be whisked up and strained right out of the sand in short order with the Lockwood Grader Corporation's Beachcleaner. In fact, all debris from 7/16 to 12 inches in diameter and to a depth of six inches is removed fast with this easy-to-operate machine.

The Beachcleaner comes in two variations of the basic model, both designed to be towed: the PTO shaft-operated machine, in the price range of \$4,000 and the engine-operated type (shown in photograph), at about \$5,250.



Details may be obtained by writing to Jim Parks, General Sales Manager, Lockwood Grader Corporation, Gering, Nebraska.

GAS, OIL AND PAINT HUT  
FOR SNOW COUNTRY

In parks where snowfalls are deep, as in the Donner Pass area in California, an "A" type building such as that illustrated in the photograph is most practical. Jack Stowe, Park Supervisor, and Curtis Mitchell, Assistant in Donner Memorial State Park designed the building shown. A gasoline pump and motor oil supplies are under the roof near the roadside, and behind them is a wall with door leading into the enclosed portion of the small building. The room thus created behind the pump serves safely to store supplies of grease, oil and paint.

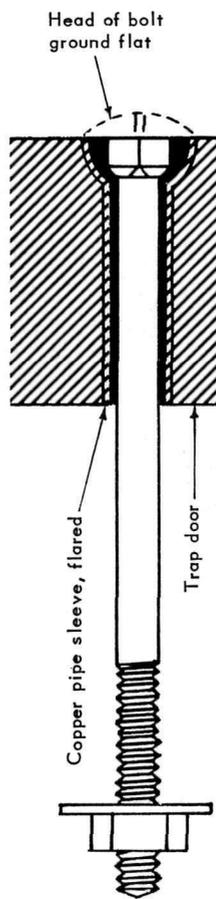


TRAP DOOR HANDLE

What kind of a handle do you need for a trap door in the floor? Ray Lehto, that man with the many ideas who is at Fort Wilkins State Park in Michigan, says that the big standard handles do not look very well in house or porch floors and the smallest ones are hard to get a grip on. So he has devised a cheap and simple trap door handle which consists of a 1/4-inch bolt fitted loosely into a short length of chrome plated copper pipe with a 5/16-inch internal diameter. The pipe is flared to receive the head of a 1/4-inch carriage bolt or similar bolt.

As the sketch shows, the bolt is equipped with a nut and washer so that when it is pulled up it will pull the trap door with it. The bolt can be from 3 to 6 inches long.

If a regular carriage bolt is used, the head should be ground or filed flat, but this work can be avoided if you can lay your hands on what the bolt and nut manufacturers call a "plow and cultivator



bolt", a "tire bolt" or even an "elevator bolt". All those special types of bolts come with flat heads which have no slots.

SURPLUS BOMB HOISTS PUT TO WORK

Two park maintenance men have suggested the use of salvaged World War II bomb hoists to make heavy jobs easier. Robert N. Thorne, maintenance man at the Dinosaur National Monument, Utah, and Donald W. Everts, who serves at Coulee Dam National Recreation Area, Washington, both have said that with a minimum of modification, hoists can be employed to handle tasks that formerly required the straining muscle power of several men.



Don Everts, who developed his idea with driver Robert E. Babler, used a small hoist taken from the inside of a plane and mounted it on a pick-up truck at one side where it can be easily swung out of the way of the load. In the picture, the hoist is being used to lift welding tanks onto the truck.



Bob Thorne's hoist is a larger type, used in bomb depots, which has an inverted U-frame supporting an eye-beam track on which the hoist moves. Bob built a special platform under the hoist and extended the eye-beam by welding a piece on to reach out over a truck bed. He then assembled emergency fire-fighting equipment in compact form to be moved quickly on to a truck with the lifting device.

For lifting the fire unit, a sling frame or spreader about 30-inches square is desirable, with lift chains at each corner, permitting the pumper and hose unit to be lifted without damage to motor or hose. The hoist may also be used for many other types of very heavy equipment and can lift truck or tractor engines from their frames for maintenance.

### FOILING PUMP HANDLE VANDALS

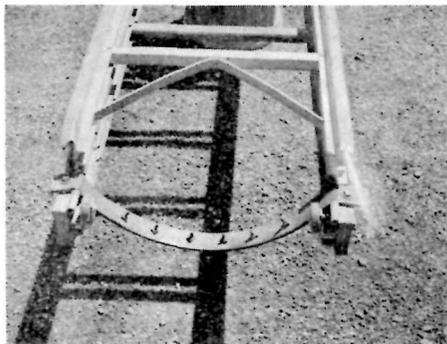
Fed up with having the local strong boys twist the handles off pumps in unsupervised areas, Jack D. Strain, Chief, Division of State Parks, Nebraska, devised the simple but completely effective handle protector shown here. Not a pump equipped with Jack's protector has been damaged since installation, and the first one was put in place four years ago.



Scrap pipe can be used to make the pump protector, with dimensions adjusted to fit the type and size of pump used. Jack points out that such a device must be set solidly in concrete so is chiefly applicable to new installations.

### NON-SLIP POLE LADDER

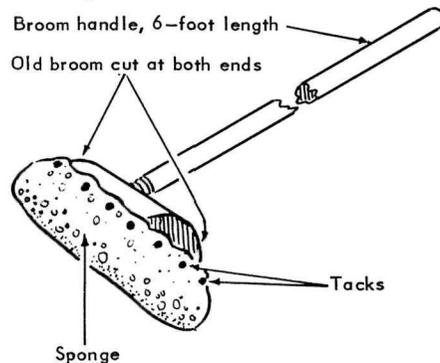
Ladders, especially the long extension type, can really wobble and slip when used against a tall tree or pole. That's why Operator General William E. Graves of Death Valley National Monument installed the special safety device pictured here on his ladder. Our busy reporter, Alfred P. Schwarz, Administrative Assistant, sent in the information.



At the top of the ladder, a 1/4 by 1 1/2-inch piece of strap iron shaped to fit a typical tree contour is bolted in place. Each couple of inches along the strap, a hole is drilled and a bolt fastened in place, projecting an inch or so. Each bolt is filed to a point to grip the tree or pole surface.

### LOW-COST WINDOW WASHER

To wash windows as high as twelve feet without using a ladder, try making and using the window washer suggested by Lawrence E. Alston, a Janitor at Everglades National Park. The parts needed are a worn out push broom, a large sponge (the 4 by 7-inch size works well), and a few tacks. Cut the wooden section that holds the bristles down to a width of about an inch less than the longest dimension of the sponge, and cut the bristles off this remaining wood part. Tack one edge of the sponge to the wood and your window washer is ready.



The improvised washer works as well as similar devices sold commercially, but costs very little.

### PREFABRICATED ALUMINUM STAIRWAY

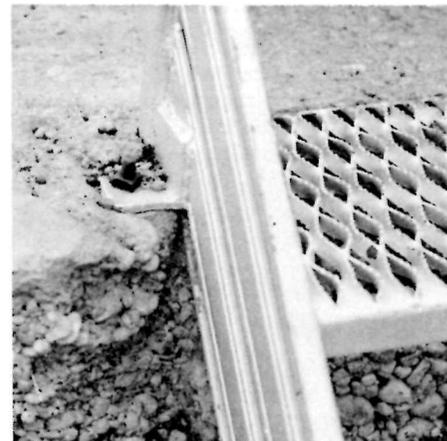
A stairway is often needed to make it easier and safer for visitors to get to caves or tunnels.



Because such features are usually great distances from the park workshops, the prefabrication of a stairway of light durable material is a necessity. Franklyn N. Hamble, Chief Park Naturalist, Craters of the Moon National Monument, sent to GRIST information about such a stairway (see photographs) designed by Superintendent Floyd Henderson for the Indian Tunnel entrance.

Dimensions of the welded aluminum stairway are: length 14 feet, width 30 inches, steps 12 inches wide, risers 8 inches high. The bracing permits a 1000 lb. load at midpoint. The handrail is 3/4-inch pipe. As you can see in the close-up

photograph, the stairway is bolted to "tee" bars which are anchored in concrete, and the embossed stamped steps minimize the danger of people slipping on them. (If a park shop is not equipped for welding aluminum, bolts may be used.)



Besides being light to transport, the stairway requires little maintenance.

### FILLING CALKING GUNS FAST

Where building maintenance requires heavy use of calking guns, so that calking compound is purchased in economical 5-gallon quantities, a gun-filling system suggested by Gordie Whittington, an Exhibits Specialist at Edison Laboratory National Monument, will save time, money and mess.



Gordie has adapted a standard grease-gun filler, such as Sears, Roebuck's No. 4998, for use with calking compound. Such a filling device will fit the standard 5-gallon can of calking compound which is the same size as a 25-pound can of grease. Instead of the filler adapter supplied, Gordie uses a 3/8 by 1/4-inch pipe reducer coupling and a short 1/4-

inch nipple. You screw the nipple into the reducer and then screw this assembly onto the 3/8-inch discharge pipe of the filler. This prepares the filler so that if the calking gun nozzle is removed from the gun, the gun can be screwed directly onto the 1/4-inch pipe nipple, as in the photograph.

When you are ready to use the filler, make sure that the ratchet side of the piston rod of the gun is disengaged from the trigger and the piston is at the nozzle end. Then a few strokes of the filler handle will fill the gun all the way with compound that is free of air bubbles. There is no waste compound to be wiped off the hands or the gun barrel. The process is as clean as using calking cartridges to fill the gun, and is much cheaper.

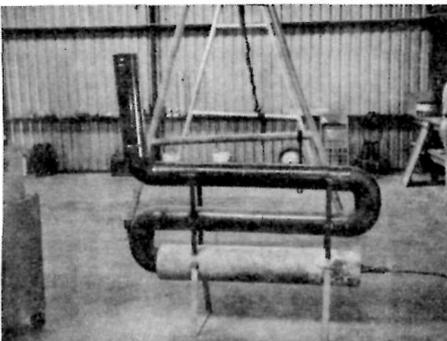
To get the most out of the fast filler method, Gordie suggests that both containers be warm (70°); that the oil-treated paper on top of the bulk compound be left there (with the filler pump barrel pushed through an X-cut in the middle) to prevent scale forming; and that a 3/4-inch screw be loosely placed in the vent hole on the handle of the gun during filling to warn you when the piston reaches this point. When the piston reaches the screw causing it to lift slightly, you stop pumping and lift the filler pump handle slightly to relieve pressure. Then the gun can be removed without compound being forced out.

To keep the discharge nozzle of the filler clean, use a 1/4-inch pipe cap.

#### PIPE THE BUTANE SPACE HEATER!

Steel pipe, stove pipe, and a butane jet -- combined right, they make a good shop heater. James L. Segrest, general manager of the Lubbock County Water Control and Improvement District, Texas, took a length of steel pipe to serve as a combustion chamber, welded on some metal spread legs, and put a butane jet in one end with a flexible tube leading to a gas bottle outside the building. Then he also welded to the steel pipe four strap steel uprights to hold two pieces of stove pipe the same length as the chamber, connected by elbows to the steel pipe.

As the photograph shows, a stove pipe elbow placed at the end of the chamber opposite the jet connects with the first straight length of stove pipe, then a second horizontal length, and a third holds



a piece of stove pipe directed upward. The rising pipe should extend out through a hole in the roof or should connect to an existing chimney, for safety.

#### PICK UP MORE TRASH WITH A PICKUP

A 1/2-ton or 3/4-ton pickup truck can be given added capacity with an easily removable trash box such as the one built by Laurie G. Miller, Foreman III, Mixed Gang; James M. Chambers, Mechanic, Heavy Duty; and Lynn J. Mowry, Building Repairman, in Big Bend National Park. With some hot rolled sheet iron, angle iron, rivets, pipe, iron rod, chain, some odds and ends of materials, and 10 man days of labor, the men built a 4 by 4 by 7-foot box with a capacity of 4 cubic yards.



A handle at the back of the box opens an angled door on the right side and top to permit easy loading of trash (See photo). By means of a crank on a frame at the front of the truck bed, a chain fastened to the front of the trash box is wound up, thus tilting the box so that the trash comes out the rear door. That door is so constructed that when open it serves as a dumping chute held in place by chains.

#### HOLD DOWN THAT TRASH CAN!

A good system for keeping trash cans from toppling over when they are located in an open area is to use ground-fastened chains or cables with hooks. Carl Whitefield, Park Supervisor at Salton Sea State Park in California, uses a method that provides a good base for each can and reliable holds for chain or cable. He has a circular concrete base poured flush with ground level at each can location, and before the concrete dries he has three loops made of reinforcing steel set in position at 120 degree points around the outside rim. The loops are used as "tie-

down" points for chain hooks or spring hooks.

The photograph shows Carl's assistant, Jack Sutton, about to place a standard refuse can on one of the bases.



#### "ATTRACTIVE, COLORFUL"

#### TRASH CANS!

When trash cans in a beach area can be described as "attractive and colorful", a considerable miracle has been accomplished. Yet those are the right words to describe the enclosed cans pictured here, designed and built by the California Division of Beaches and Parks, people who operate Silver Strand Beach State Park. The three can enclosures shown are painted in pastel colors, two in flamingo orange, one in sea green.

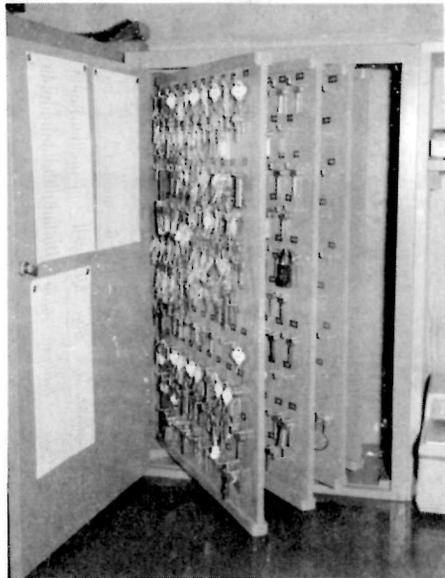
Made of transite pipe with large enough inside diameter to accommodate standard GI garbage cans, the enclosures are mounted on a poured concrete island. The pipes are fastened down by angle irons inside, but could have been set in concrete at the time of pouring. Semi-circular holes at the bottom of each transite pipe permit drainage of rain water.



The tops are fitted metal with hole in top center. These tops stay in place by weight and friction against the outer sides of the transite pipes.

## SAFEKEEPING FOR KEYS

Development at Death Valley National Monument has been so great that the key situation was getting out of hand. To safely house and systematize the control of more than 300 keys, Administrative Assistant, Alfred P. Schwarz and Procurement and Property Management Assistant, Charles V. May knew that what they needed would cost about \$275 commercially. Together they designed and had built in the park carpenter shop the cabinet pictured here, at a cost of \$27 for materials and labor.



Keys fit on hooks fastened to hinged plywood panels. Room was allowed for expansion. An index to all keys is fastened to the inside of the cabinet door. Number labels for the hooks were made with a Dymo Tapewriter.

## MAKING HATBANDS SHINE

Park Ranger uniform hatbands, or similar decorative leather hatbands, can be kept looking new and shiny through application of one of the new aerosol lacquer sprays, such as Krylon Acrylic spray, says Staff Park Ranger Carl E. Lehnert of the Washington office of the National Park Service.

"After the hatband has been thoroughly cleaned and polished and the silver sequoia cones treated with silver polish, the band should be fitted to the Stetson on which it is to be worn," says Carl. "Then the approved lashing should be done with the thong, and when you are sure that the band fits properly, you should slip the band off carefully, preserving the round shape. Spray it then on the outside with the lacquer. The coating dries fast and the band can be put back on the hat in a few minutes.

"Hatbands treated this way retain a new shining appearance for a long time and need only occasional dusting to freshen them up," the Ranger adds. "But don't try the idea on belts or any other leather that must constantly bend and stretch. Such action breaks the lacquer surface."

## EXPLOSIONS BY RADIO?

Any two-way radio telephone set can produce sparks. Thus, if a can of gasoline or other volatile fluid is placed in a car or truck near a set, or where vapors can leak into the set compartment, there can be an explosion. Jackson E. Price, Assistant Director of the National Park Service recently pointed out that a law enforcement officer was killed when such an explosion took place.

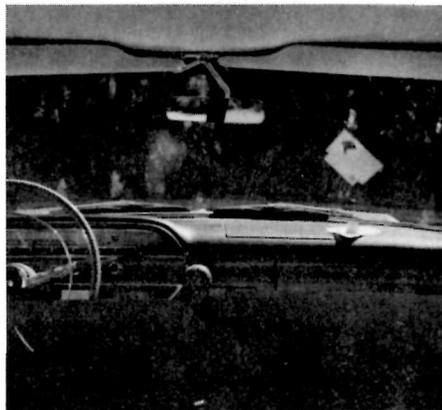
In a circular memorandum, Mr. Price wrote: "All personnel should be warned against storing flammable liquids, or containers which have held flammable liquids, in the space which contains the radio transmitter."

At the same time, another explosive possibility from radio-telephone equipment came to notice. If you drive in an area where blasting operations are taking place, turn off the radio telephone set if possible, because the transmitted impulses sometimes set off certain types of electric detonators used in modern blasting.

## SAFE FROM REFLECTION DANGER

Hugh H. Bozarth, Supervisory Park Ranger, Death Valley National Monument, California, was concerned about the safety hazard caused by reflection from the light, shiny top of the car dashboard (deck above the instrument panel) onto the windshield.

To eliminate the hazard, he sanded the glossy dashboard surface and painted it with a flat, dark-colored enamel. Chromed windshield wiper arms may also cause a reflection which makes it difficult to see through the windshield. They, too, may be covered with the dark flat enamel.

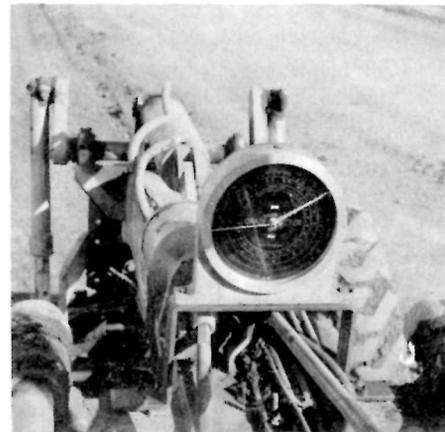


The photo shows a deck to which flat dark enamel has been applied. The piece of paper placed on it shows the dangerous windshield reflection caused by a light surface. Hugh calls attention to the fact that penalty decals placed on the deck will also cause the hazardous reflections.

## GRADE-O-METER

Now you can build that road, slope that ditch, set that slope, or grade that large fill without having the grade checked and

rechecked by a trained person. Nor do you need to be an engineer to check as you go with the new Grade-O-Meter, says Theodore J. Wirth of Theo. J. Wirth Associates, Billings, Montana.



The Grade-O-Meter, a well built, accurate instrument designed to be mounted on almost any kind of equipment, enables the operator while in action to tell by a glance at two pre-set markers whether he is on the right grade or slope. There is no so-called reading of the instrument once the two pointers are pre-set at the desired position.

Job tests in the Dakota area have proven the instrument to be invaluable in eliminating expensive errors and rechecking, thus cutting operational costs considerably. Since the Grade-O-Meter can be used on almost any kind of machine, it is especially adaptable to park work where grades of trails and landscaped slopes are built by force account rather than under contract.

The Grade-O-Meter was developed by engineer Fred Brady. Additional information about it or the instruments themselves can be obtained through the Fredon Company, Spearfish, South Dakota. They are designed to retail for about \$400.

## RANGER 'RED' sez:-



"If you want anythin' done, take it to the busiest man in town - he'll give it to his secretary to do."

Jim Burnett & IBL