

Fall 1981

Design

U.S. Department
of the Interior

National Park Service



Design

A publication of the Park Practice Program

The Park Practice Program is a cooperative effort of the National Park Service and the National Recreation and Park Association.

Russell E. Dickenson, Director
National Park Service

John H. Davis, Executive Director
National Recreation and Park Association

Editorial Staff

Branch of Professional Publications
Division of Cooperative Activities
National Park Service
U.S. Department of the Interior

Frank C. Goodell, Program Manager

James A. Burnett, Editor, *Design* and *Grist*.

Kathleen A. Pleasant, Editor, *Trends*.

Contractors to the Park Practice Program

District Lithography Company, Inc., Printer

The Park Practice Program includes: *Trends*, a quarterly publication on topics of general interest in park and recreation management and programming; *Grist*, a bi-monthly publication of practical solutions to everyday problems in park and recreation operations; and *Design*, a quarterly compendium of plans for park and recreation structures which demonstrate quality design and intelligent use of materials.

Membership in the Park Practice Program includes a subscription to all three publications and selected back issues in vinyl binders with indices and all publications for the calendar year.

The information presented in any of the publications of the Park Practice Program does not reflect an endorsement by the agencies sponsoring the program or the editors.

Articles, suggestions, ideas and comments are invited and should be sent to the Park Practice Program, Division of Cooperative Activities, National Park Service, USDI, Washington, D.C. 20240.

The initial membership fee is \$80; annual renewal is \$20. A separate subscription to *Design* is \$50 initially, and \$10 on renewal. Subscription applications and fees, and membership inquiries should be sent *only* to: National Recreation and Park Association, 1601 N. Kent Street, Arlington, VA 22209.

Dear Reader:

This issue of DESIGN brings you a medley of ideas from experts throughout the park and recreation community.

We have a design for the theft-proof collection box that is in use at the Whiskeytown-Shasta-Trinity NRA in California and two different gate designs, one from the East Bay Regional Park District in California and another from Silver Springs State Park in Yorkville, Illinois.

We also have horse show rings and equipment developed by the Virginia

Polytechnic Institute and a gravity hinge from the USDA Forest Service's Mark Twain National Forest in Rolla, Missouri.

We hope these designs prove useful to you and we look forward to receiving any more good ideas you would like to share with others.

This chart indicates the proper place to insert new design sheets in your DESIGN binder.

Remove Index No. from book	Behind Index No.	Insert New Sheet Index No.	Backed by Index No.
	A-1362	A-1363	A-1364
	P-2420	P-2421	P-2422
	P-2422	P-2423	P-2424
	P-2424	P-2425	P-2426
	B-3806	B-3807	B-3808
	B-3808	B-3809	B-3810
	B-3810	B-3811	B-3812

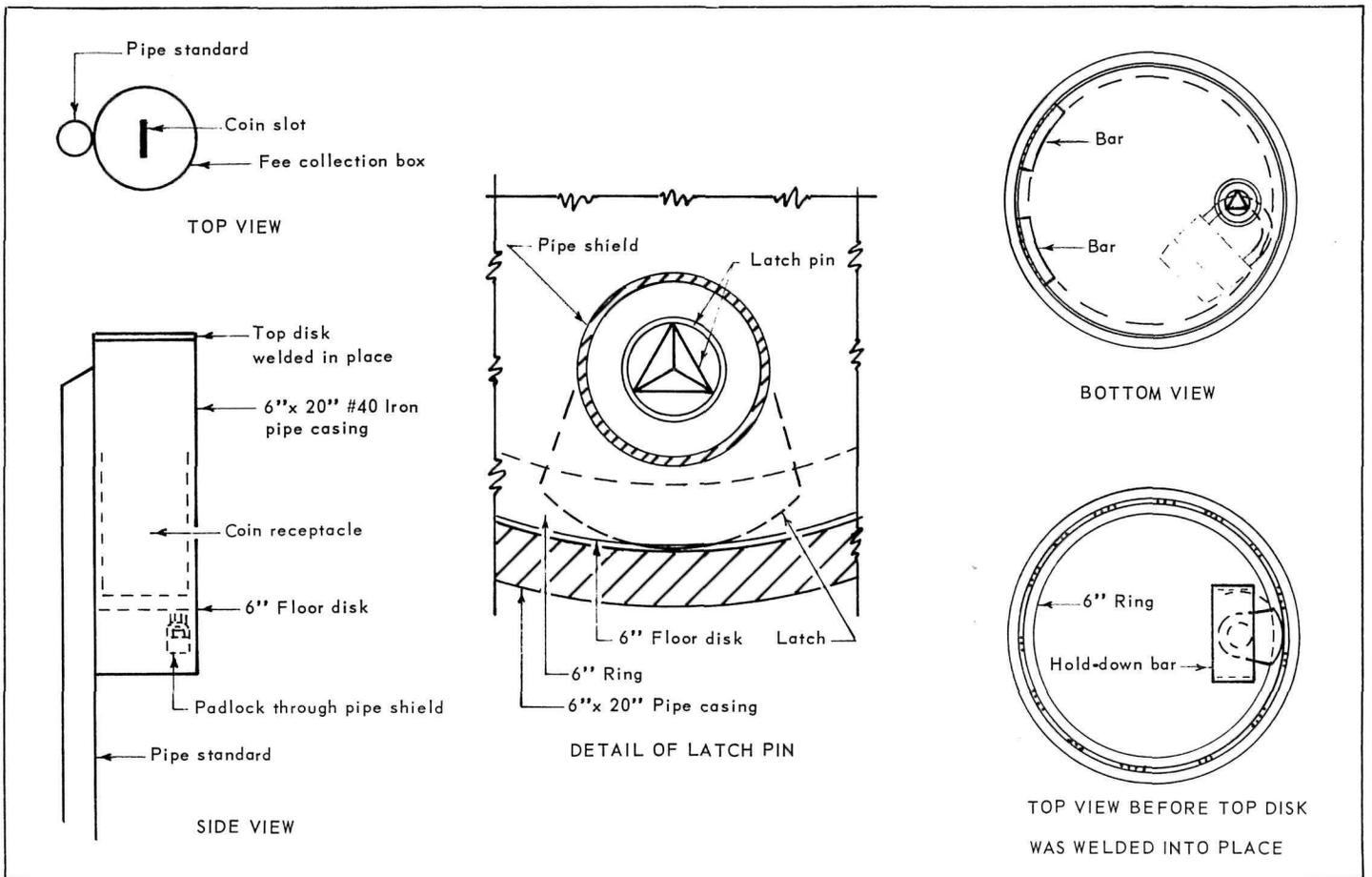
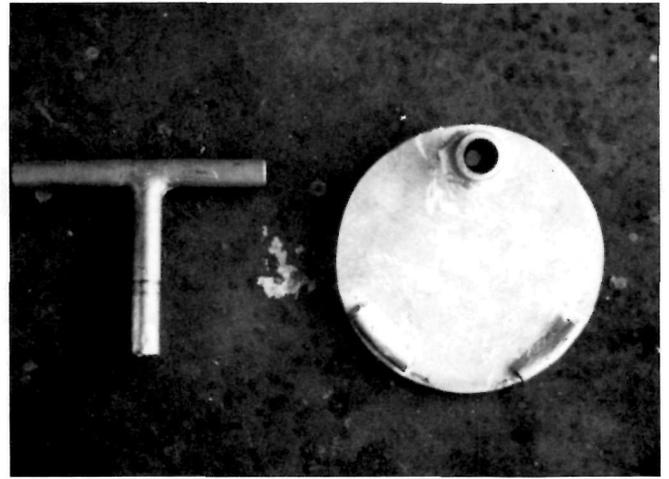
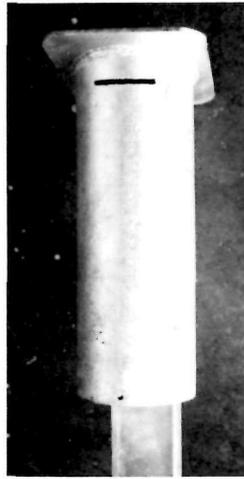
All plans contained in *Design* are presented as guidelines and suggestions, not as blueprints for construction. Before building from any plan, be sure to consult federal, state, and local safety and building codes. We particularly recommend your checking building plans for compliance with the National Fire Protection Association's — NFPA No. 101, "The Life Safety Code," of 1976.

Also, to assure barrier-free design that permits access for all people, check your plans for compliance with the American National Standards In-

stitute's ANSI A117.1 *American National Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped*.

When submitting new material for *Design*: We'd like a black and white glossy photograph showing your structure. This photo should be of good quality and in sharp focus. For best reproduction, we like to receive 8" x 10" photos, but smaller ones can be used if their quality is good.

Theft-proof Collection Box



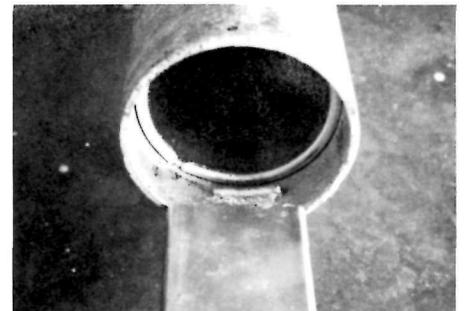
Maintenance man James Goodwin at Whiskeytown-Shasta-Trinity National Recreation Area (CA) has devised this sturdy, theft-proof fee collection box. When used in conjunction with a display board bearing instructions and a supply of permit envelopes, this box puts day campers on the honor system for do-it-yourself registration and payment of fees.

The box is a #40 iron pipe casing, 20" x 6", capped by a square inch plate, welded in place. A slot is cut through the pipe wall, under the cap, for deposit of envelopes and fees. The box is welded on one side to a 2" or 3" steel support post, set in concrete

near the display board.

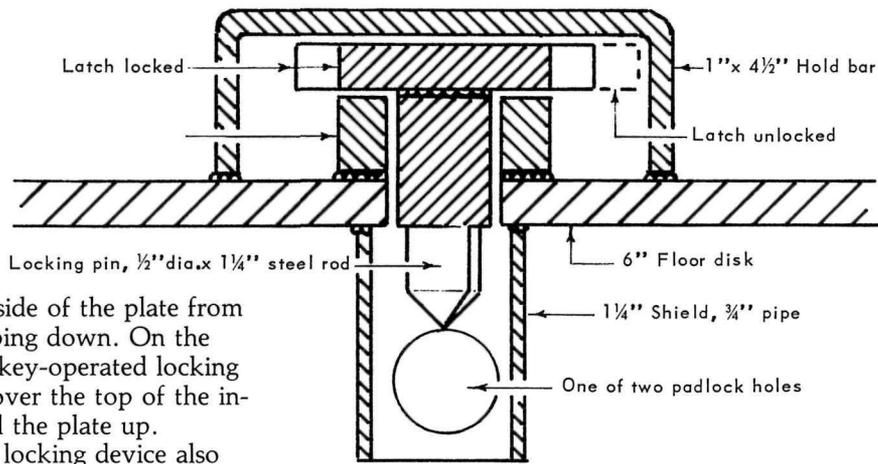
A bottom circular plate is held tightly in place against a 3/8" diameter bar stock, welded as a ring completely around the inside diameter of the casing. The plate is locked on one side of the casing by short lengths of bar stock (on its underside) which mate with a similar short length on the casing wall, thus

(Continued on backside)



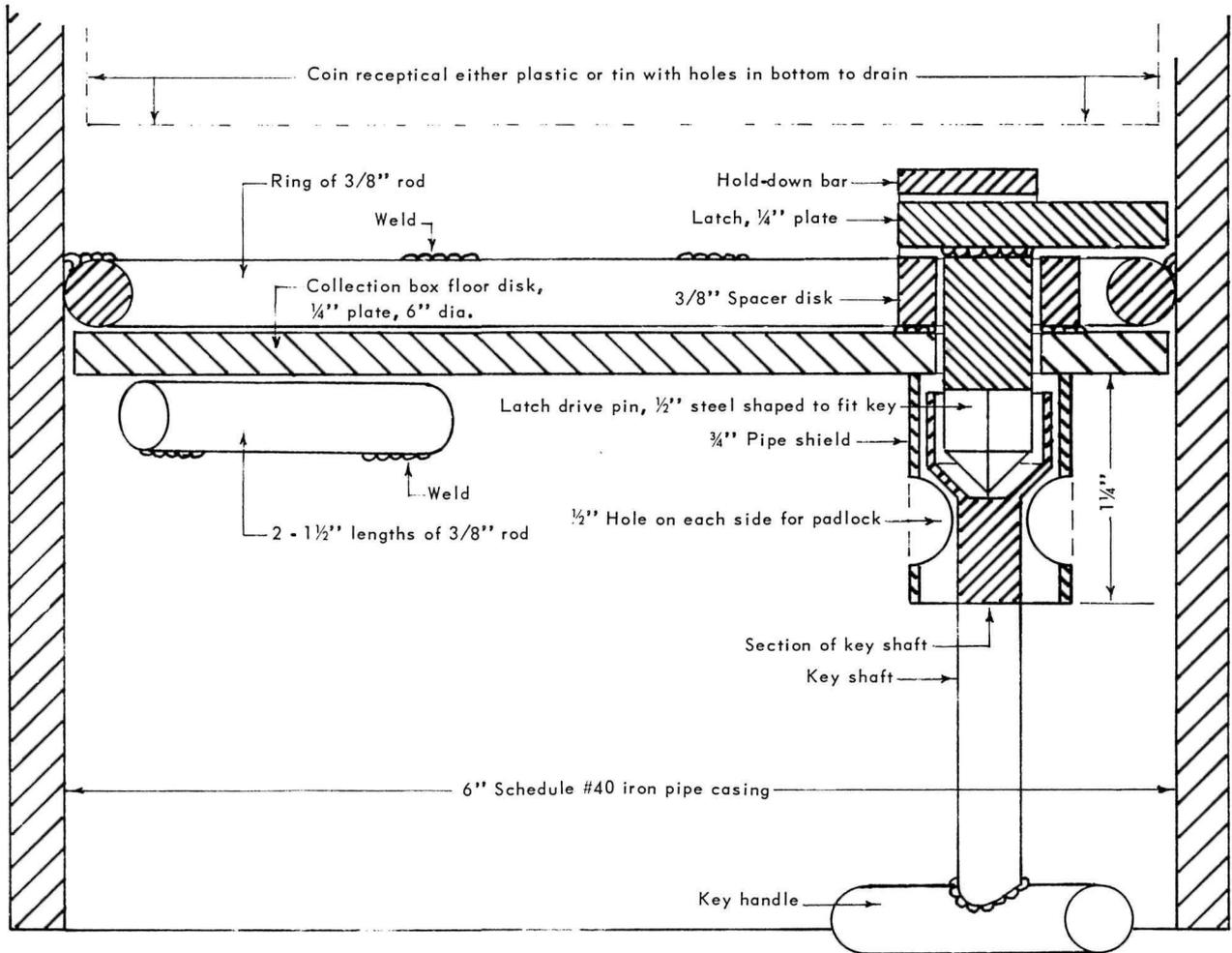
DESIGN . . . A publication of the Park Practice Program

COLLECTION BOX		Contributed by
Index	A-1363	James Goodwin
	October 1981	USDI - NPS
	Control	S-1440-A



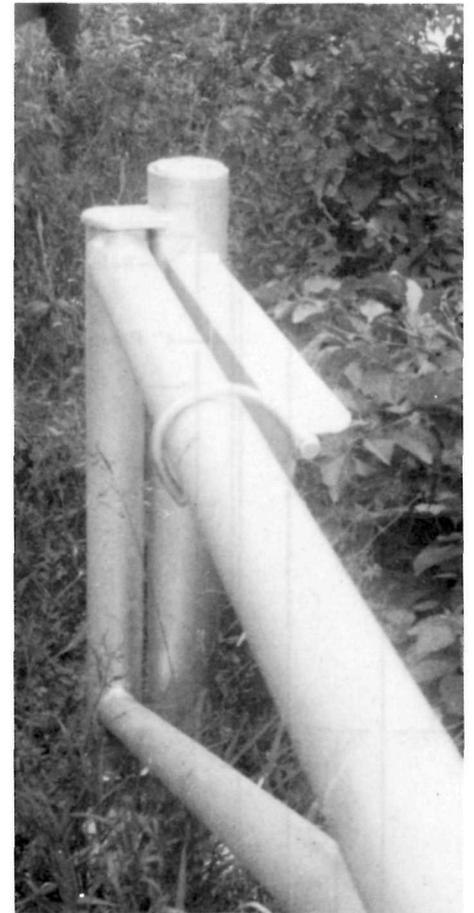
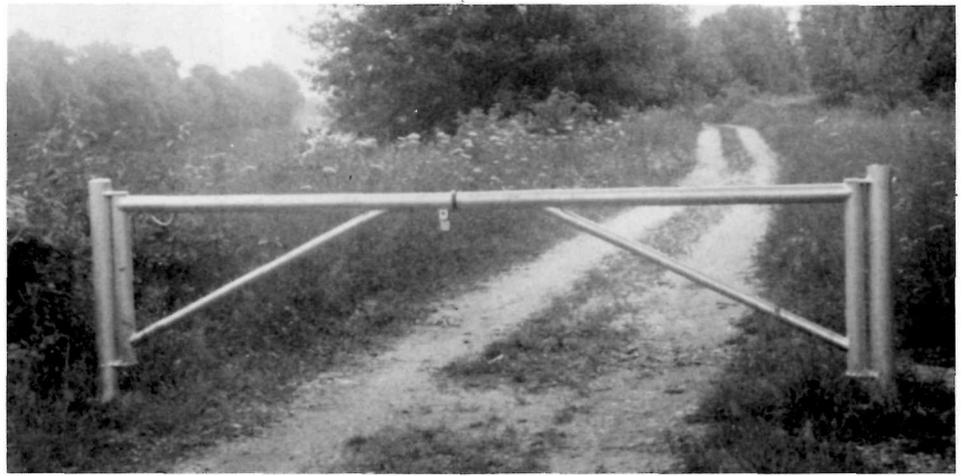
DETAIL SECTION OF LATCH

preventing that side of the plate from turning or dropping down. On the opposite side, a key-operated locking plate is rotated over the top of the inside ring to hold the plate up. The shaft of the locking device also prevents rotation of the plate. With the tee-shaped pipe key withdrawn, a sturdy pad lock through holes in a $\frac{3}{4}$ " pipe shield around the locking shaft makes the box theft proof.



SECTION OF LOWER PART OF COLLECTION BOX

Metal Security Gate



William G. Konczal, Assistant Ranger at Silver Springs State Park in Yorkville, IL designed this metal security gate to close maintenance roads to the public. The gate can be constructed to almost any height or width desired, and if a large enough lock is used with the gate, even bolt

cutters could not break through. There is only one moving part in the gate's lock assembly which saves on the amount of time opening, passing through, and closing the gate.

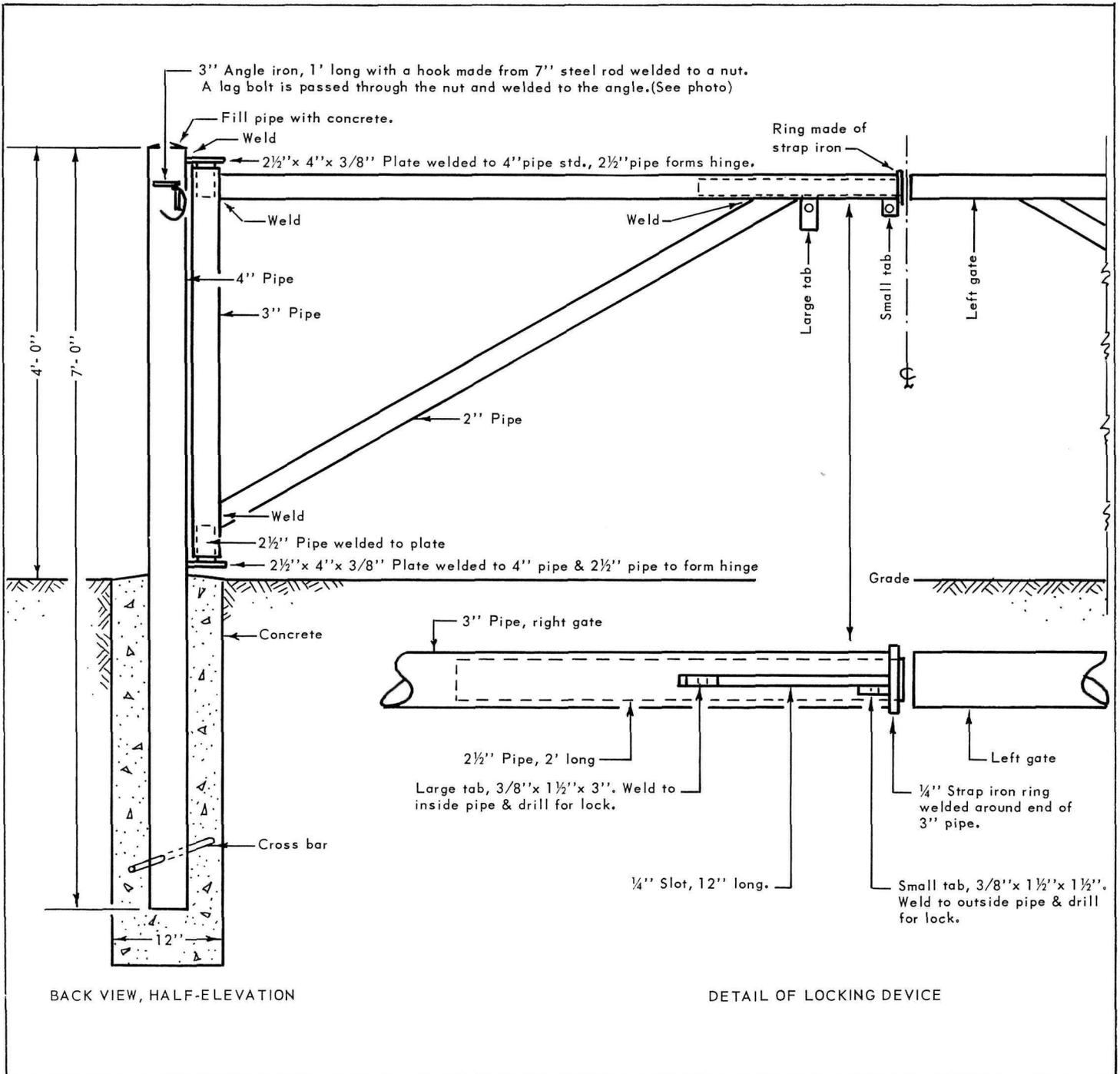
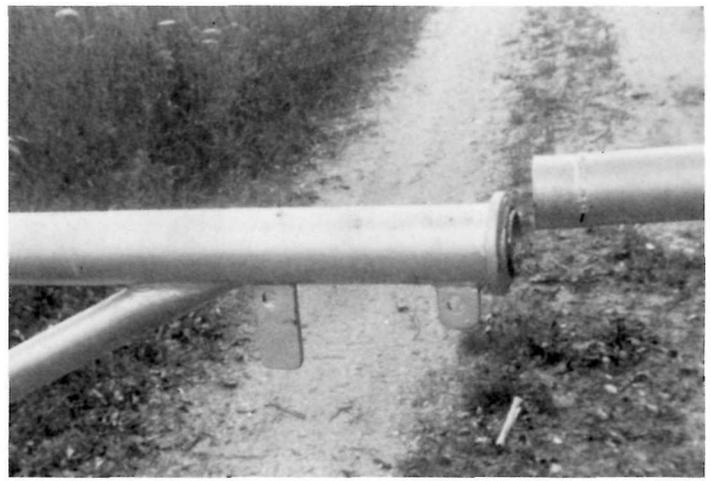
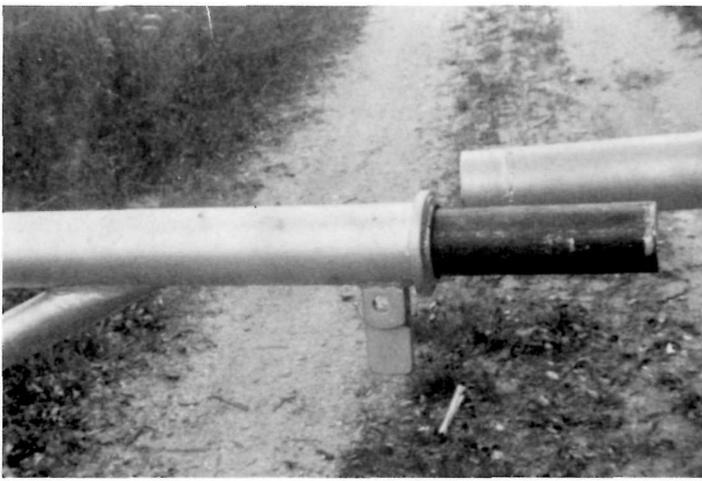
This gate features an angle iron arm out from each post with a hook to hold the gate open when being

used. This type of gate should always have a striped panel hung from its midsection so it can be easily seen.

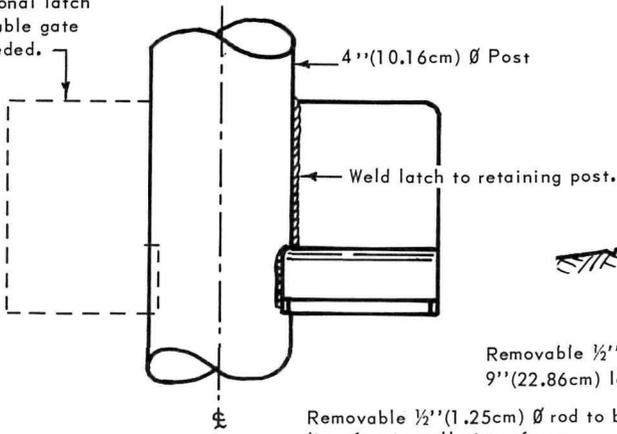
The cost for the pipe and other metal involved was \$29.00, and the 6½ hours of labor for a professional welder (\$65.00) brought the total cost for the gate to \$94.00.

DESIGN . . . A publication of the Park Practice Program

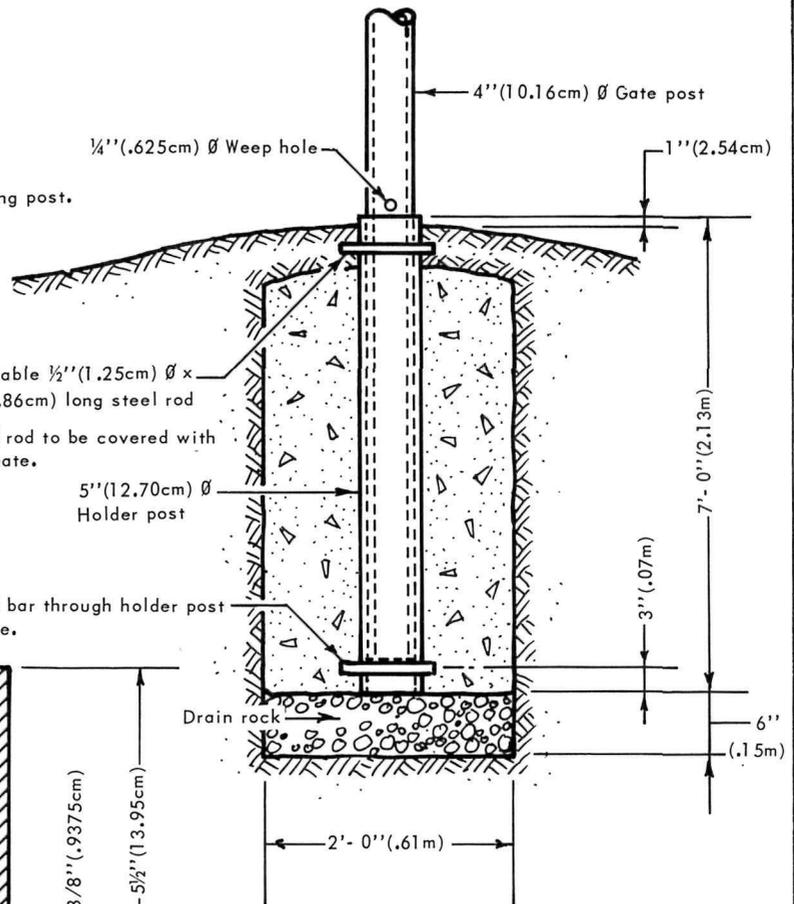
METAL SECURITY GATE		Contributed by
Index	P-2421	William G. Konczal
	October 1981	Illinois S.P.
	Control C-1442-P	



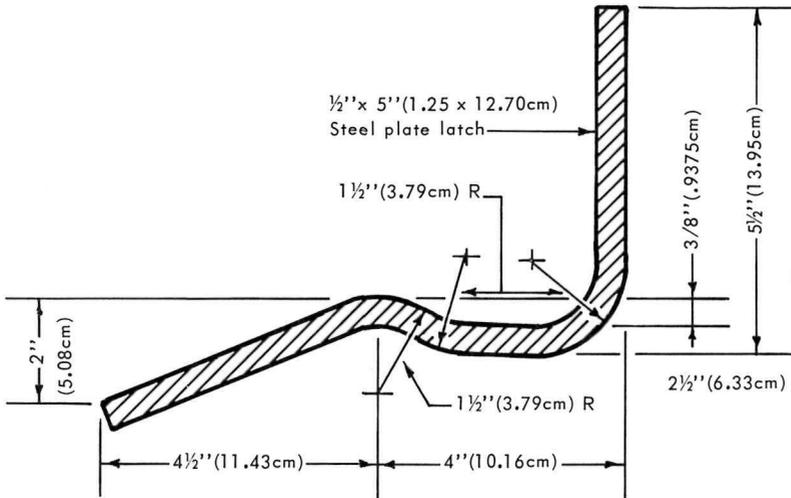
Additional latch for double gate as needed.



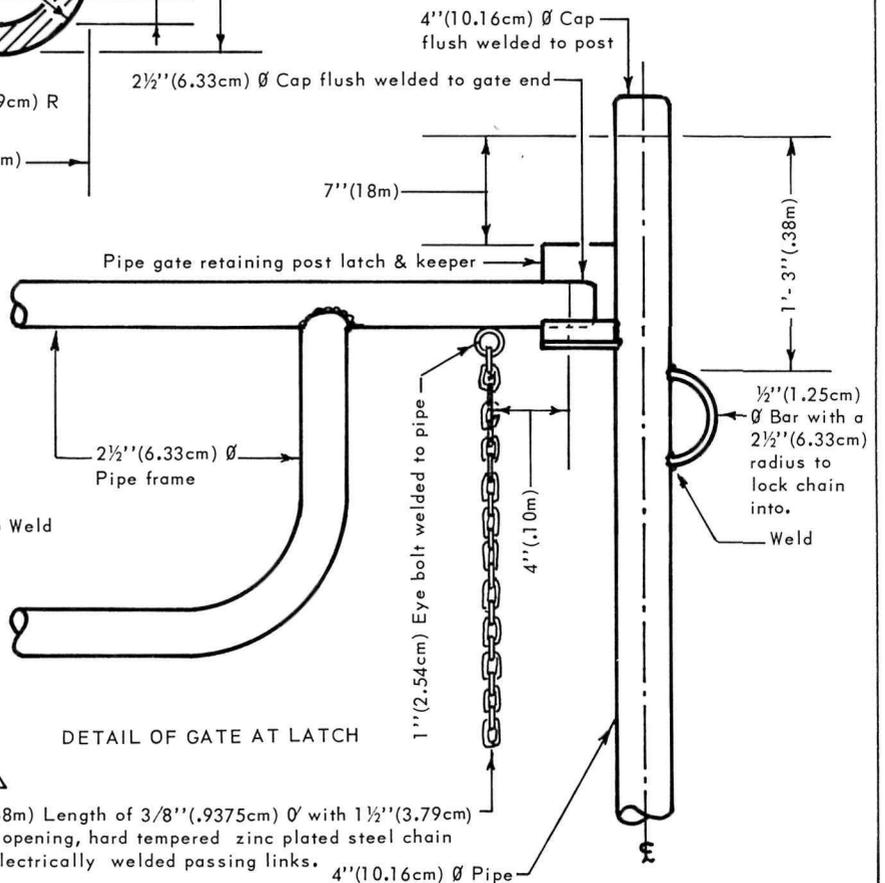
SIDE VIEW OF LATCH



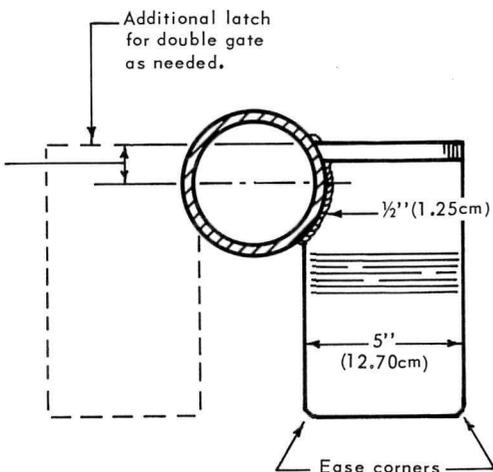
DETAIL OF INSTALLATION OF GATE POSTS



SECTION OF LATCH



DETAIL OF GATE AT LATCH

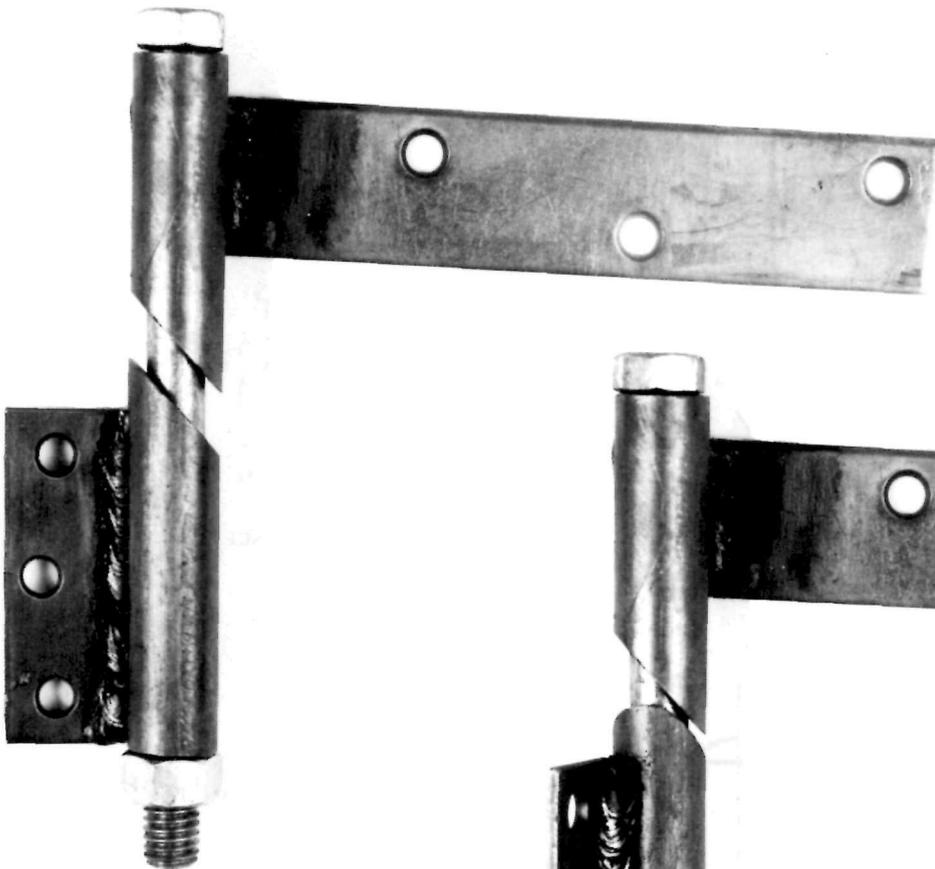


TOP VIEW OF LATCH

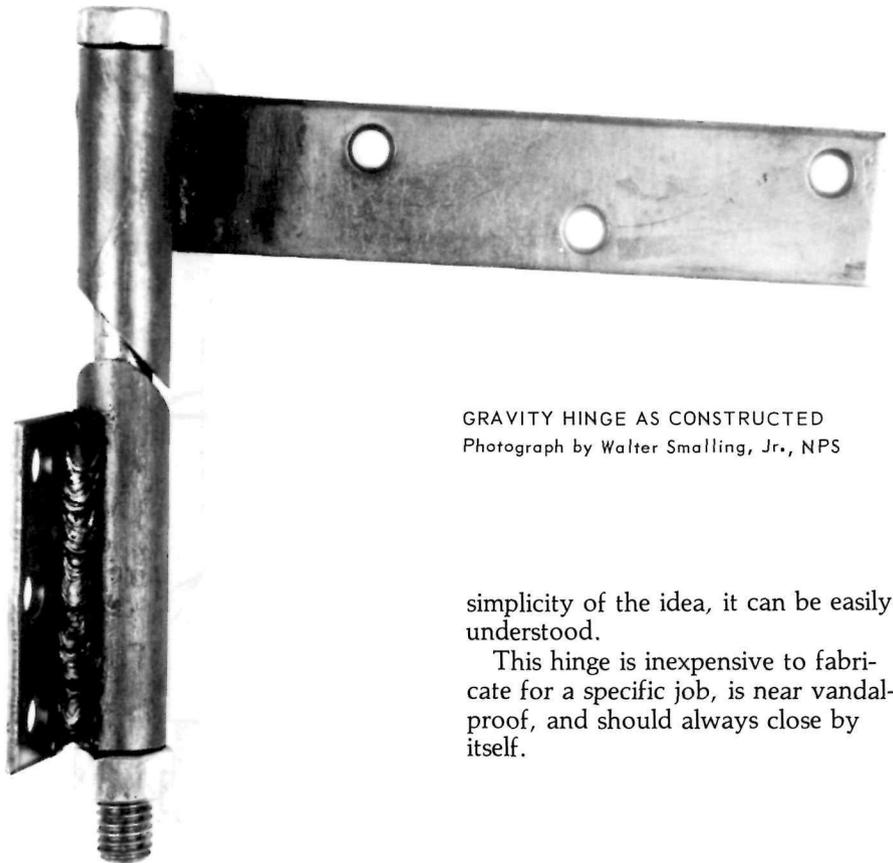
Gravity

Hinge

This self-closing mechanism called the Gravity Hinge is shared with our *DESIGN* readers by Dennis Fehler, Landscape Architect at the Mark Twain National Forest in Rolla, Missouri. Here are two variations of Dennis' hinge—The photographs show one; the drawing the other. Some experimentation may be needed to adapt the mechanism to specific situations, but because of the intrinsic



HINGE CLOSED



HINGE OPEN

GRAVITY HINGE AS CONSTRUCTED
Photograph by Walter Smalling, Jr., NPS

simplicity of the idea, it can be easily understood.

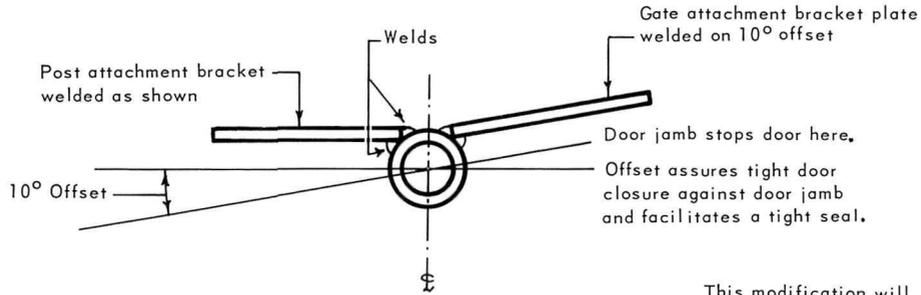
This hinge is inexpensive to fabricate for a specific job, is near vandal-proof, and should always close by itself.

DESIGN . . . A publication of the Park Practice Program

GRAVITY HINGE		Contributed by
Index	P-2425	Dennis Fehler
	October 1981	USDA - USFS
	Control F-1625-M	

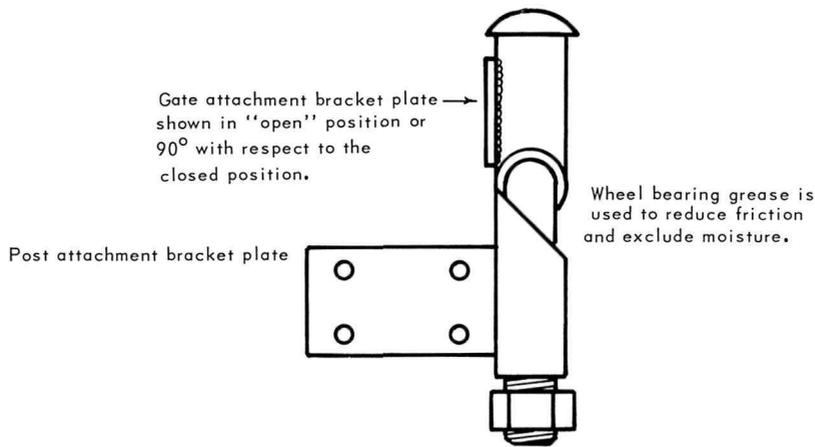
GRAVITY HINGE AS DESIGNED

Reduced 60%

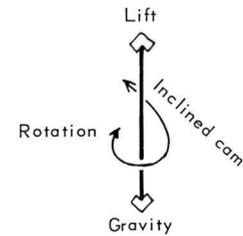


PLAN SECTION

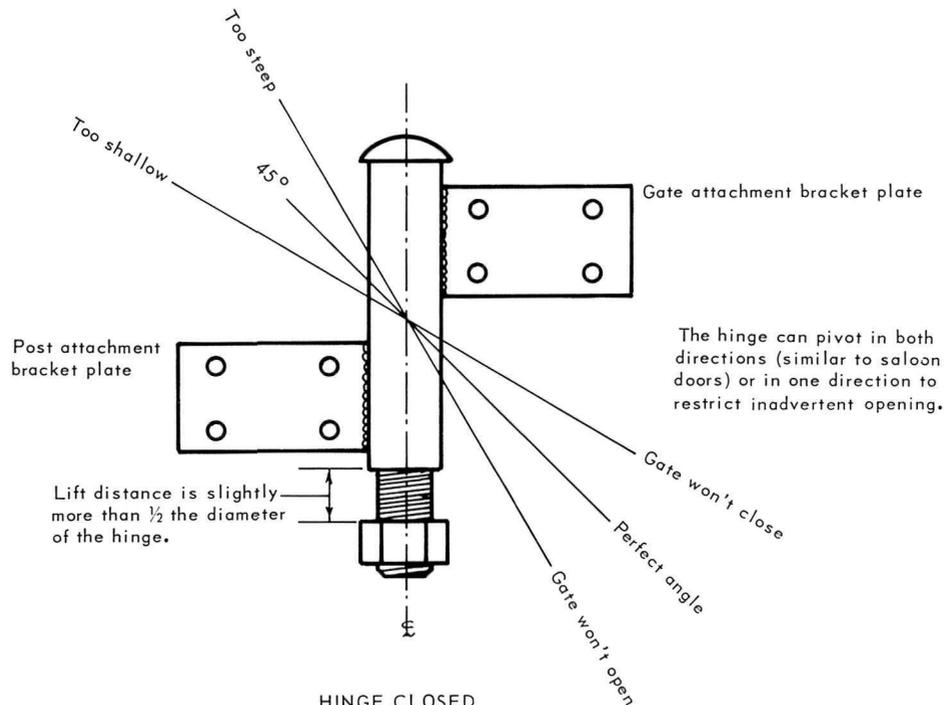
This modification will assure tight closure in the single direction gates.



HINGE OPEN

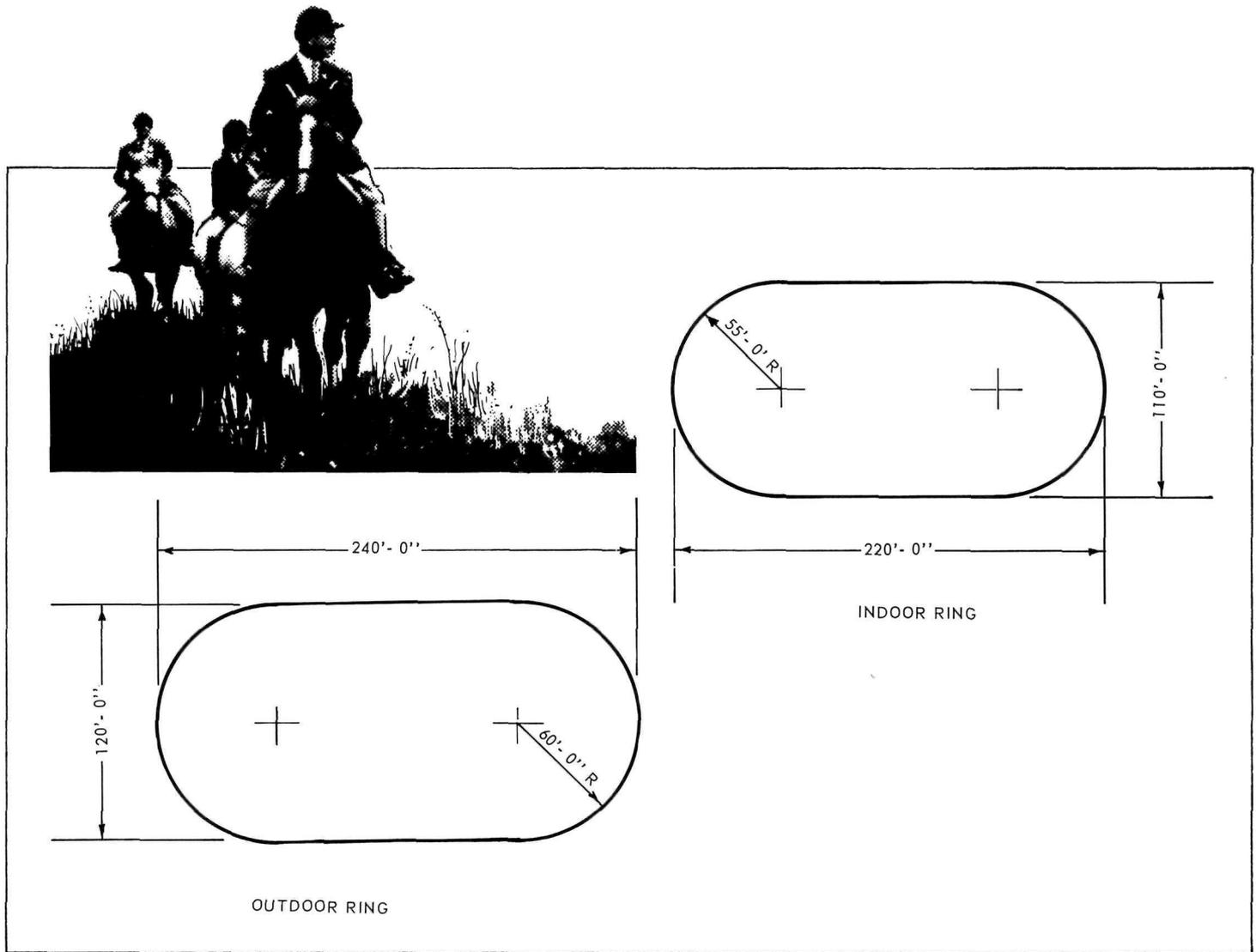


HINGE CONCEPTS



HINGE CLOSED

Horse Show Rings and Equipment



The Virginia Polytechnic Institute developed the plan for these indoor and outdoor show rings for the United States Department of Agriculture.

The natural-rail boards and movable fence should be treated with a nontoxic preservative for longer life, and noncorrosive fastenings

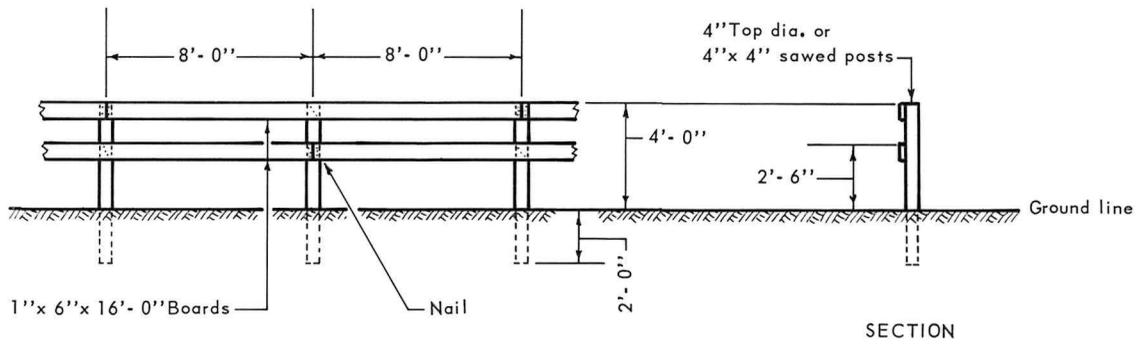
should be used throughout the structures.

A section of movable fence, a gate, or removable rails can provide entrance to the ring. The ring sizes shown in the illustration are recommended by the National Horse Show Association, 307 West 49th St., New York, NY 10019.

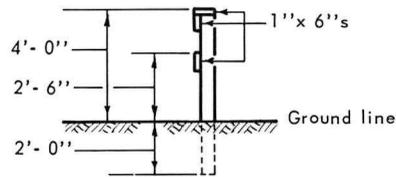
Training horses for field events requires the use of special equipment such as that featured here. Construction details show various types of jumps and related equipment.

DESIGN . . . A publication of the Park Practice Program

HORSE SHOW RINGS AND EQUIPMENT		Contributed by
Index	B-3807	U.S. Department of Agriculture
	October 1981	
	Control F-1406-R	

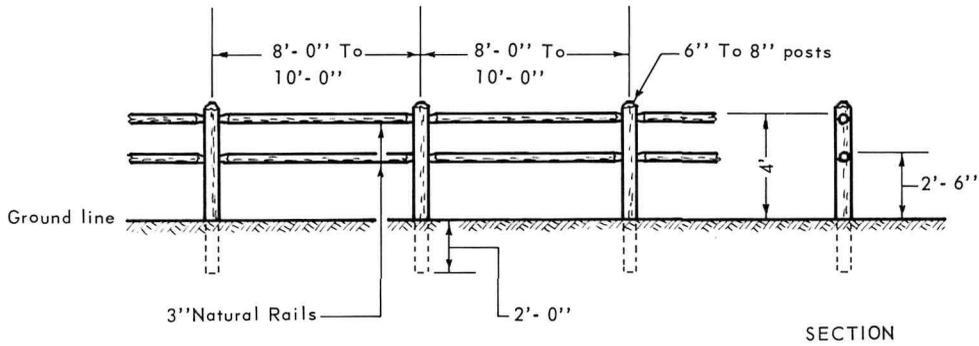


FRONT VIEW



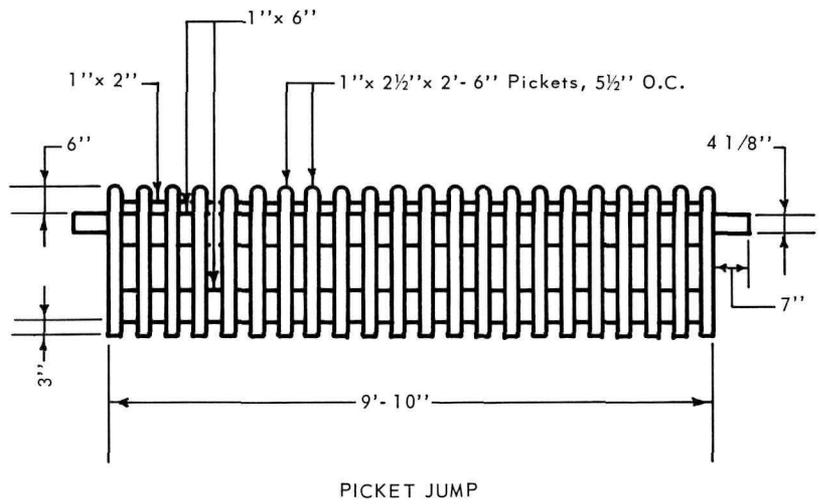
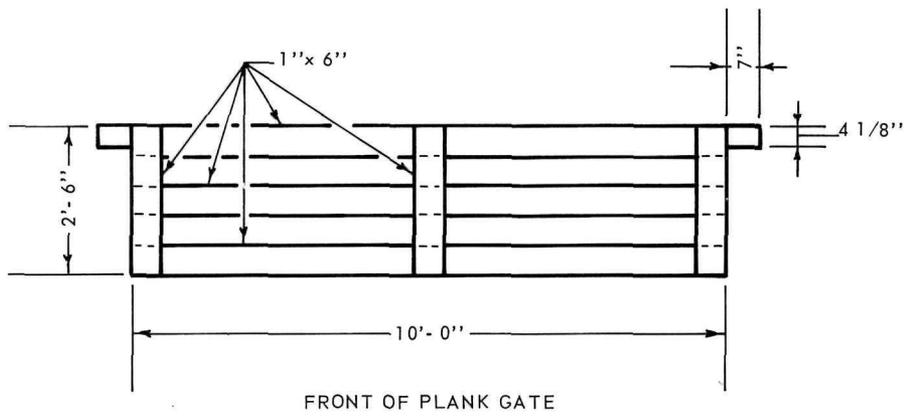
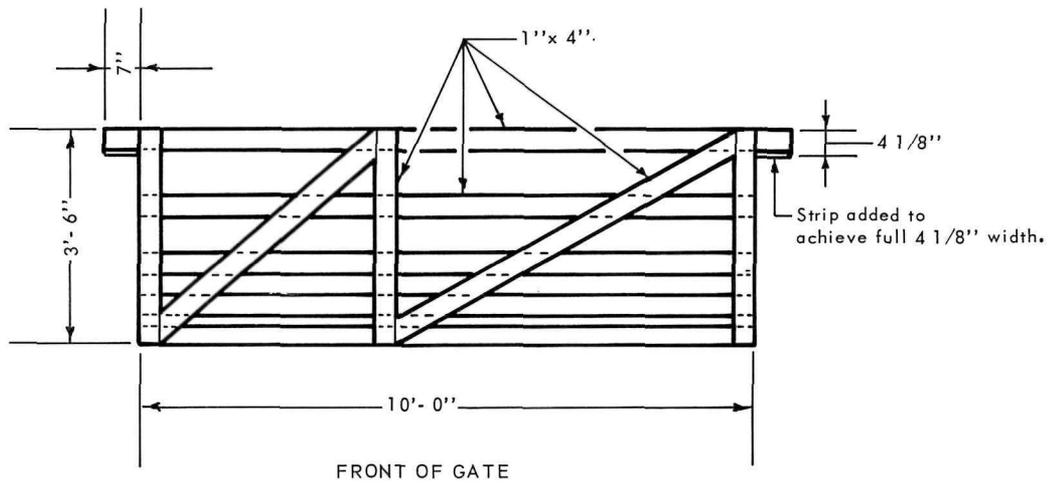
ALTERNATE SECTION

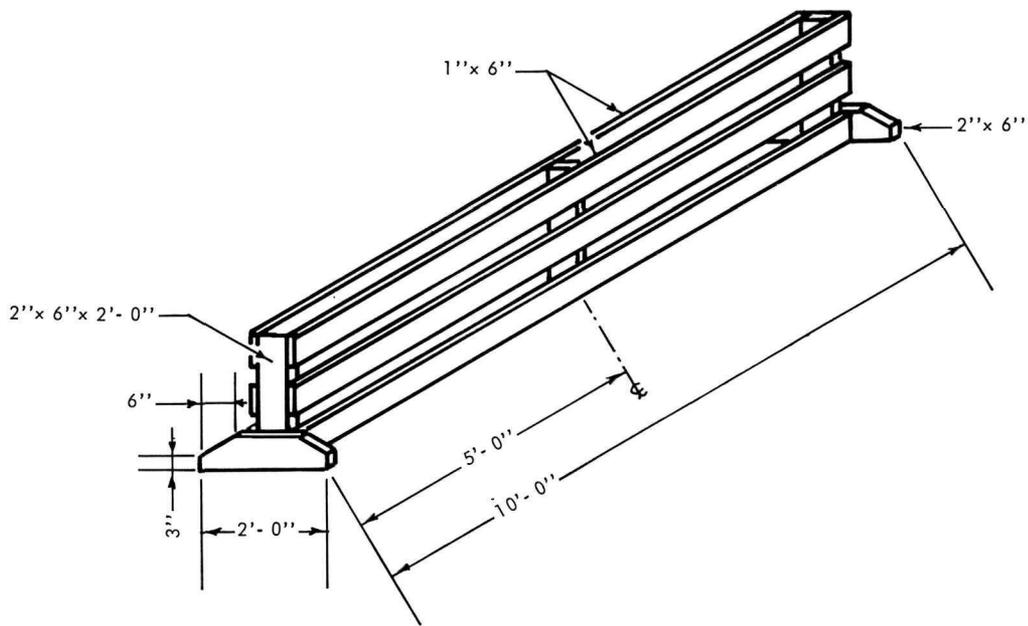
BOARD FENCE



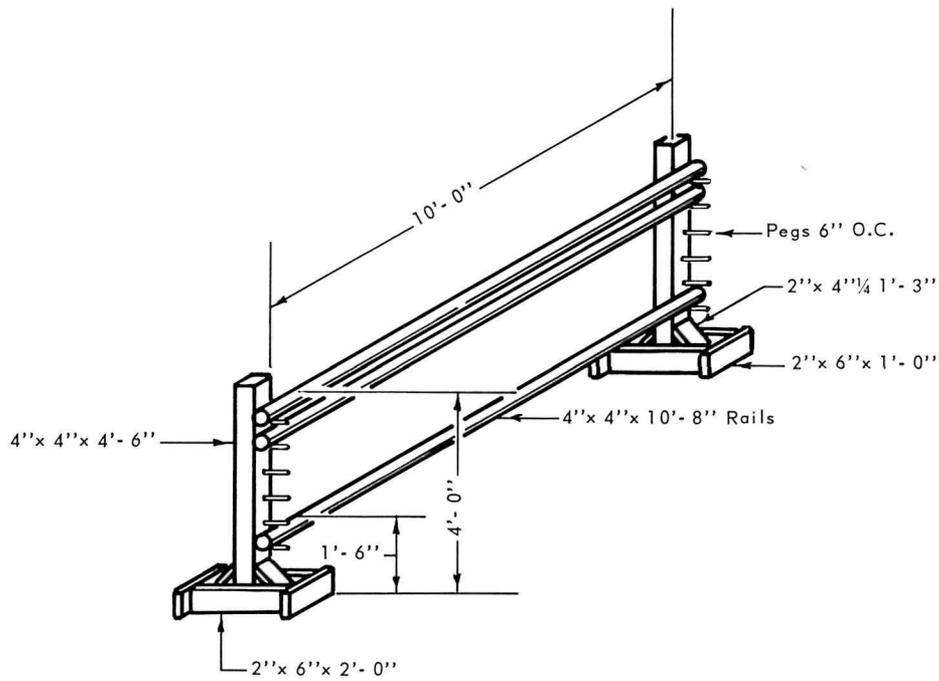
FRONT VIEW

NATURAL RAIL FENCE

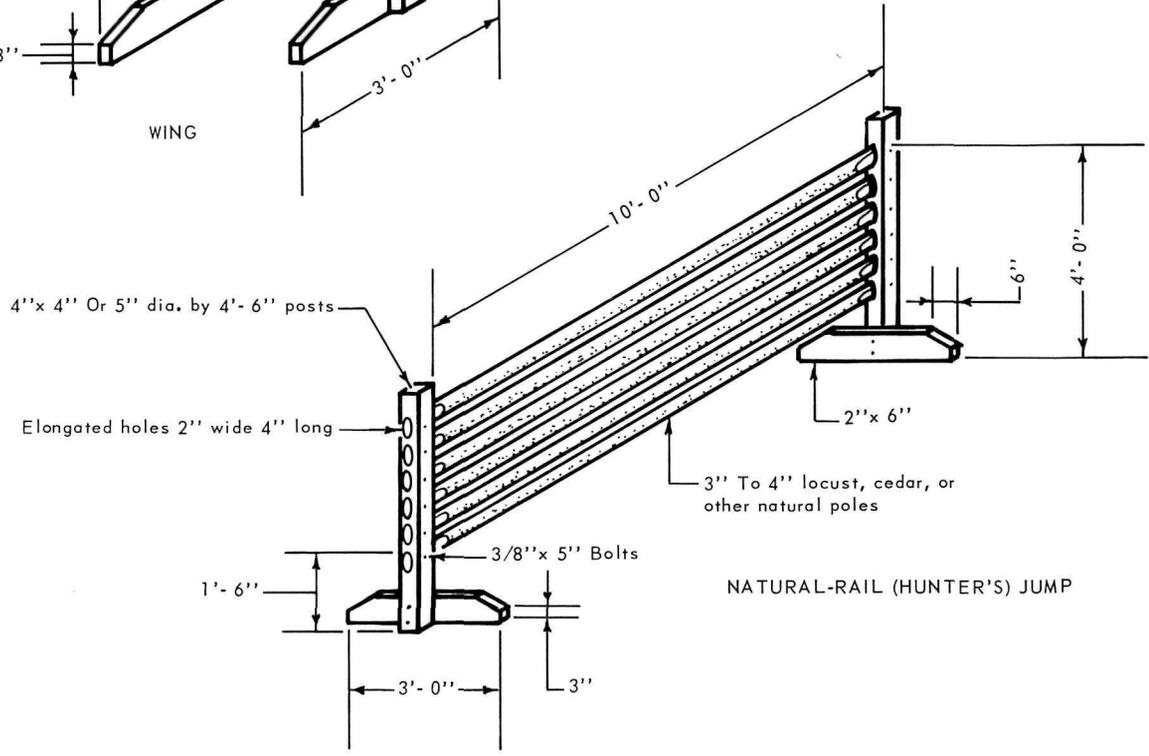
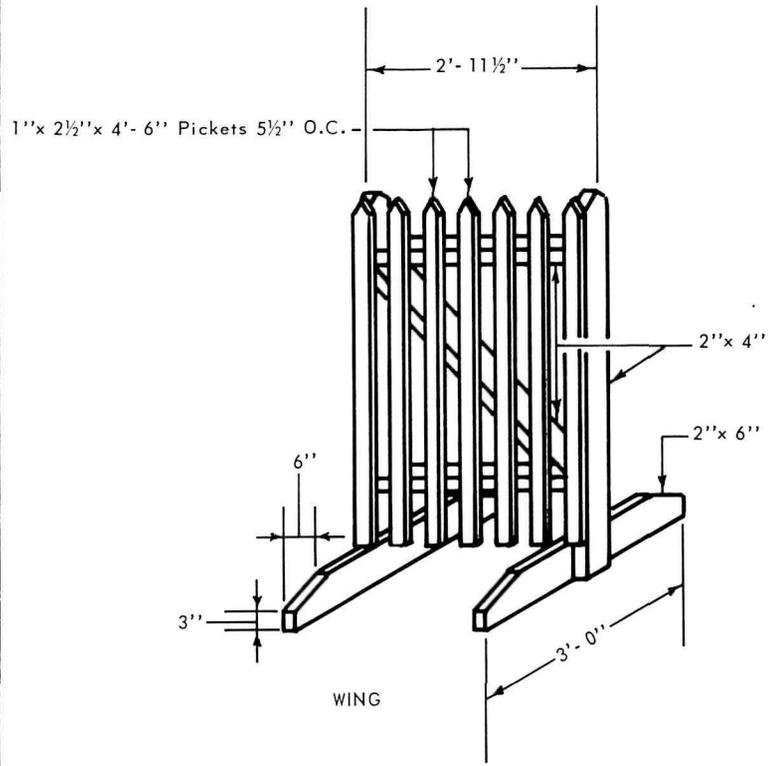
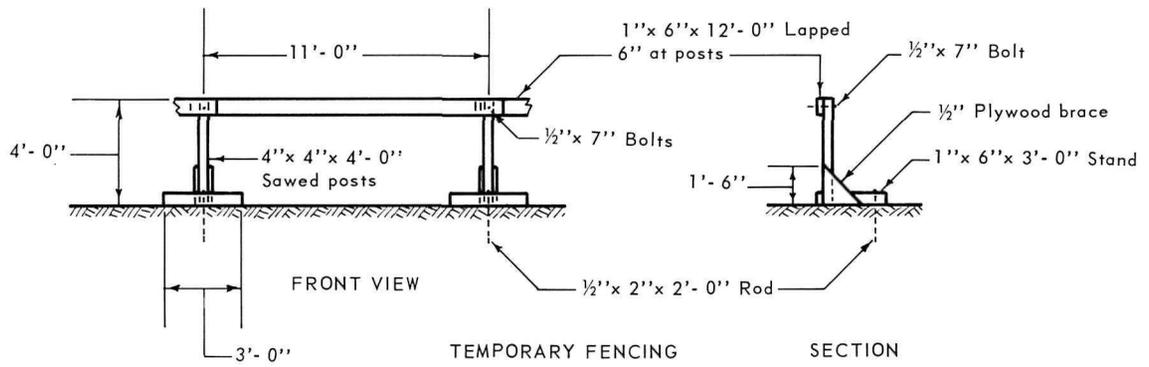


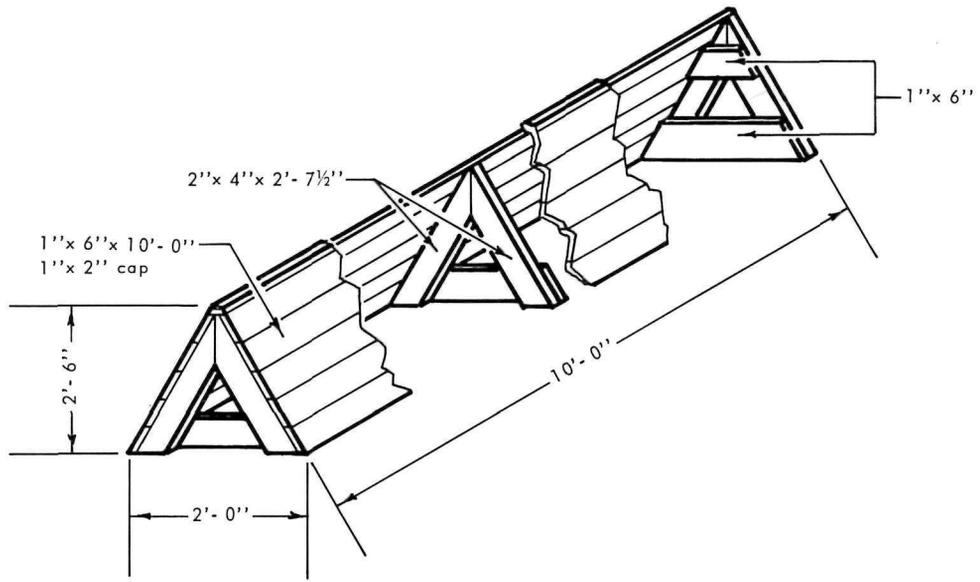


BUSH JUMP

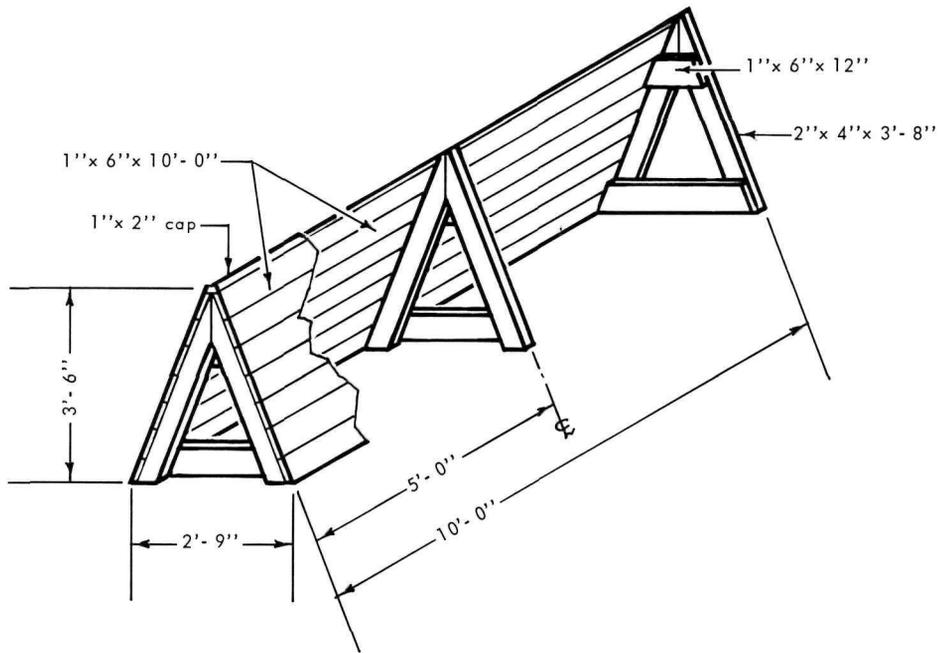


WHITE-RAIL JUMP





COOP JUMP



COOP JUMP