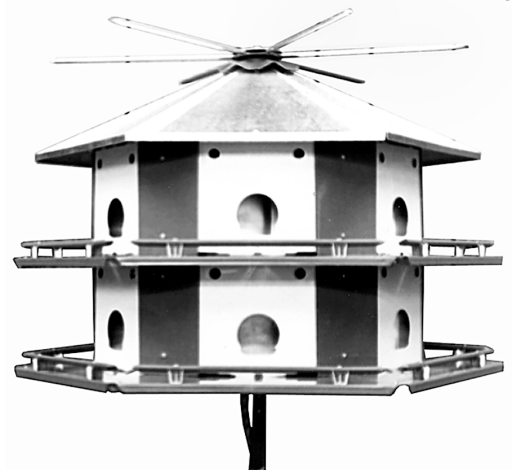


Assembly Instructions and Parts List for **TM-12 Mini-Castle** Purple Martin Safety System With Lanyard Lock

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.



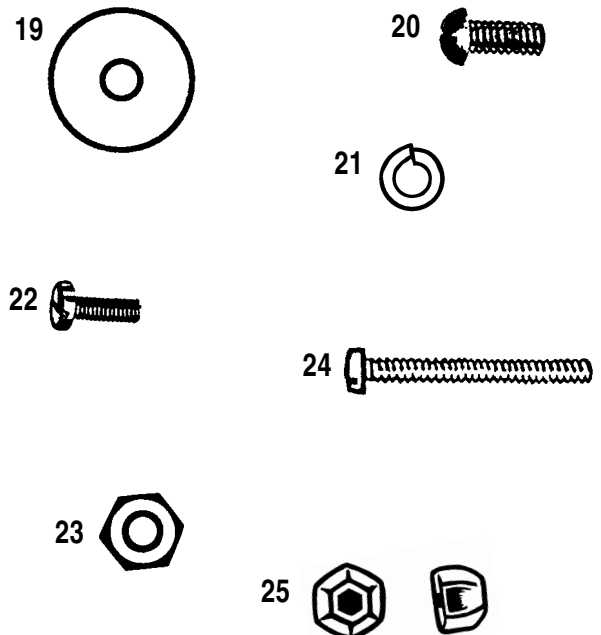
Check parts received against lists on pages 1 and 2.

The major house parts are shown on page 3.

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

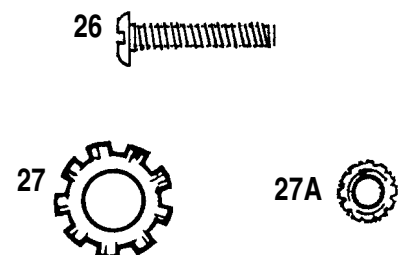
HOUSE PARTS PACKED IN THIS BOX

<u>Item</u>	<u>Qty. Req.</u>	<u>Description</u>
1	6	Floor sections
2	12	Doors
3	3	Ceilings
4	6	Roof sections
5	1	Finial
6	12	Dividers
7	12	Spacer panels
8	12	Back panels
9	6	6-32 x 13" tie rods
10	12	Door rods
13	12	Rails
16	6	Perch tubes
17	12	Floor trays
18	12	Winter door stops (in paper bag)



PARTS IN SMALL PLASTIC BAG

HOUSE PARTS		
19	1	3/4 O.D.x3/16 I.D. washer
20	4	10-24x1/2 Round head machine screws
21	4	#10 Lock washers
22	*88	6-32x5/16 Pan head machine screws
23	4	10-24 Hex nuts
24	24	6-32x1-1/4 Pan head machine screws
25	*19	6-32 Acorn nuts
26	6	6-32x3/4 Pan head machine screws
27	1	5/16 Star washer
27A	*110	6-32 Keps nuts

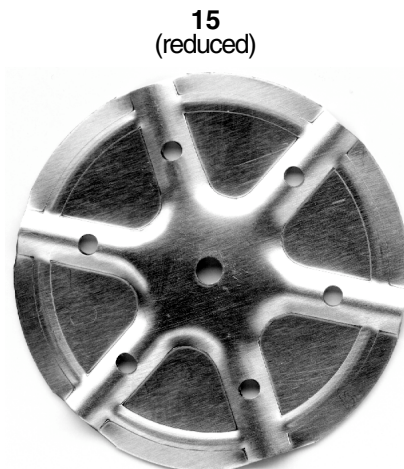
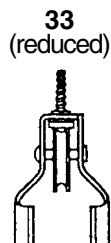


...Parts list continues on Page 2

*Extra parts included

PARTS IN LARGE PLASTIC BAG

<u>Item</u>	<u>Qty.</u> <u>Req.</u>	<u>Description</u>
11	6	Roof reinforcing brackets
14	24	Rail supports
15	2	Perch brackets
28	2	Kit wrenches
29	4	Tape strips (see step 15)
30	2	1-1/4 A clamps
31	2	1-1/2 B clamps } (see step 13)
32	2	Links
33	1	Pulley end assembly
34	4	1/4-20x3/4 Carriage bolts
35	4	1/4-20 Hex nuts
36	4	1/4 Lock washers
37	1	1/4-20 Lock nut
38	1	1/4-20x2 Hex head bolt
39	2	10-32x1/2 self-threading screws
40	1	10-24 Lock nut
41	1	1/4 I.D. steel washer
42	1	1/4x2 Spring pin



PARTS IN FLOOR CLIP BAG

(Packed inside large bag)

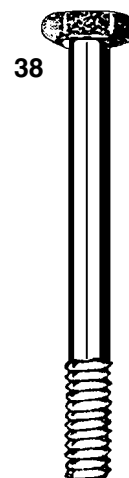
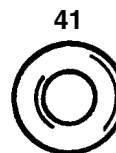
43	12	Floor clips
44	12	6-32x1/4 Machine screws
45	12	6-32 Keps nuts

PARTS IN LANYARD LOCK BAG

A	1	Lanyard lock assembly
B	1	Cover
C	4	#6x3/8 Sheet metal screws

PARTS PACKED IN BUNDLE (See page 3)

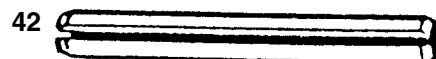
N	1	22 ft. rope
P	1	Rope cleat
12	1	Center bracket



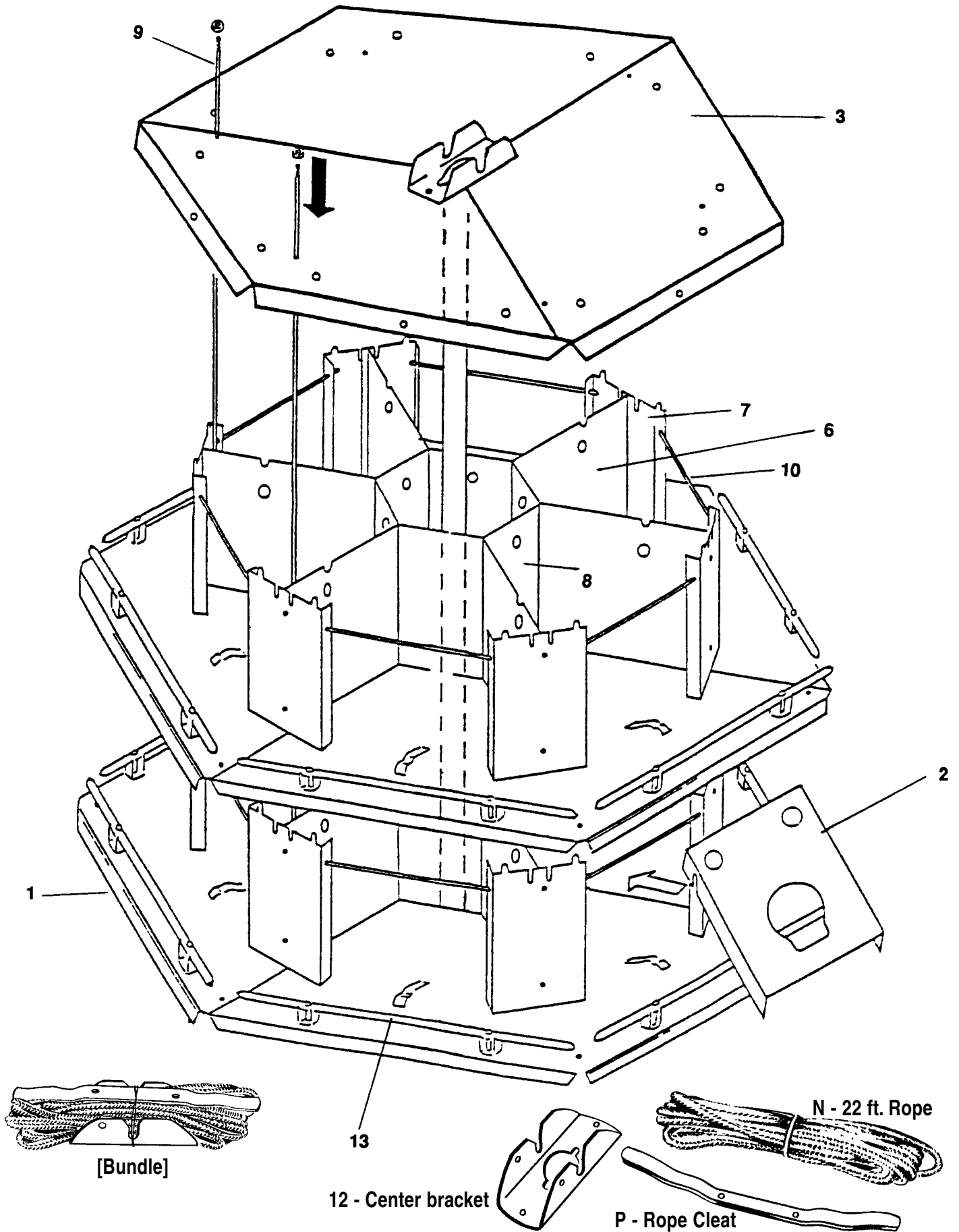
NOTE: TOP SECTION POST (Q) IS PACKED INSIDE BOTTOM SECTION (S)

PARTS PACKED IN POST BOX

Q	1	1-1/4"x60 1/2" Post (top section, 2 holes in end)
R	1	1-1/4"x76" Post (center section)
S	1	1-1/2"x74" Post (bottom section)
	1	1-3/4"x24" Ground socket with hardware



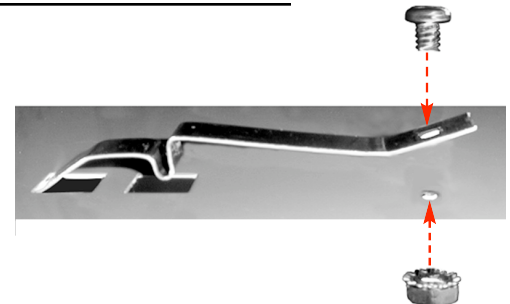
For post and roof, refer to step-by-step instructions.



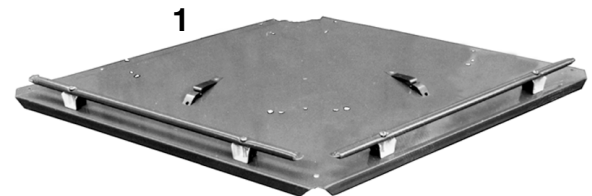
TM-12 MINI-CASTLE ASSEMBLY INSTRUCTIONS

Wipe protective oily coating from all parts' surfaces prior to assembly. Read all instruction before starting assembly. This will acquaint you with each step. The exploded view of house on page 3 shows each major part numbered to correspond with item numbers on pages 1 and 2.

1. Attach two floor clips (43) to each floor section (1) using one 6-32x1/4 machine screw (44) and one 6-32 Keps nut (45) per clip. Screw heads go on top (green) side of floor, front end of clip slips under edge of cutout in floor.

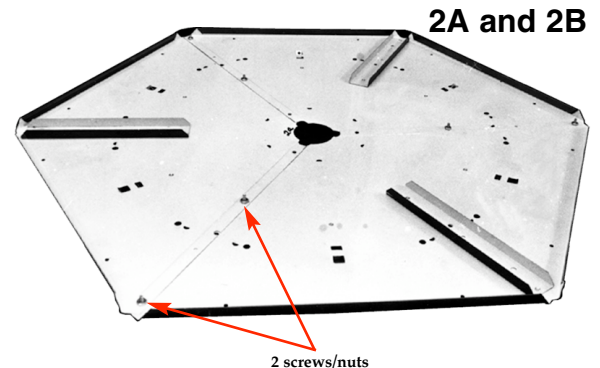


Install two rails (13) on each floor section. Use two rail supports (14), two 6-32x1-1/4 PHMS (24) and two 6-32 Keps nuts (27A) per rail. Screw heads should go at top of rails.



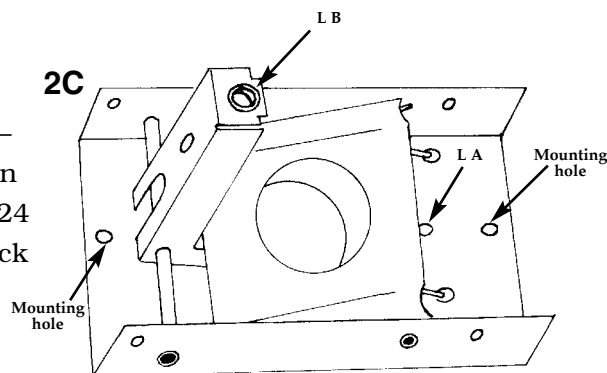
2A. Arrange three floor sections (1) in hexagon shape (green side down).

2B. Assemble sections by using 6-32x5/16 PHMS (22) and 6-32 Keps Nuts (27A) at locations shown in **EACH** seam. Screw heads go on green side. Repeat for three remaining floor sections.

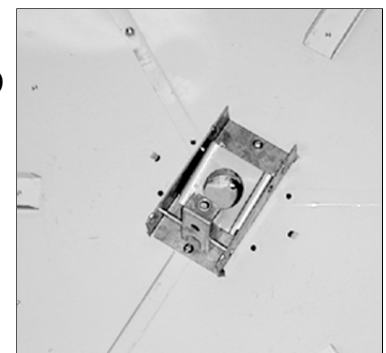


2C. On underside of one complete floor assembly, position lanyard lock as shown in photo 2D. Line up center hole in floor assembly with center hole in lanyard lock. Mounting holes in lanyard lock case (see illustration 2C) will line up with screw holes in floor.

2D. Using two each 10-24x1/2" RHMS (20) — making sure heads are on green side of floor — 10-24 hex nuts (23) and #10 lock washers (21), fasten lanyard lock in place.



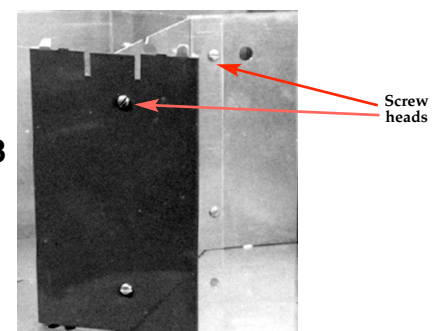
2D



3. Assemble 3-piece divider assembly. This consists of parts 6, 7 and 8. Fasten together using four each: 6-32 x 5/16 PHMS (22) and 6-32 Keps nuts (27A) as shown. Twelve sets of these are required.

NOTE: Heads of screws should be as shown in photo.

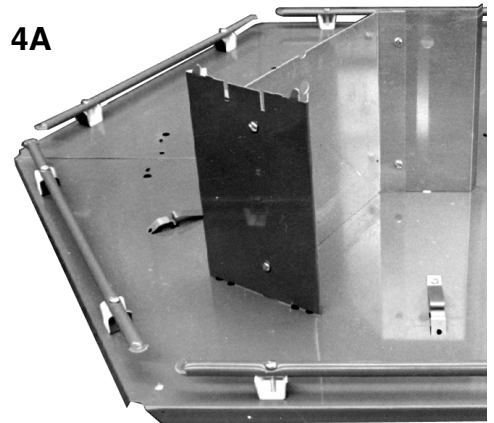
3



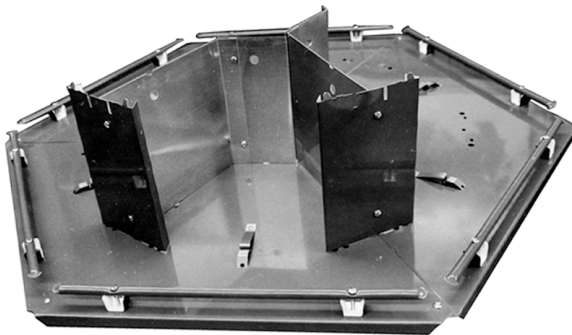
TM-12 MINI-CASTLE ASSEMBLY INSTRUCTIONS — CONTINUED

4A, B, C. Starting with bottom floor, green side up, place one divider assembly on floor (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 assembly 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.

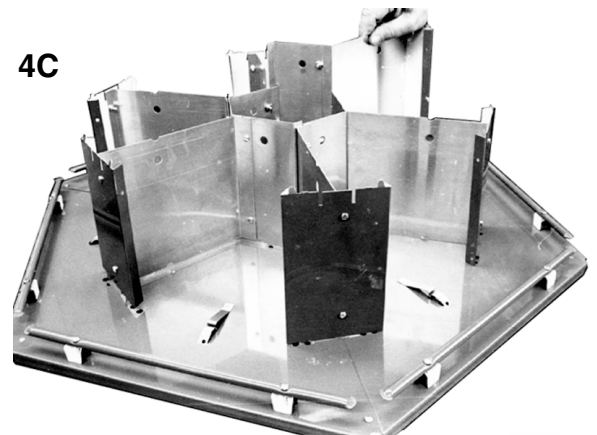
4A



4B



4C

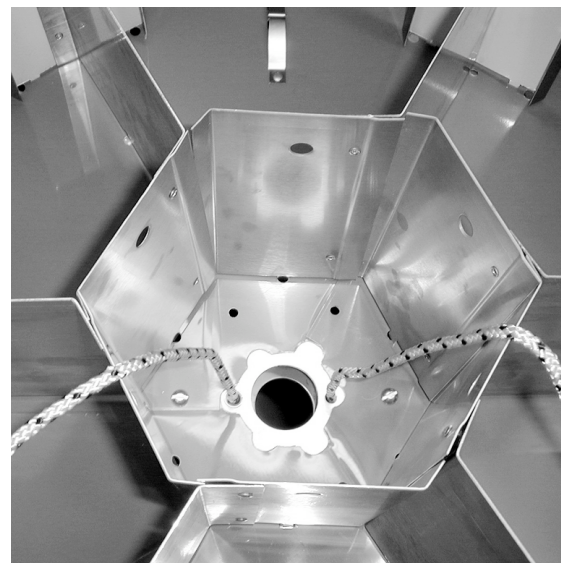


4D. Using the rope (N) furnished with the TM-12 house, double at approximate center. Feed both loose ends of rope through the first floor hole and into the lanyard lock from ABOVE. One rope end will go through hole marked “L A” in sketch 2C (pg. 4). Place a 1/4 I.D. washer (41) over end of rope (N); the other end will need to be fed through the grommet in lanyard lock and then through the hole marked “L B” in sketch 2C as shown. Tie an overhand knot on end of each rope.

4D



Underside view of floor /lanyard lock assembly



TM-12 MINI-CASTLE ASSEMBLY INSTRUCTIONS — CONTINUED

5. Repeat Steps 4A, 4B and 4C for second floor, but do not stack floors together at this point.

6. Place bottom floor assembly on a wastebasket and center so that floor may be held level. Position so that a few inches extends over edge for easy access to underside of floor.

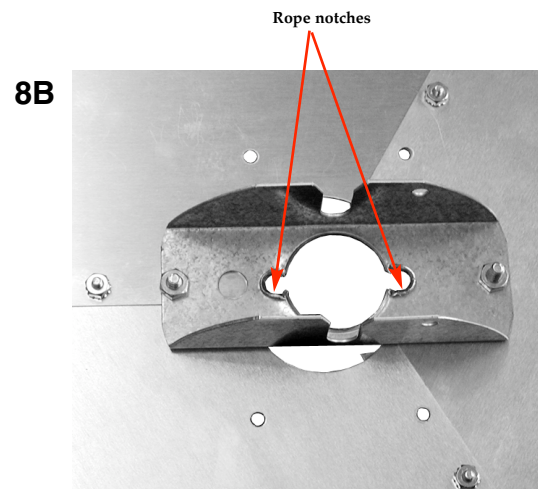
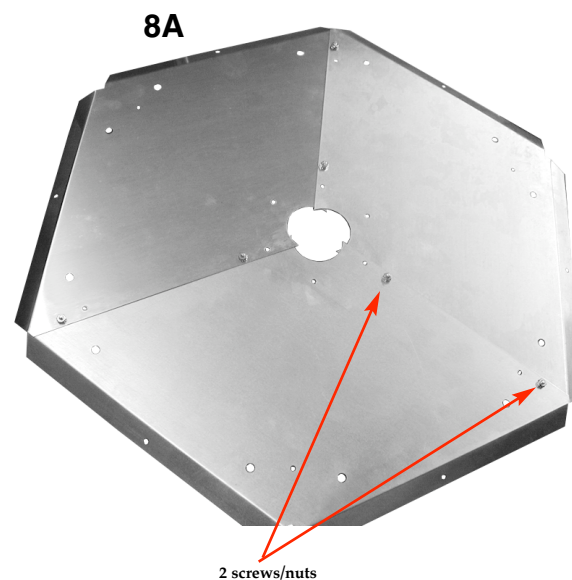
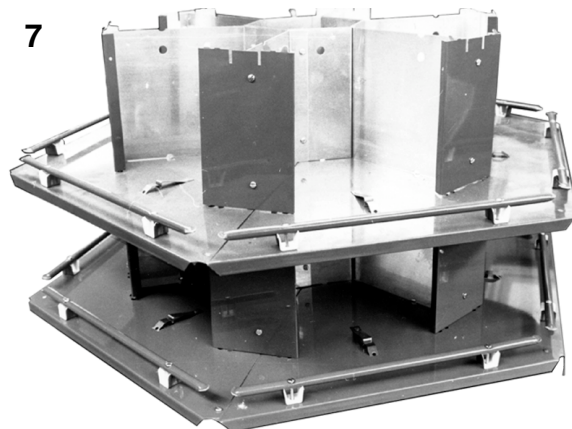
7. Nest second floor over first floor. (**NOTE:** Seams on second floor **MUST BE** directly above seams on bottom floor. This is very important for center hole alignment and proper rope operation.)

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.

Pull double rope through second floor as you go; the double rope goes on through ceiling and roof.

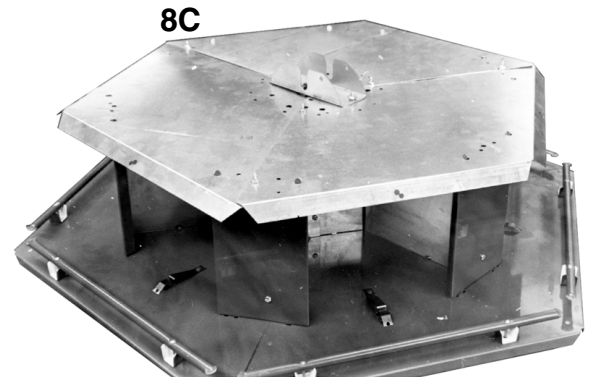
8A. Assemble three ceiling sections (3), assemble to form a hexagon by overlapping edges as shown. Use two each: 6-32x5/16 PHMS (22) and 6-32 Keps nuts (27A) in each seam. (Use the two smaller holes in each seam, as shown.) Screw heads go on underside. Outside edge flanges angle down as shown.

8B. Fasten center bracket (12) in center of ceiling, as shown, using two each: 10-24x1/2 RHMS (20), #10 lock washer (21) and 10-24 hex nuts (23). Screw heads on **UNDERSIDE** of ceiling.

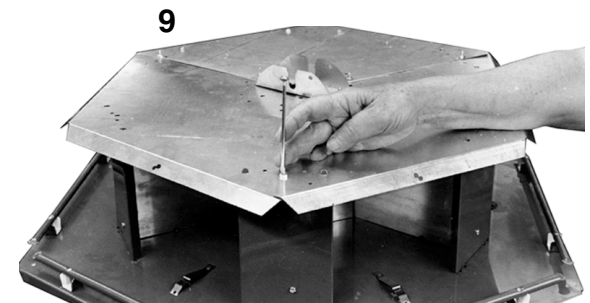


TM-12 MINI-CASTLE ASSEMBLY INSTRUCTIONS — CONTINUED

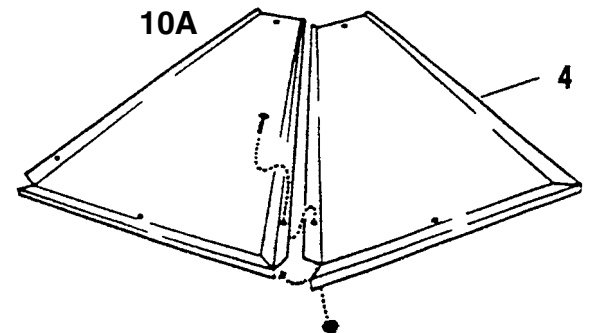
8C. Position ceiling assembly so the two rope notches in the ceiling center bracket (see Photo 8B) line up directly above the two rope holes in the lanyard lock on the bottom floor (see Photo 4D). This is critical for proper rope operation when house is installed on post. Ceiling is installed over top floor assembly by inserting the two round top tabs on each divider into the two large holes in ceiling. Pull doubled rope up through ceiling center bracket.



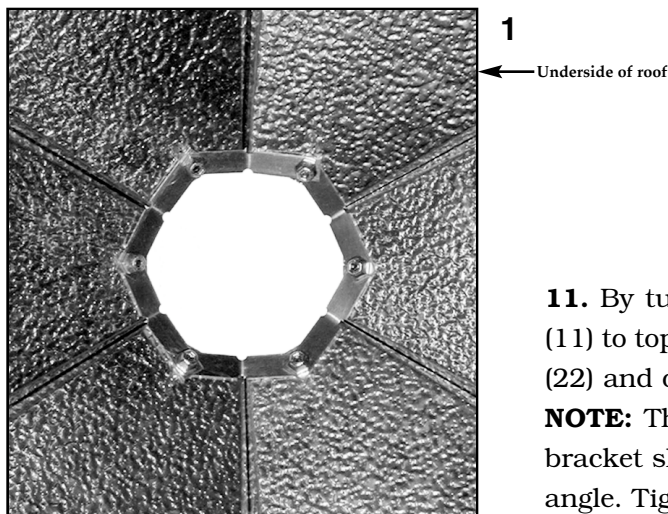
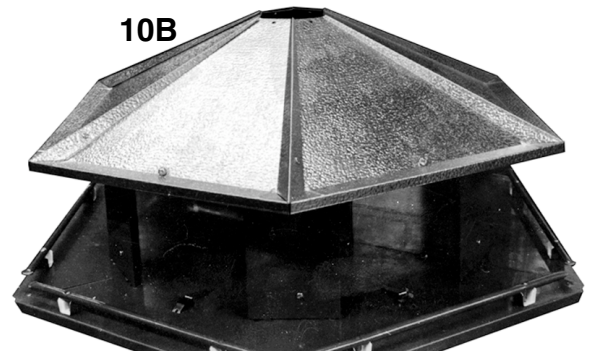
9. Install one 6-32 acorn nut (25) on one end of each of the six tie rods (9). Use kit wrench (28) after starting. On ceiling locate tie rod holes between two larger holes — about two inches in from edge of ceiling. (Refer to page 3, if necessary.) Insert tie rods (9) into these holes as shown. Use nail to align holes in assembly, if required. Guide tie rod through hole in top floor, then rotate rod slowly and it will drop through assembly. Thread 6-32 acorn nut (25) onto lower end of tie rod on underside of bottom floor. Do not tighten completely at this time. Repeat with balance of tie rods. **ASSEMBLY MUST BE HANDLED WITH CARE UNTIL ALL TIE RODS ARE IN PLACE.** Insert twelve door rods (10) into holes at top of each doorway. Now tighten nuts on vertical rods (9) until snug.



10A. Assemble roof by joining six roof sections (4) as shown, using six 6-32x5/16 PHMS (22) and 6-32 Keps nuts (27A). Be sure right hand side of each roof section goes over left hand side of adjacent roof section. Tighten screws and nuts. Keps nuts go on inside of roof. See sketch 10A.



10B. See photo 10B of roof after completion of step 10A.

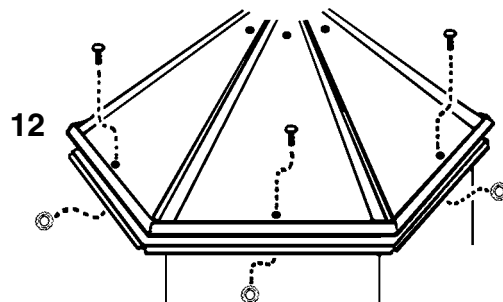


11. By turning roof over, fasten six roof reinforcing brackets (11) to top edge of center opening, using one 6-32x5/16 PHMS (22) and one 6-32 Keps nut (27A) at each position, as shown. **NOTE:** There will be two bracket ends over each screw. The bracket should be bent slightly at center to conform with roof angle. Tighten until snug. Keps nuts are inside of roof.

TM-12 MINI-CASTLE ASSEMBLY INSTRUCTIONS — CONTINUED

12. Bolt roof assembly to ceiling edges using six 6-32x5/16 PHMS (22) and 6-32 Keps nuts (27A).

NOTE: Screw heads will be on top side of roof. See sketch. Tighten until snug. Pull doubled rope up through hole in roof peak.

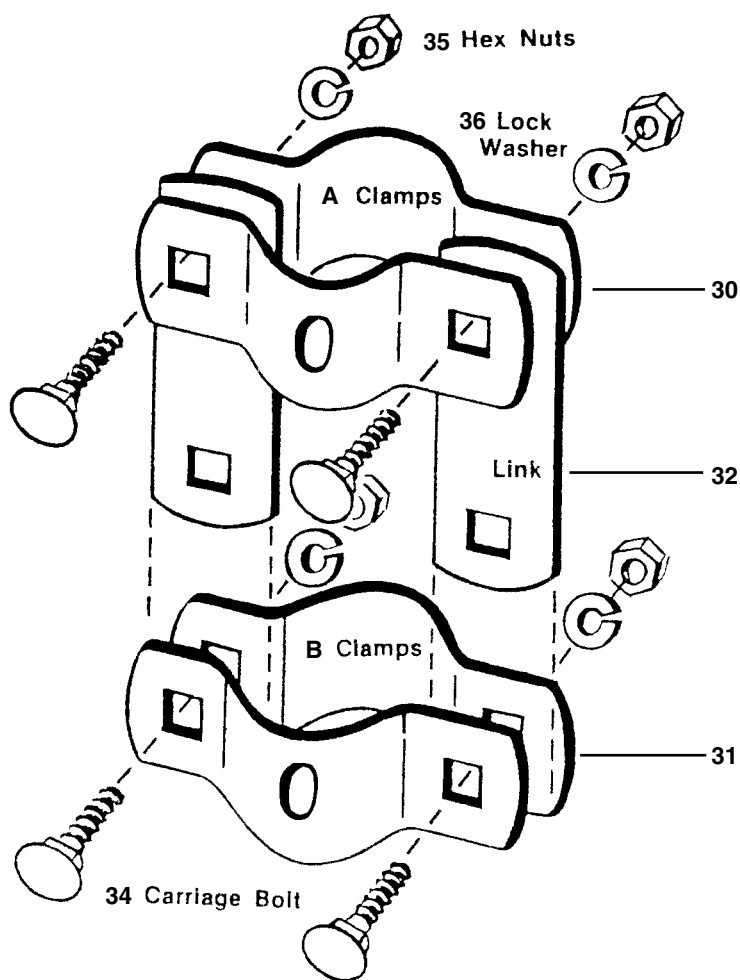
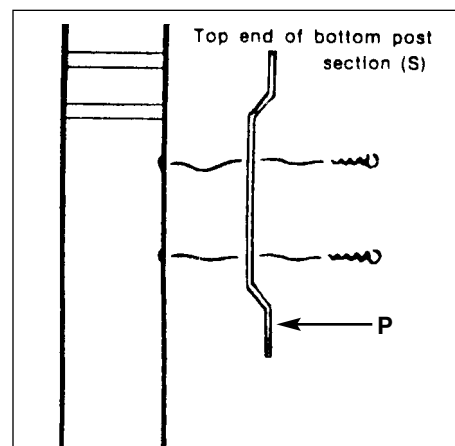


TM-12 MINI-CASTLE POST ASSEMBLY INSTRUCTIONS

Top section of post (Q) is packed inside bottom section (S) and MUST be removed before installation of post.

13. Attach rope cleat (P) to post bottom section (S) with two 10-32 x 1/2 self threading screws (39) in holes provided and tighten. This end is up.

Assemble tube clamps as shown. Place "B" clamps over top end of post (S) and tighten nuts. Leave "A" clamps loose.



NOTE:
Top section of post (Q)
is packed inside
bottom section (S)

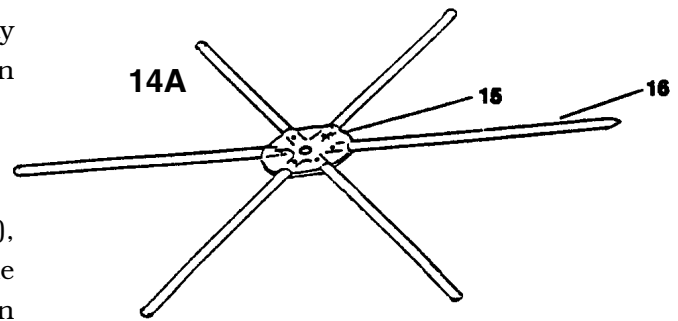
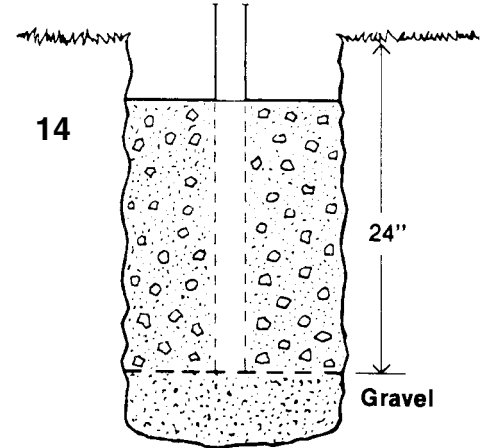
TM-12 MINI-CASTLE POST ASSEMBLY INSTRUCTIONS — CONTINUED

NOTE: If using TGS Mounting Post Ground Socket (included), skip Step 14 and follow instructions included with TGS, then proceed to Step 14A.

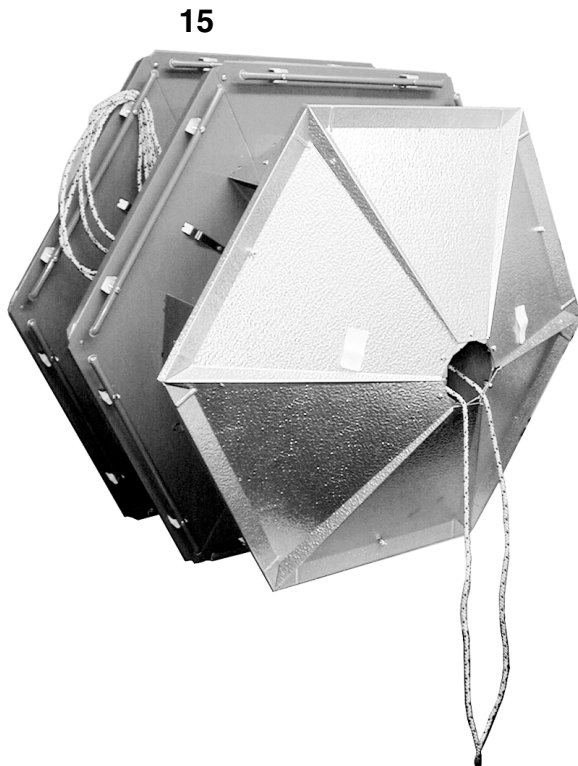
TGS GROUND SOCKET IS RECOMMENDED FOR EASE OF INSTALLATION.

The ground socket is installed in concrete and clamps securely to post. This allows the pole and house to be moved to another location without losing the bottom section of post.

14. Dig hole eight inches in diameter and twenty-eight inches deep. Put four inches of coarse gravel in hole. Place bottom post section (S) in hole and fill with concrete to three or four inches below ground level (approximately ninety pounds). Use guy wires or rope to hold in vertical position while concrete sets up.



14A. Using six perch tubes (16), two perch brackets (15), six 6-32x3/4 PHMS (26) and six acorn nuts (25), assemble as shown. Head of screws down, acorn nuts on top, when placed on post assembly. Tighten until snug.



14B. The perch assembly, including finial, is part of the house, but is mounted on top post at step 18 and will be shown later.

15. By using a table or other flat surface, turn martin house assembly on its side. Pull the rope through hole in roof until the slack is taken up between knots below bottom floor and roof. Place half rope to right and half to the left at top of house. Take two pieces tape strip (29) and tape rope, one-half each side, to roof. Be sure that rope is not twisted inside of house.

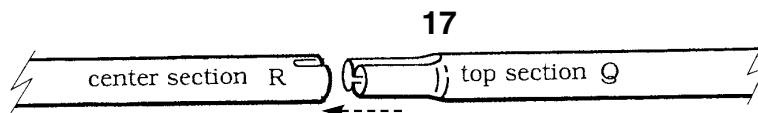
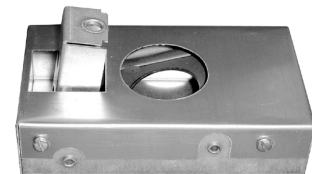
TM-12 MINI-CASTLE POST ASSEMBLY INSTRUCTIONS — CONTINUED

16. Taking the top section post (Q), 1-1/4 dia.x60-1/2" long, and the spring pin (42); tap the pin into the hole three inches from top end of tube and center on post. (See sketch 18.)

Place other end of post through roof hole and slide through house and lanyard lock about two feet. Check to see that ropes are still in place and not crossed.

Using the pulley end assembly (33) and the far end of doubled rope, work the rope into pulley bracket over the pulley, as shown. Rotate one leg of the pulley assembly 90° to aid in rope placement. Check to determine ropes are not crossed. Place this unit over post top end and bolt in place using bolt (38) and nut (37). Tighten firmly. Check with sketch 18.

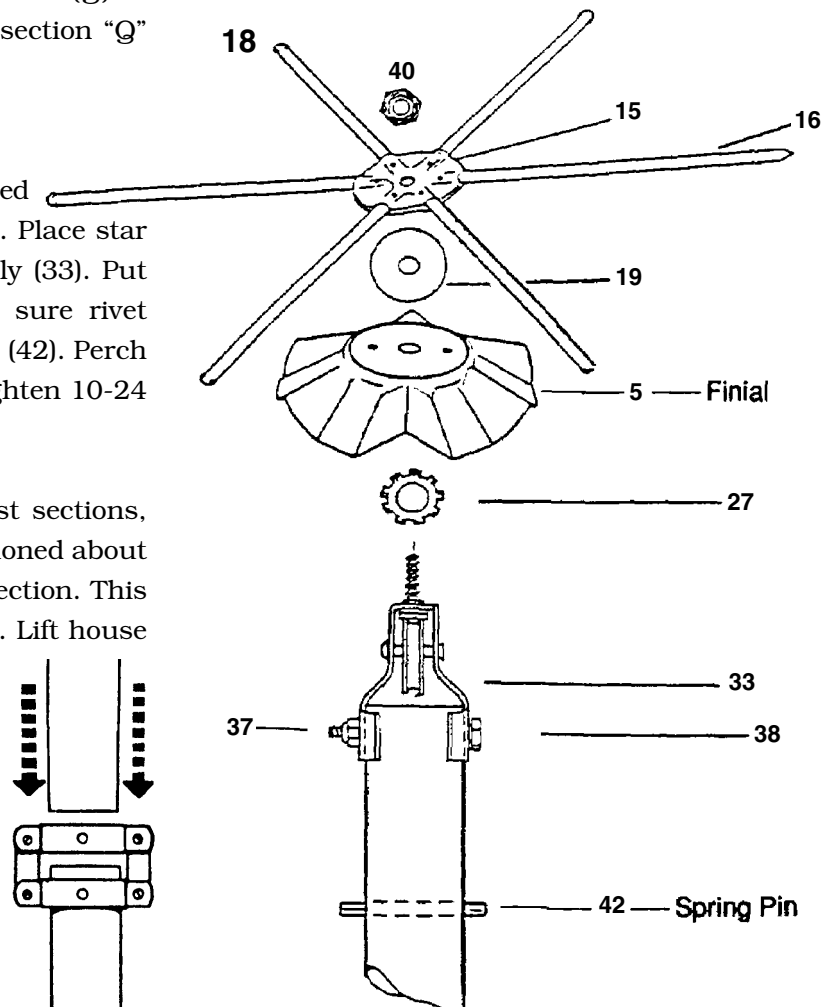
At this point, install lanyard lock cover on lanyard lock case using four #6x3/8 sheet metal screws (packed in lanyard lock bag).



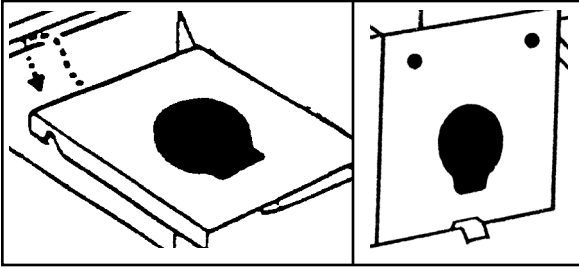
17. Attach center post section (R) to top post section (Q) as shown. Note alignment of crimped end of top section "Q" and grooved end of center section "R".

18. The finial and perch assembly is now installed on the pulley assembly as shown in sketch 18. Place star washer (27) over stud at top of pulley assembly (33). Put finial over stud and add washer (19). Make sure rivet heads on top of finial are in line with spring pin (42). Perch assembly is added next (acorn nuts at top). Tighten 10-24 lock nut (40) until snug.

To safely lift and install house and upper post sections, two people are required. House should be positioned about two feet above the bottom end of center post section. This will provide a low center of gravity when lifting. Lift house and upper post sections to vertical position. Then slip bottom end of center post section through clamp assembly and down into bottom section. Make sure center post section slides down until it rests on top rope cleat screw. Rotate upper post sections and house until groove in pulley wheel is in line with rope cleat on bottom section. Tighten nuts on clamp assembly.



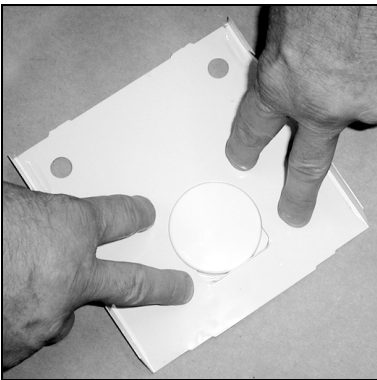
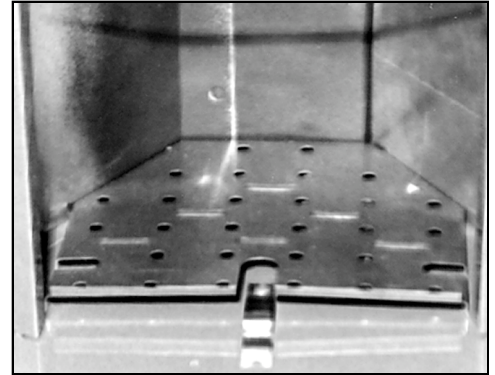
TM-12 MINI-CASTLE ASSEMBLY INSTRUCTIONS — CONCLUSION



19. Our suggestion is to install doors (2) at this point. Hook doors (2) over door rods (10). Do not force.

NOTE: Doors should hinge freely and snap into floor clips on floor. See sketches.

20. Floor trays (17) can now be placed in house. Flanges on sides of floor trays go down.



21. We suggest to install door stops; remove door, place door stop upside down on a flat surface and press door onto the door stop, then rehang door. Use door stops (18) to close house during winter months.

Rope should be checked yearly and replaced if worn. With house lowered, attach new rope to end of old rope with tape or wire and pull new rope through with old rope.

Lanyard lock operation

This device provides a positive means of locking your house into any position on the post. Pulling out on the rope releases this lock and allows house to be raised and lowered. Releasing rope allows lanyard lock to tighten against post securing it in position. When lowering house, stand out far enough from base of mounting post to allow for pulling rope out for release of lock. Slowly allow rope to feed up through lock, standing in this same position and lowering house. To stop lowering at any point, simply loosen pull on rope and allow to drop in position. When raising house, stand close to base of mounting post and pull rope straight down. With house at top of post, lock will engage ring in post for correct location.

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

E-mail <ervatool@sbcglobal.net>

Fax 800-342-3781

Nature House — bringing the benefits of nature to your house

Please use product code number when ordering parts
TM-12 Mini-Castle Safety System

HOUSE PARTS PACKED IN THIS BOX

<u>Code #</u>	<u>Item</u>	<u>Qty.</u>	<u>Description</u>
827416	1	6	Floor sections
25040	2	12	Doors
25332	3	3	Ceilings
25345	4	6	Roof sections
25375	5	1	Finial
27406	6	12	Dividers
27402	7	12	Spacer panels
27404	8	12	Back panels
28425	9	6	6-32 x 13" tie rods
65648	10	12	Door rods
27427	13	12	Rails
66382	16	6	Perch tubes
26241	17	12	Floor trays
25075	18	12	Winter door stops

PARTS IN SMALL PLASTIC BAG

24400	19	1	3/4 ODx3/16 ID washer
40050	20	4	10-24x1/2 RHMS
35283	21	4	#10 Lock washers
35263	22	*88	6-32x5/16 PHMS
35281	23	4	10-24 Hex nuts
35270	24	24	6-32x1-1/4 PHMS
35288	25	*19	6-32 Acorn nuts
35257	26	6	6-32x3/4 PHMS
32020	27	1	5/16 Star washer
35252	27A	*110	6-32 Keps nuts

PARTS IN LANYARD LOCK BAG

726276	A	1	Lanyard lock assembly
26272	B	1	Cover
35250	C	4	#6x3/8 SMS

PARTS IN LARGE PLASTIC BAG

<u>Code #</u>	<u>Item</u>	<u>Qty.</u>	<u>Description</u>
25180	11	6	Roof reinforcing brackets
25060	14	24	Rail supports
27428	15	2	Perch brackets
27300	28	2	Kit wrenches
35248	29	4	Tape strips (see step 15)
20414	30	2	1-1/4 A clamps
28024	31	2	1-1/2 B clamps
20416	32	2	Links
732001	33	1	Pulley end assembly
30052	34	4	1/4-20x3/4 Carriage bolts
42500	35	4	1/4-20 Hex nuts
43550	36	4	1/4 Lock washers
32015	37	1	1/4-20 Lock nut
32006	38	1	1/4-20x2 Hex head bolt
35264	39	2	10-32x1/2 Self-threading screws
40525	40	1	10-24 Lock nut
32048	41	1	1/4 I.D. steel washer
32004	42	1	1/4x2 Spring pin

PARTS IN FLOOR CLIP BAG

25042	43	12	Floor clips
35260	44	12	6-32x1/4 Machine screws
35265	45	12	6-32 Keps nuts

PARTS PACKED IN BUNDLE

33000	N	1	22 ft. rope
26212	P	1	Rope cleat
26211	12	1	Center bracket

PARTS PACKED IN POST BOX

27856	Q	1	1-1/4"x60 1/2" Post (top section)
27858	R	1	1-1/4"x76" Post (center section)
27850	S	1	1-1/2"x74" Post (bottom section)
28410		1	1-3/4"x24" Ground socket with hardware