

Assembly Instructions and Parts List for PMC-24 Castle

Purple Martin Safety System

With Winch and Cable

A complete system is packed in two boxes — post box and house box.
House box contains hardware for house and post.

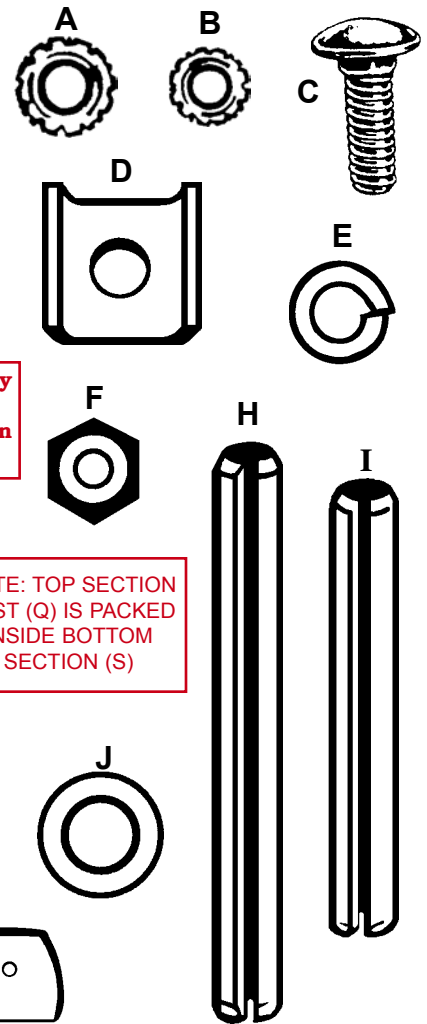
Note: It is necessary to install post before house is put up, but the house can be assembled at any time.

Check parts received against lists on pages 1 and 2.

Refer to packing slip claim instructions if any shortages are found.

Please use "Product Code #" when ordering replacement parts

**CAUTION: Carefully
read instructions
for safe installation
and operation.**



PARTS PACKED IN POST BOX

Product

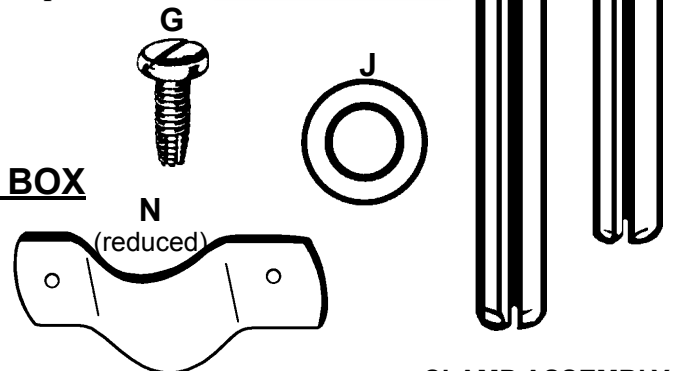
Code #	Item	Qty	Description
27806	Q	1	1-1/2"x74" Post (top section, 3 holes in end)
927808	R	1	1-1/2"x74" Post (center section with splice)
27810	S	1	1-3/4"x72" Post (bottom section)
27812	U	1	1-3/4"x28-1/4" House tube
27860	1	1	2"x30" Ground socket
900003	1	1	Ground socket hardware

**NOTE: TOP SECTION
POST (Q) IS PACKED
INSIDE BOTTOM
SECTION (S)**

PARTS PACKED IN WINCH/HARDWARE BOX

Product

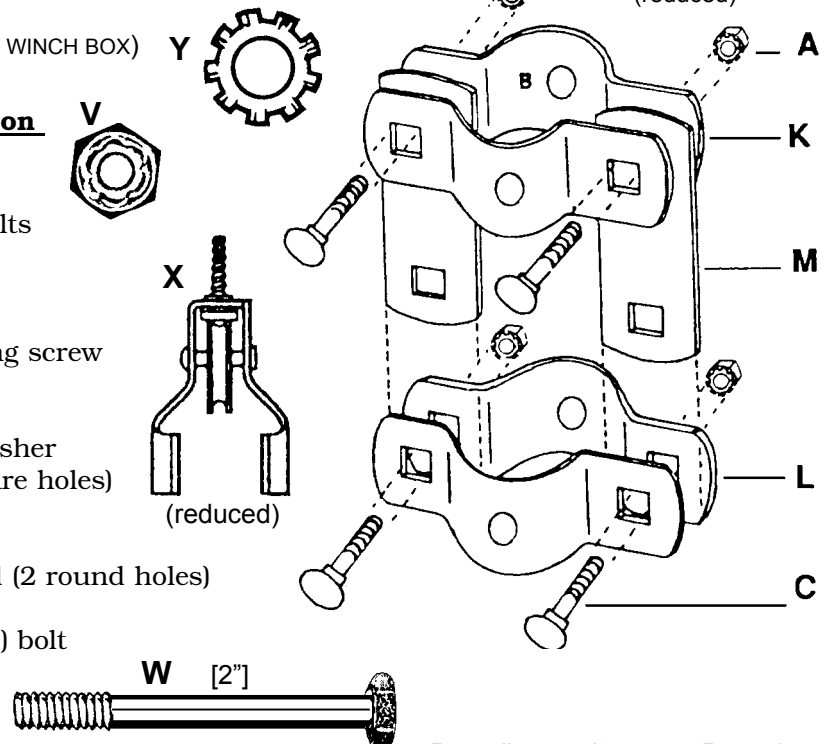
Code #	Item	Qty	Description
728000	AA	1	Winch (assembled)
728205	BB	1	Safety clamp (assembled)
728040	CC	1	Winch cable
900019	DD	1	Post and winch hardware (plastic bag)



PARTS IN PLASTIC BAG (PACKED INSIDE WINCH BOX)

Product

Code #	Item	Qty	Description
42550	A	6	1/4-20 keps nuts
40550	B	1	10-24 keps nut
30052	C	4	1/4-20x3/4 carriage bolts
28032	D	1	Plate washer
35283	E	1	#10 lock washer
40750	F	1	10-32 Hex nut
35264	G	1	10-32x1/2 self-threading screw
32004	H	1	1/4x2 split pin
32005	I	1	1/4x1-1/2 split pin
24500	J	1	#10 I.D. x7/16 O.D. washer
28024	K	2	1-1/2 B clamps (2 square holes)
20413	L	2	1-3/4 clamps
20416	M	2	Links
28025	N	1	1-1/2 B clamp modified (2 round holes)
32019	V	1	1/4-20 insert nut
32006	W	1	1/4-20x2 hex head (HH) bolt
726210	X	1	Pulley end assembly
32020	Y	1	5/16 star washer



← Parts list continued from Page 1 →

Parts packed in house box and winch hardware box

This house has an opening through the center which takes a 1-3/4" O.D. tube (house tube). This tube is clamped to the top of the ceiling and to the bottom of the lower floor. The house and tube slide up and down the pole and is raised and lowered by the cable over a pulley at the top of the pole. See drawing.

HOUSE PARTS PACKED IN THIS BOX

Product

Code #	Item	Qty	Description
827400	1	3	Floor assembly
827401	1a	1	Bottom floor assembly
827410	2	6	Roof sections
827422	3	1	Ceilings
65649	4	6	6-32x25-1/2 tie rods
25040	5	24	Doors
827406	6	24	Compartment dividers
28034	7	1	Cable tube
27415	8	1	Finial
65648	9	24	Door rods
925065	10	24	Winter door stops (in two plastic bags)
827428	11	1	Perch assembly
26241	12	24	Floor trays
35286	14	12	Flat C nuts (pre-installed on roof and ceiling)

PARTS IN SMALL PLASTIC BAG

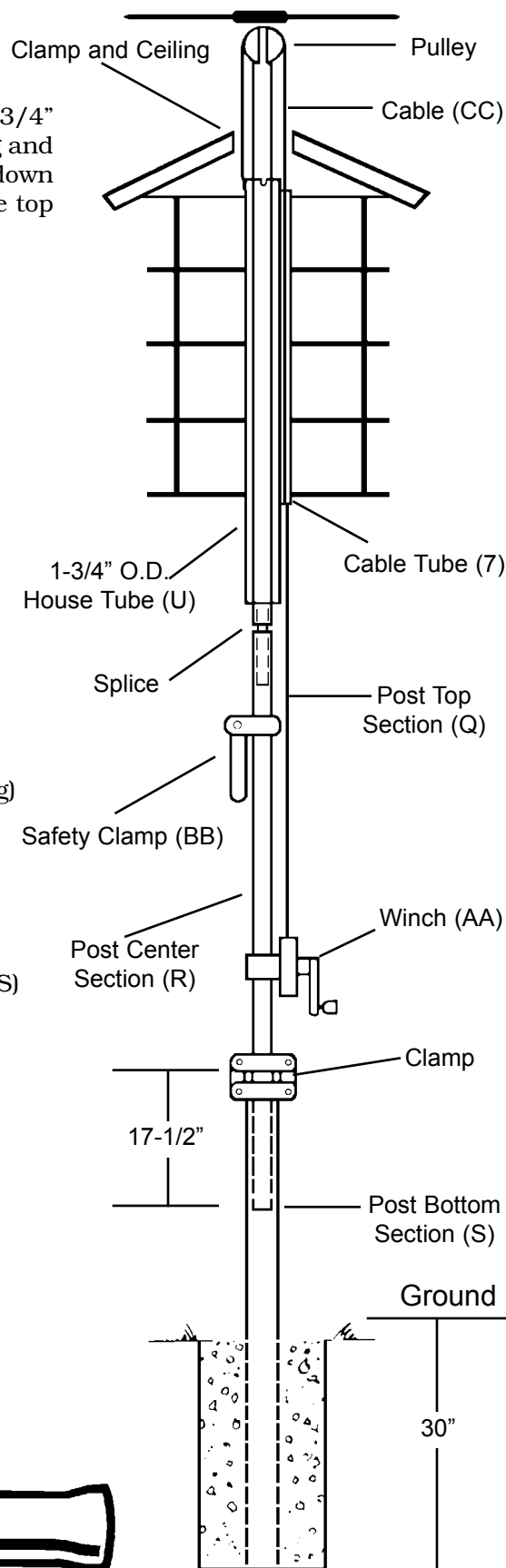
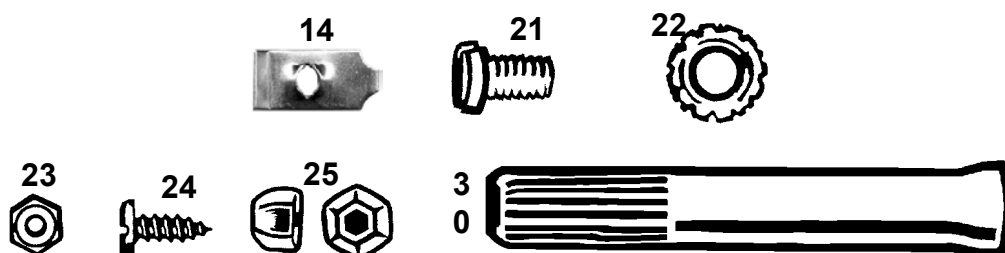
Product

Code #	Item	Qty	Description
35261	21	12	6-32x5/16 pan head machine screws (PHMS)
42550	22	4	1/4-20 keps nuts
35252	23	12	6-32 keps nuts
35259	24	12	#6 Sheet metal screws (SMS)
35288	25	12	6-32 acorn nuts

PARTS IN PLASTIC BAG

Product

Code #	Item	Qty	Description
27300	30	2	Kit wrench
43101	31	2	U bolts

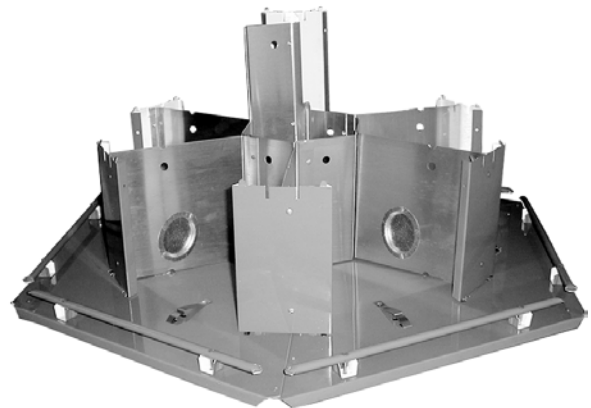
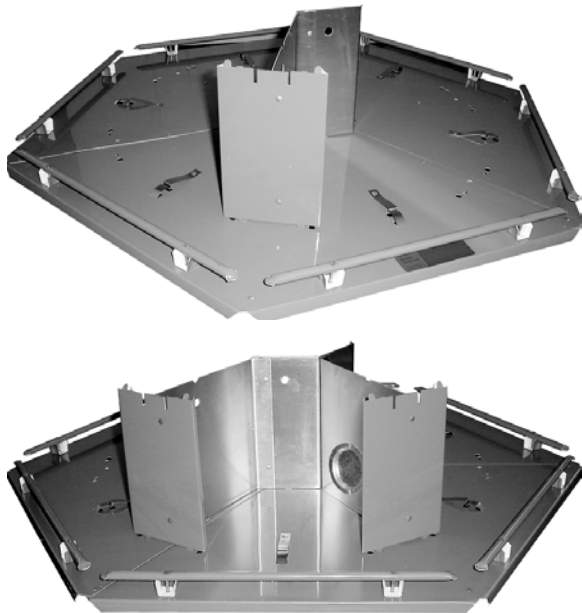


Assembly Instructions

Read all instructions **before** starting assembly. This will acquaint you with each step required.

Wipe protective oily coating from all martin house parts surfaces prior to assembly.

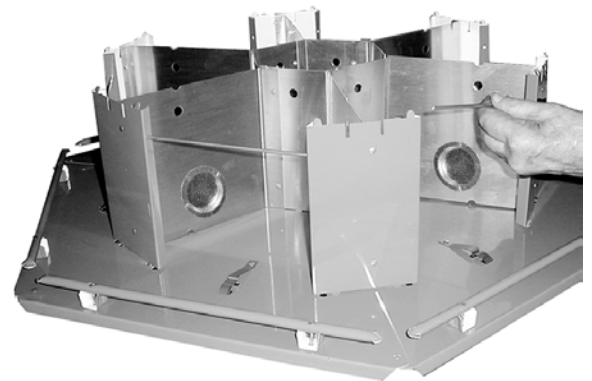
1. Start with bottom floor. (Note that ceiling [3] and bottom floor have mounting plate riveted in place.) Place one compartment divider [6] on floor assembly [1] as shown. **Ventilation holes are up.** The three square tabs go into "D" holes in floor. Bend tabs against straight side of "D" on underside of floor. Place another divider [6] adjacent to first and slide flange near center into slot provided. Bend tabs to hold in place. Repeat with balance of dividers for bottom floor. Slide last divider into slot and flange from above, interlocking all pieces around center.

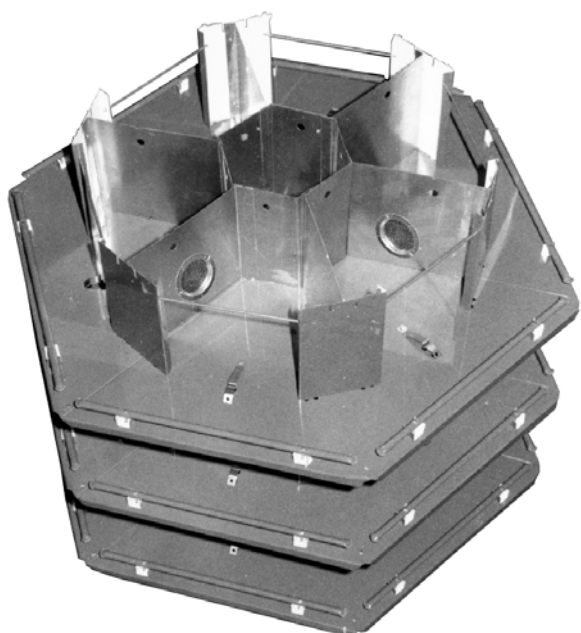


2. Repeat this procedure on other three floors, but do not stack floors together at this point.

3. Place bottom floor assembly [1a] on cardboard box with mounting plate between carton flaps in order that floor may be held level. Position so that about 6" extends over end of carton (for easy access to underside of floor at Step 7). Install six door rods [9] in two holes at top of each doorway on bottom floor (do not install doors yet).

4. Nest second floor. (Note: Riveted seams on this floor should be over seams on first floor.) Locate in proper position over dividers below by inserting the two round top tabs on each divider into the round holes in floor. BE SURE that round tabs are to the **inside** of each divider front on second floor. Door rods [9] for second floor can now be added.

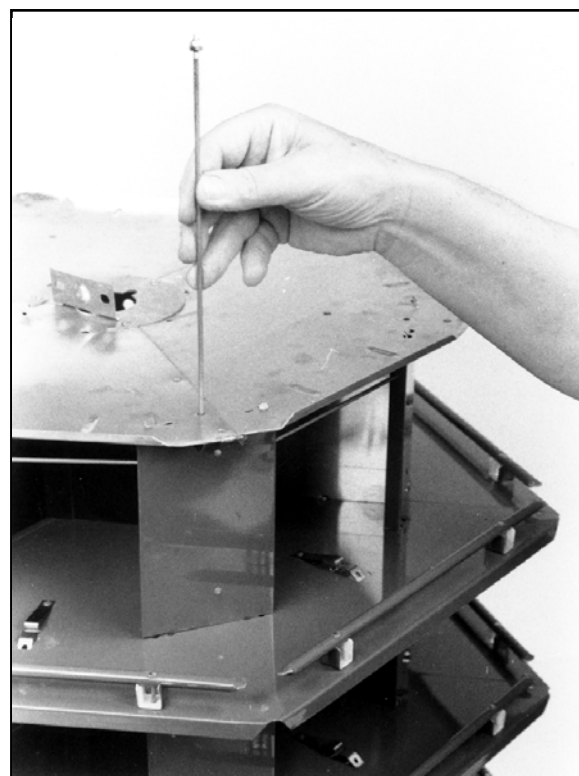
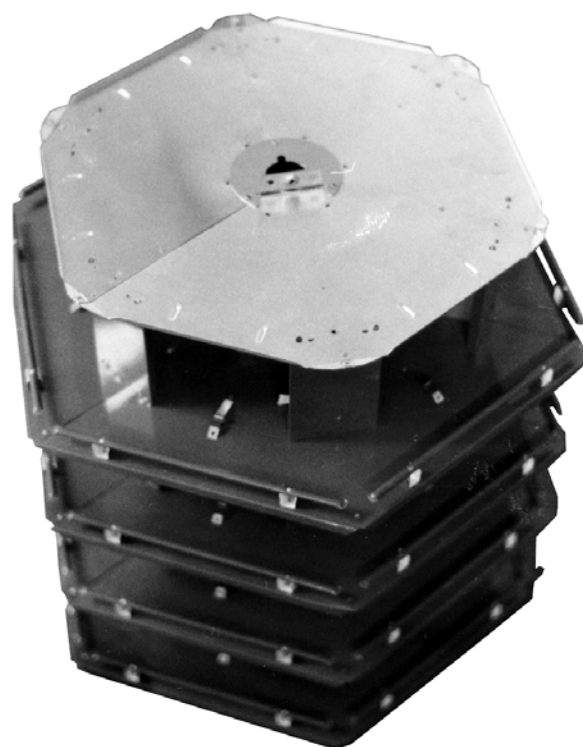




5. Proceed with third and fourth floors using same steps as used on page 3.

6. Ceiling [3] is installed over top floor in same manner. Mounting plate goes up. **MAKE SURE** flange on mounting plate faces in same direction as mounting plate on bottom floor.

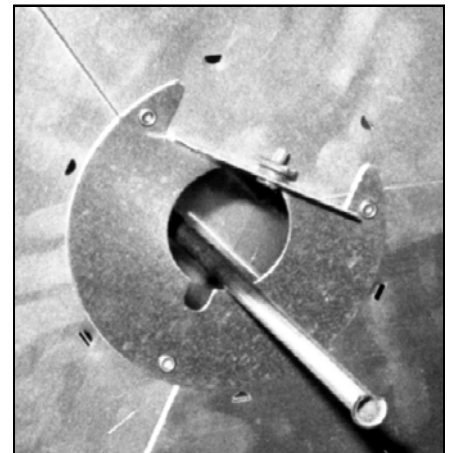
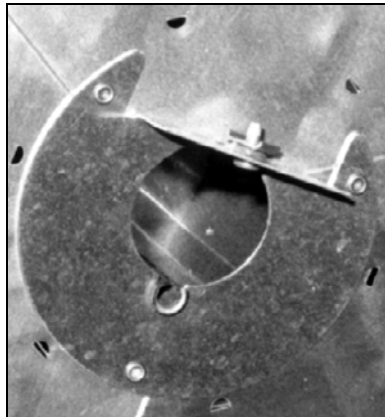
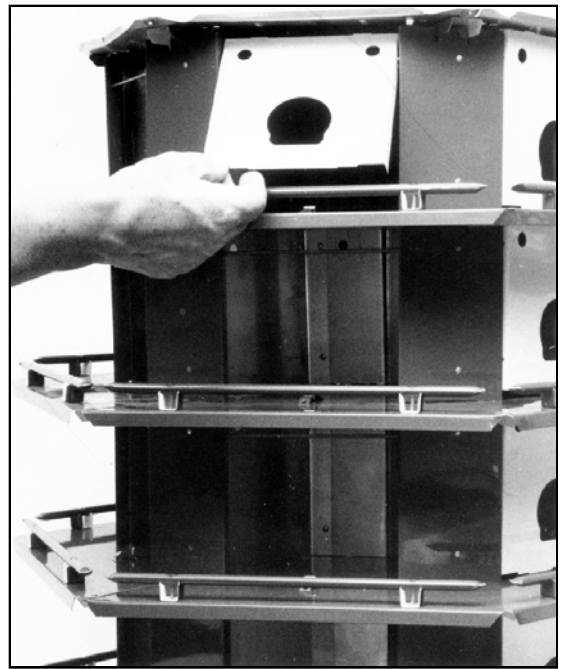
7. Install one 6-32 keps nut [23] on each of the six tie rods [4]. Use kit wrench [30] after starting. On ceiling locate six round holes between each set of "D" holes, about two inches from edge. These holes are for tie rods. Insert tie rods [4] into round holes over edge of carton. Use nail to align holes in assembly if required. Guide rod through hole in top floor, then rotate rod slowly and it will drop through assembly. Thread 6-32 keps nut [23] onto lower end of tie rod on underside of bottom floor. **Do not tighten completely at this time.** Slide house to other end of carton and install tie rods in the two holes now exposed. Rotate house and install final two tie rods. **Assembly must be handled with care until all tie rods are in place.** Nuts can now be tightened until snug.



8. Turn house on side and inspect round end tabs and door rods for correct location. Readjust if required.

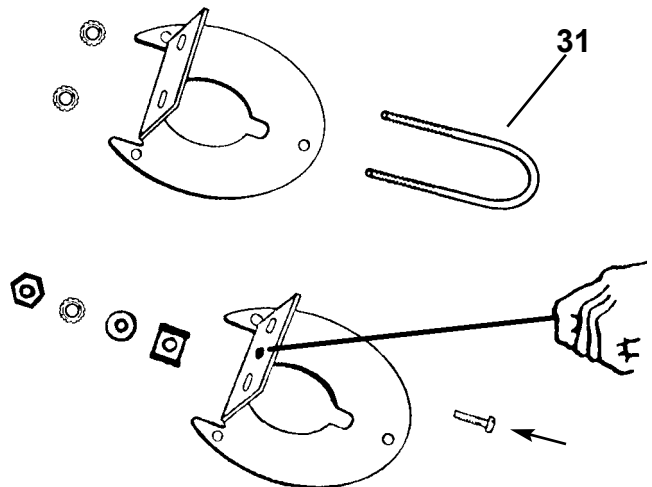
9. Hook doors [5] over door rods [9]. Do not force. Doors should hinge freely and snap into door clips on floor.

10. Turn house back to horizontal position, rotate until notch in mounting plate is on lower side. Insert cable tube [7] from either end through hole in center of house and drop into notch. Flange on ends of tube should be on outside of mounting plates. Seam of cable tube is to be towards center of house.



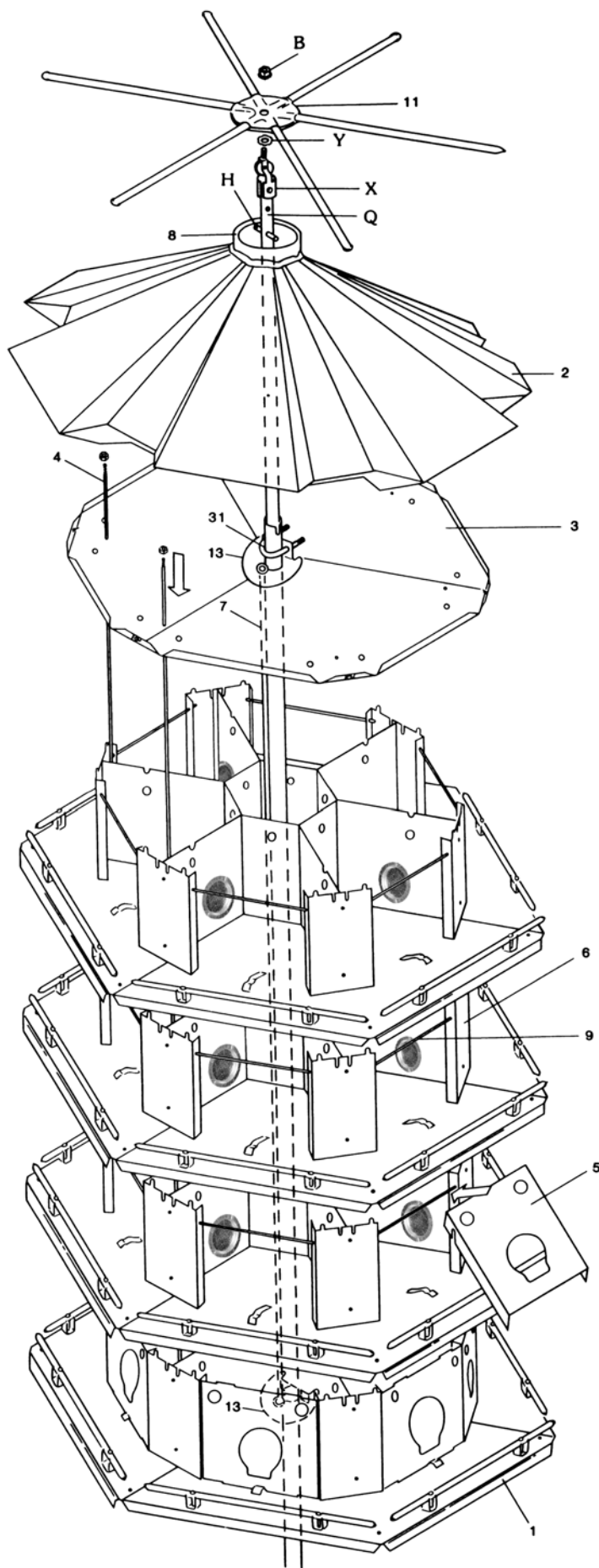
11. Assemble two U-bolts [31] with mounting plates on ceiling and bottom floor, using four 1/4-20 keps nuts [22] as shown.

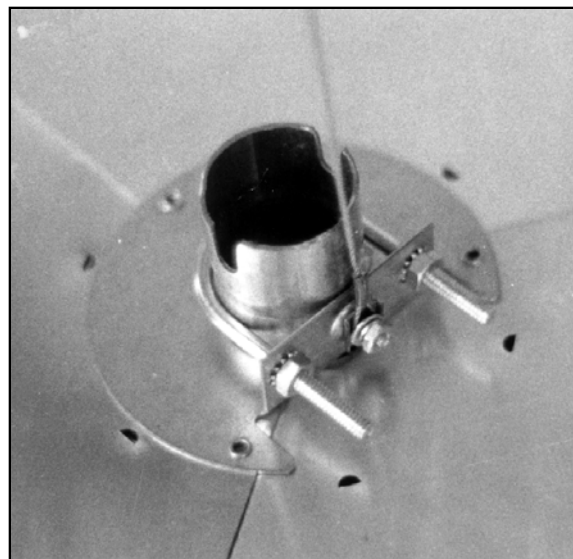
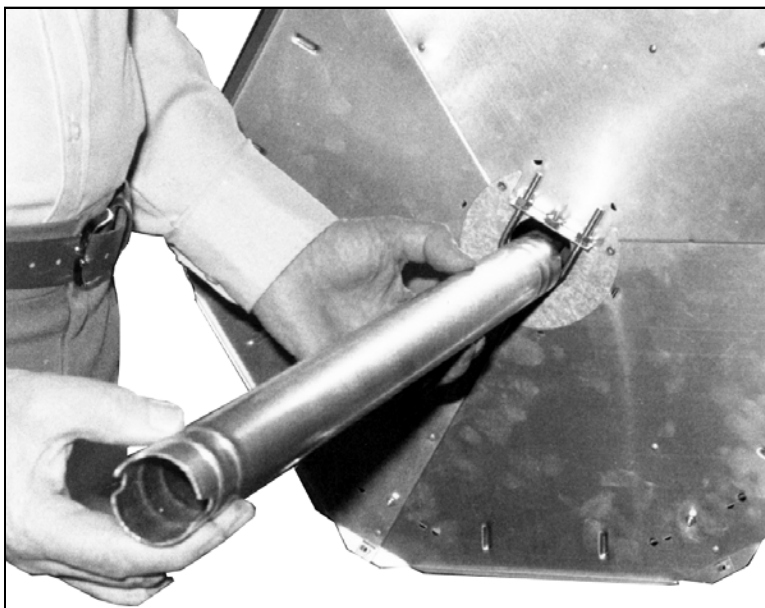
12. Cable is attached at point shown to mounting plate on ceiling using 10-32x1/2 self-threading screw [G]. Insert screw **from inside** mounting plate. Place plate washer [D] over screw with bevel out. Loop end of cable [CC] is now placed over screw and plate washer [D]. Add #10 washer [J], #10 lock washer [E], 10-32 hex nut [F] and tighten securely with cable in perpendicular position to ceiling.



Exploded view

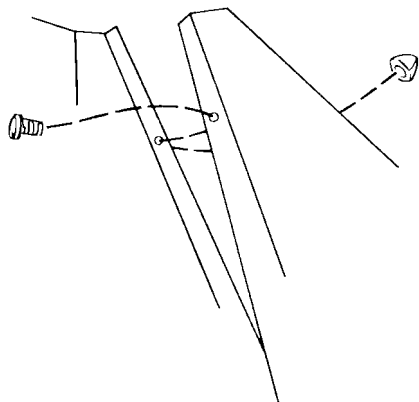
Numbers/letters
refer to parts
identification
numbers/letters
mentioned in
the instructions.



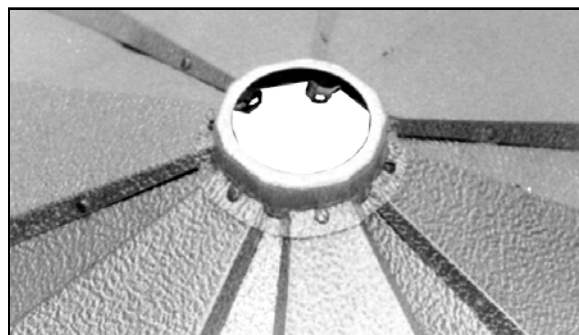


13. Install house tube [U] through house and U-bolts. **Tighten** nuts with slotted end of tube two inches above ceiling and with slots at 90° to cable hole in ceiling as shown. This assembly should be quite tight but care must be taken not to distort house tube. Make sure that 1-1/2"x74" post center section [R] slips into house tube freely. The notch in house tube, when installation is complete, engages with a pin below pulley on 1-1/2"x74" post top section [Q] and limits the height to its proper position and prevents the house from turning on pole.

14. Starting with two roof sections [2] and using twelve 6-32x5/16 PHMS [21] and twelve 6-32 acorn nuts [25], attach six roof sections to each other as shown. Head of screw should be on outside and acorn nut on inside of smaller section. **Do not tighten at this time.**



15. Place finial [8] over roof peak and using six #6 SMS [24] fasten in place. Tighten all screws on roof. **Roof is not attached to house until Step P9.**



**Ground socket
and hardware is
packed inside
post box.**

Please use "Product Code #" when ordering replacement parts

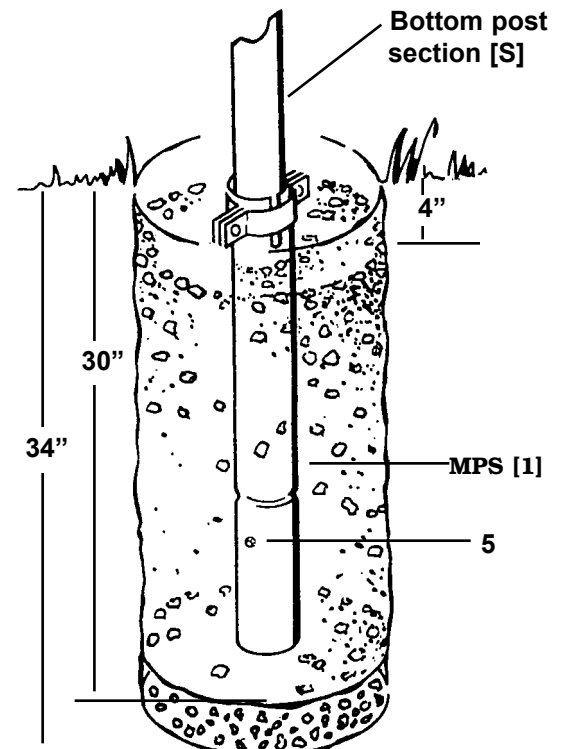
Product			
<u>Code #</u>	<u>Item</u>	<u>Qty</u>	<u>Description</u>
27860	1	1	2"O.D.x30" long galvanized tube
20413	2	2	Tube clamps
42550	3	3	1/4-20 keps nuts
30053	4	2	1/4-20x1-1/4 carriage bolts
32003	5	1	1/4-20x2-1/4 hex head (HH) bolt

Diagram illustrating the assembly components and their assembly order:

1. Vertical rod or shaft.
2. Bracket or mounting plate.
3. Nut or washer.
4. Bolt or screw.
5. Bolt or screw (labeled [2-1/4"]).

5 [2-1/4"]

GS 7. After concrete has hardened, loosen clamps and slide post section to bottom of socket. Re-tighten clamps securely.

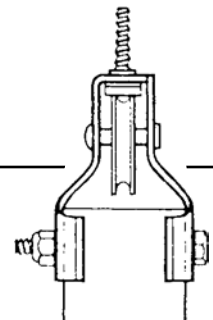
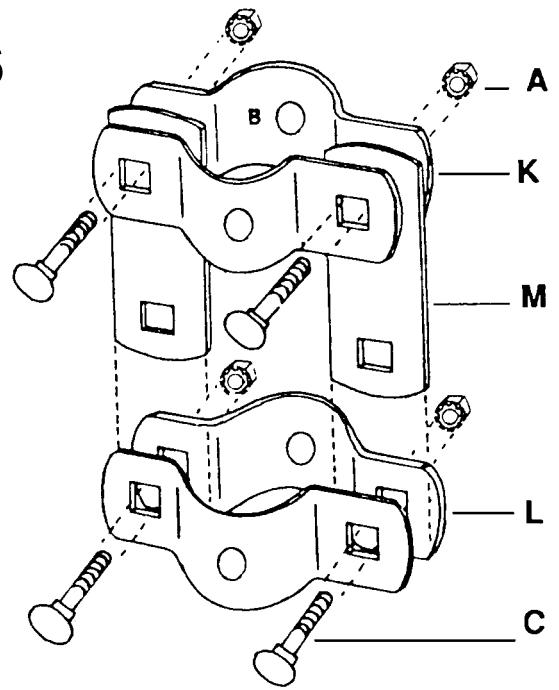
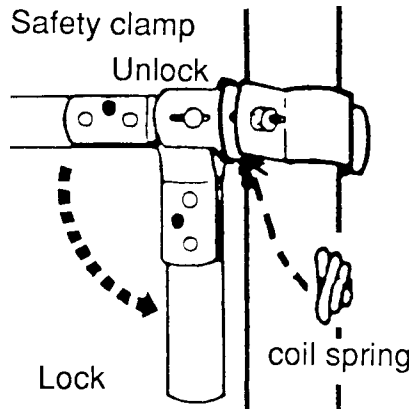


Post Installation Instructions

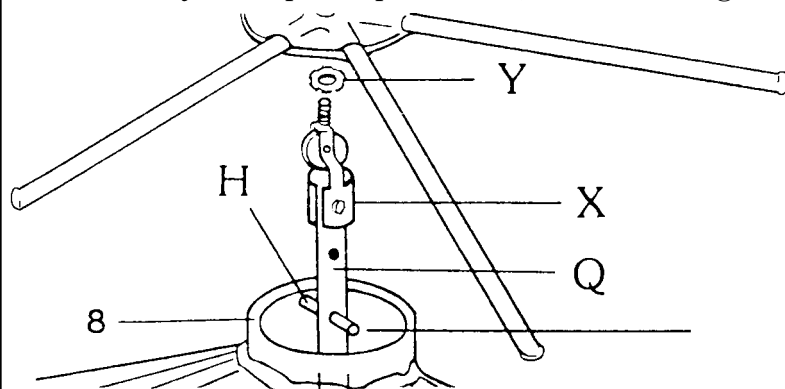
P 1. Assemble clamps as shown using 1/4-20 keps nuts [A], 1/4-20x3/4 carriage bolts [C], "B" clamps [K], 1-3/4 clamps [L], and links [M]. Place 1-3/4 clamps [L] over top end of post bottom section [S]. Top is end with four rings. Tighten nuts on 1-3/4 clamps [L] securely. Leave "B" clamp [K] nuts loose.

P 2. As safety clamp [BB] will be used in assembly, adjust at this time. Slide clamp over either end of center post section [R]. Adjust by tightening nut with handle. Safety clamp Unlock against post until snug. Handle is down when nut is adjusted and to right side of pole. Raise and lower handle a few time.

P 3. If handle is not locking tight, turn nut 1/2 turn tighter; if too tight, loosen 1/2 turn. Raising handle will release clamp. Remove from post. When installation is completed, this clamp is an added safety feature and should be positioned just above head height. As house is lowered, clamp is loosened and lowered also.

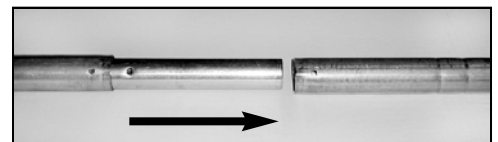


P 4. Using the 1/4-20x2 HH bolt [W] and 1/4-20 insert nut [V], bolt pulley end assembly [X] to post top section [Q] as shown. Tighten nut until secure.

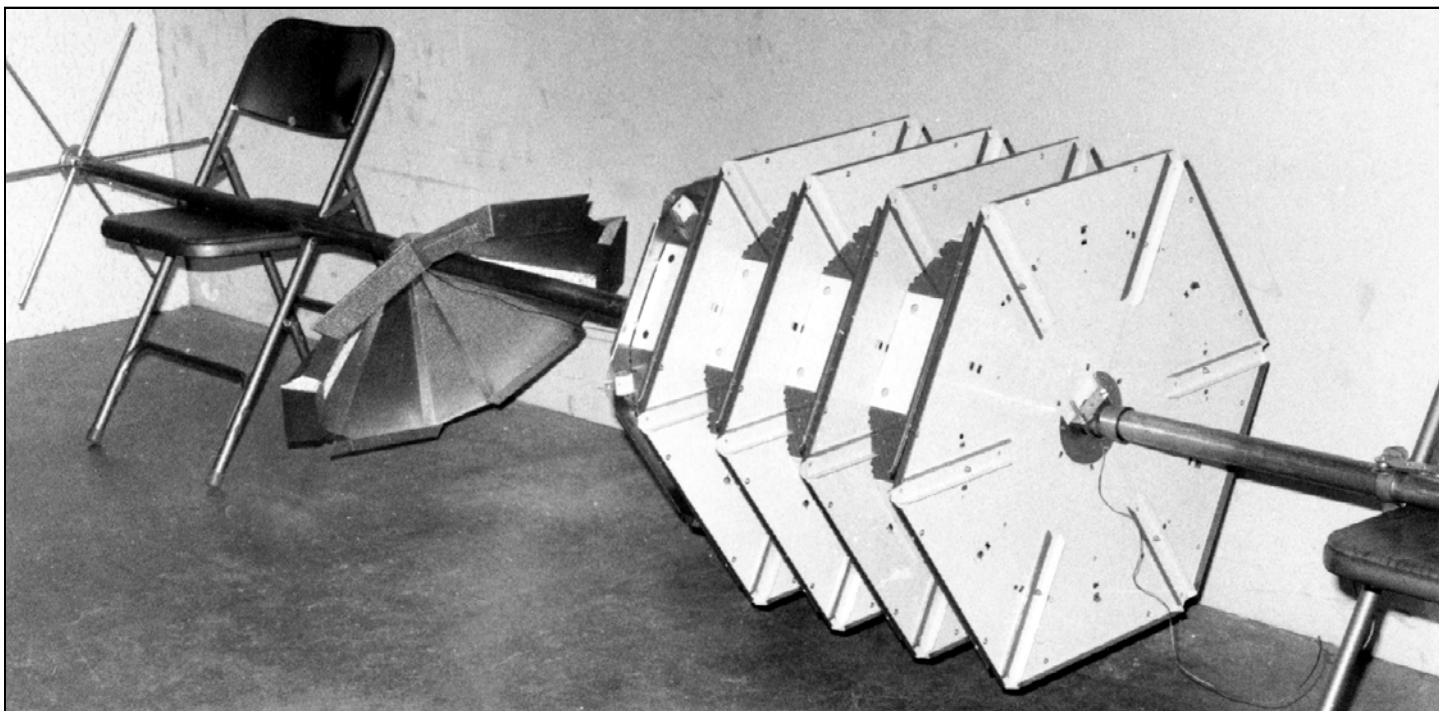


P 5. Install 1/4x2 split pin [H] in second hole below pulley in post top section [Q]. Drive pin through post until centered.

P 6. Slip center post section [R] into top post section [Q] as shown. Post should be assembled on a level surface such as a sidewalk or lawn. Turn post sections until holes in splice are in accurate alignment through post; then tap 1/4x1-1/2 split pin [I] through post until flush.

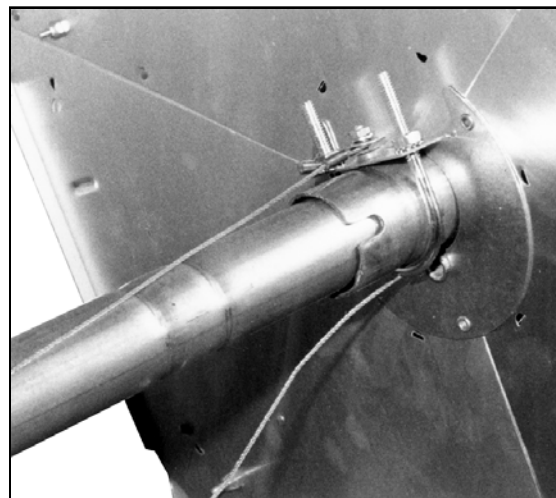


NOTE: This pre-alignment is essential and pin should drive through assembly with ease.



P 7. With post assembly supported in a horizontal position, slide martin house over post from lower end. Slip safety clamp over post and lock into position 18-1/2 inches from bottom end of post to lower edge of clamp. **Note:** In order to support post, it is suggested that two chairs be used.

The safety clamp was designed for the user's protection. **Always keep the safety clamp above your head when making installation, raising or lowering of house.**

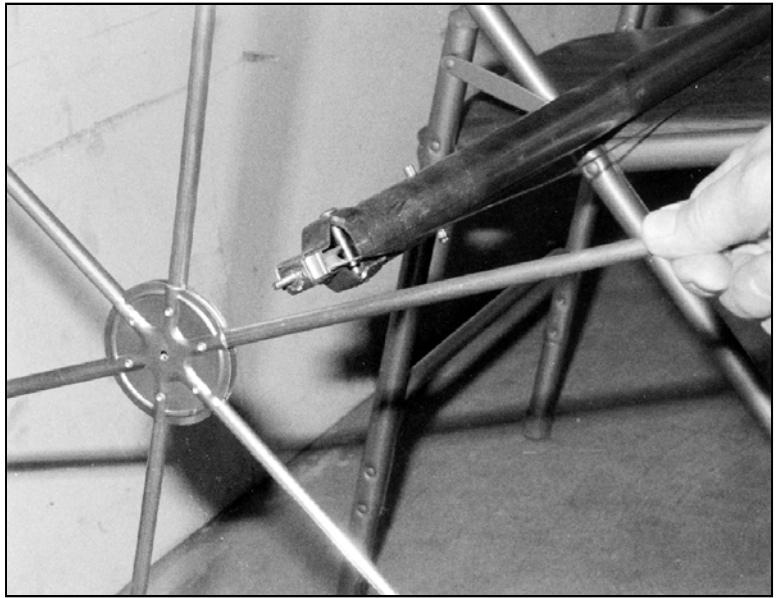


P 8. Thread cable over pulley at top end of post. Insert through cable tube and from bottom of house pull cable until slack has been taken up. **Make sure cable is not twisted above house.**

P 9. Slip roof over top end of post and fasten to house using six #6 sheet metal screws [24]. Note that flange on roof is located over flat C nut [14] on ceiling tab and screw is installed at an upward angle.

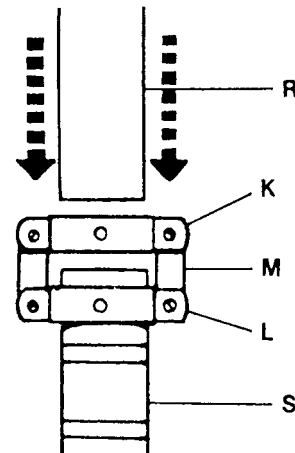


P 10. Place 5/16 star washer [Y] over threaded stud above pulley, then add perch assembly [11]. Fasten in place using 10-24 keps nut [B]. (Refer to exploded view on page 6.)



P 11. House is ready to install in bottom post section [S]. **It is best to use two people on this phase of the installation.** Pick the house and post assembly up and with post in vertical position insert into the bottom post. Allow assembly to rest on safety clamp (installed at Step P 7) and tighten nuts on “B” clamp [K].

**NATURE HOUSE MARTIN SAFETY SYSTEMS
ARE THE ONLY MARTIN HOUSES OFFERED
WITH SAFETY FEATURES FOR THE USER'S
PROTECTION.**

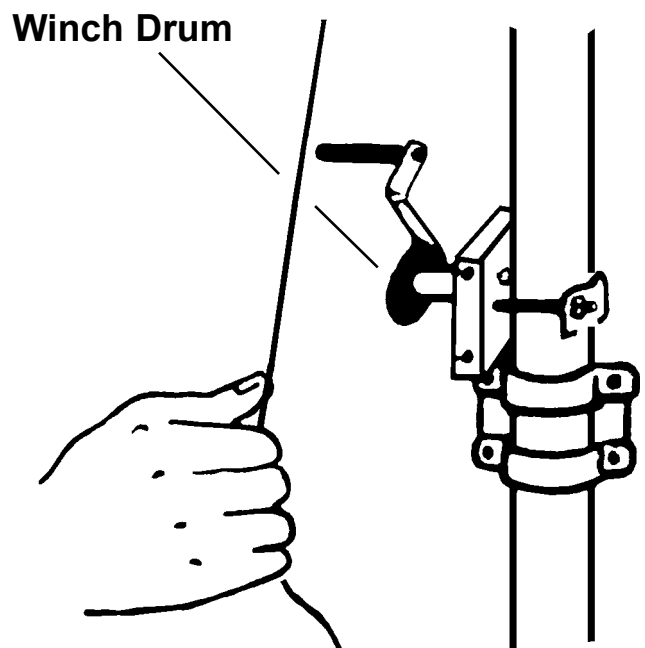


P 12. Release safety clamp and raise clamp and house manually a few inches so that winch can be installed. Re-lock clamp.

Winch [AA] is attached to center post section [R] just above “B” clamp [K]. Use 1-1/2 “B” clamp modified [N] and two 1/4-20 keps nuts [A].

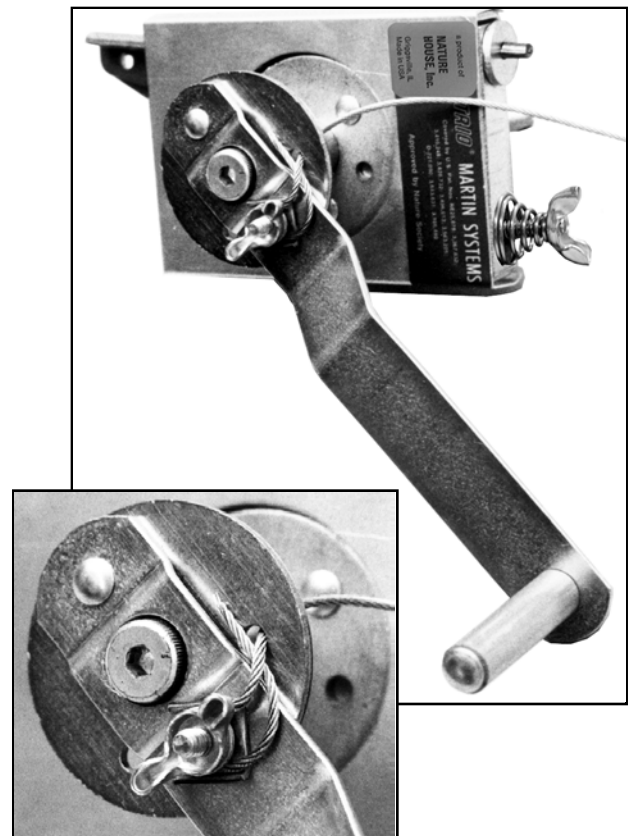
Note: Label on winch case cover should be to the right.

Align winch drum under cable hole in bottom of house and with pulley. (Cable will be parallel to post.) Again, check cable to make sure it is free.

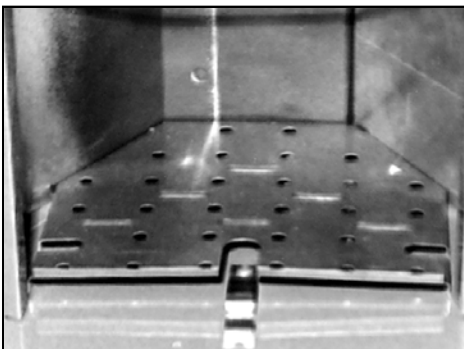


P 13. Loosen wing nut on winch drum, thread cable end through either hole in drum face from inside of drum. Wind cable around stud, between plate washer and round washer, and tighten wing nut. Cable end should be at least 1/2" beyond washers. Slack cable can be wound onto drum by turning winch handle in clockwise direction. **DO NOT RAISE HOUSE YET!**

Two safety features are designed into the winch. First, a brake mechanism to carry the weight of the house and, second, a ratchet and pawl to hold weight of house. The pawl lever is on upper left of winch. In operation, it is necessary to disengage pawl to lower house. To adjust brake, tighten spring tension by turning wing nut on lower right in clockwise direction until brake will hold weight of house. Raise house an inch or two and release pawl. If house slips down, tighten brake further.



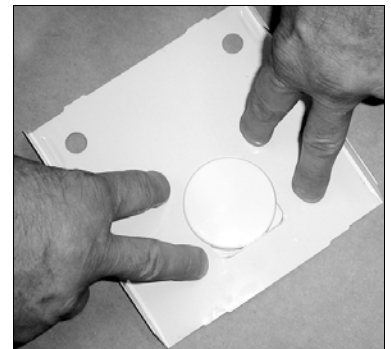
To reduce tampering with installation, pawl and winch case can be fastened together through holes provided. If this is desired, use bolt and nut, wire or padlock for this purpose.



Floor trays [12] can now be placed in house. Flanges on sides of floor trays go down.



Use winter door stops [10] to close house during winter months. To install door stops, remove door, place door stop upside down on a flat surface and press door onto door stop then rehang door.



CABLE SHOULD BE CHECKED YEARLY AND REPLACED IF WORN

For replacement parts or accessories call toll-free 877-833-2478 or 800-255-2692



Nature House products by
ERVA TOOL & MFG CO INC
 3100 W GRAND AVE, CHICAGO IL 60622-4324



Phone 800-342-3782

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Fax 800-342-3781

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