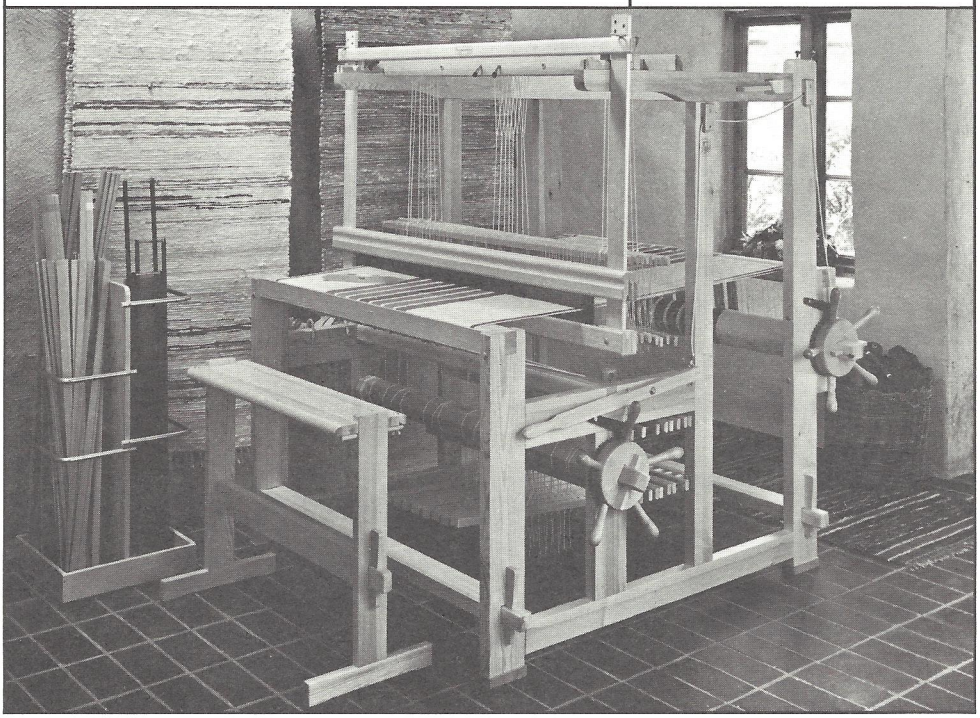
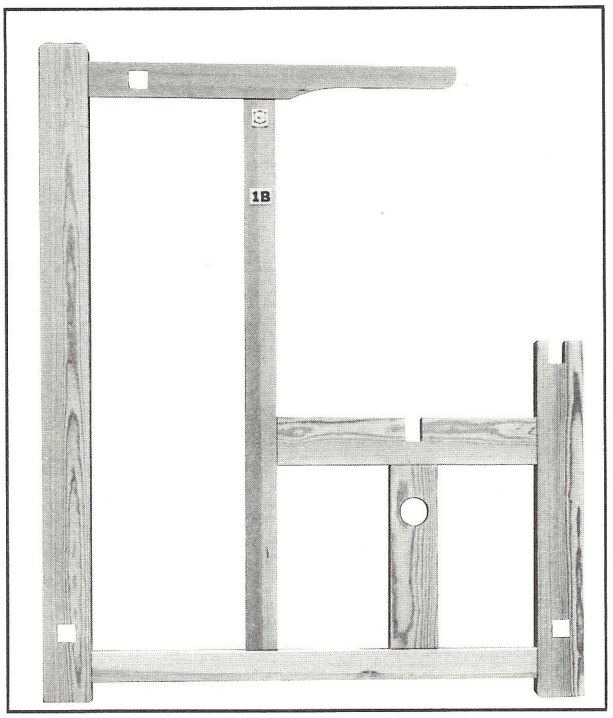
THE GLIMAKRA LOOM OWNER'S MANUAL AND ASSEMBLY INSTRUCTIONS

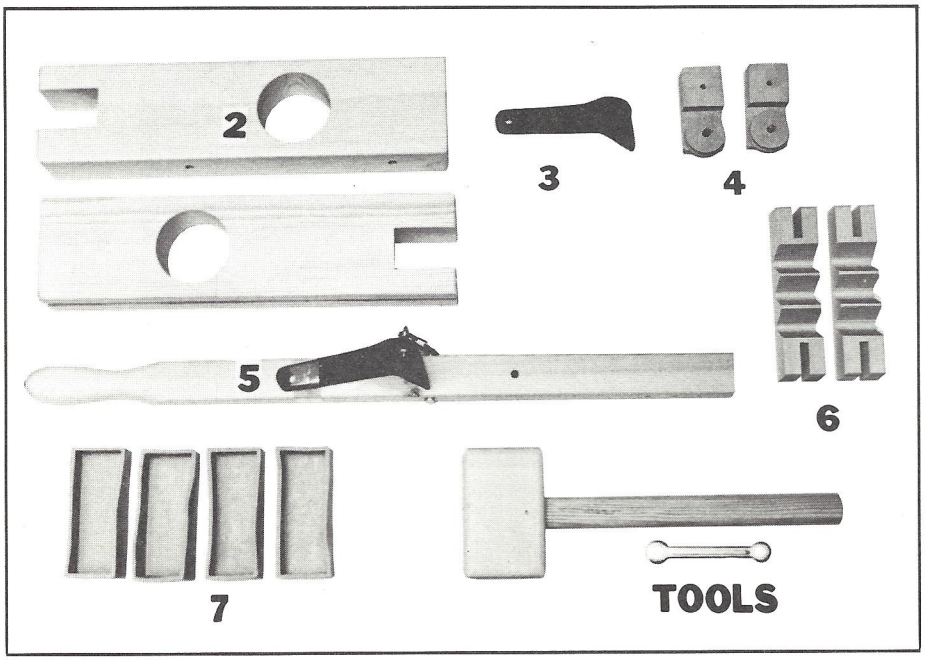


LOOM PARTS

1a. Right gable (Has metal lam support rod below center)



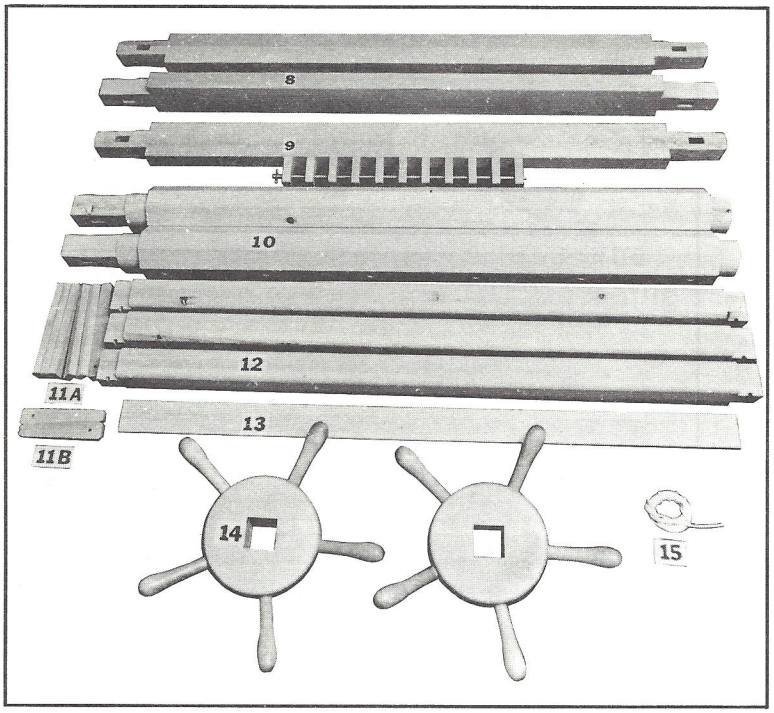
1b. Left gable



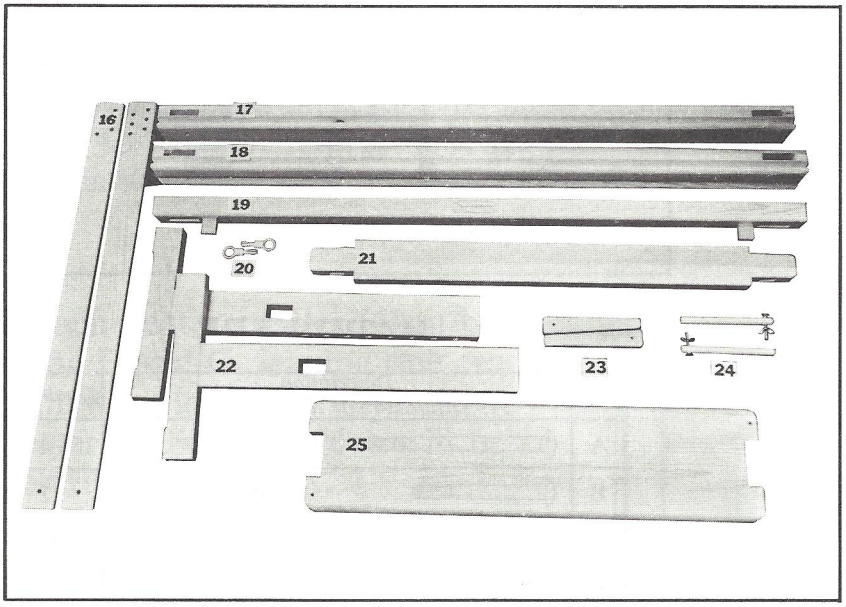
2. Warp beam support (bushing)
3. Pawl
4. Pulleys for pawl cord
5. Pawl release handle
6. Beater cradles (2)
7. Rubber feet (4)

Tools: mallet
wrench

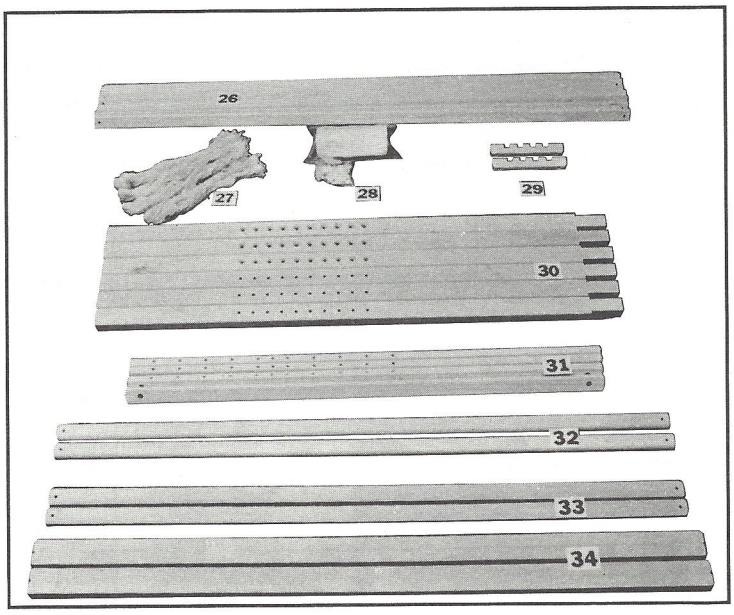
At the time of printing, this assembly manual reflected current Glimakra loom specifications. However, the manufacturer reserves the right to make changes in the design, materials, etc., at any time. Please contact your Glimakra Looms Dealer if you require further instruction clarification.



8. Cross bars for footrest and upper support (2)
9. Cross bar for treadlemount
10. Warp beam and cloth beam (2)
11a. Large wedges (6)
11b. Small wedges (2) (160 cm and larger looms have 4)
12. Knee beam, back beam, and breast beam (3)
13. Cloth cover board
14. Ratchet wheels (2) (160 cm and larger looms have 4)
15. Pawl release cord



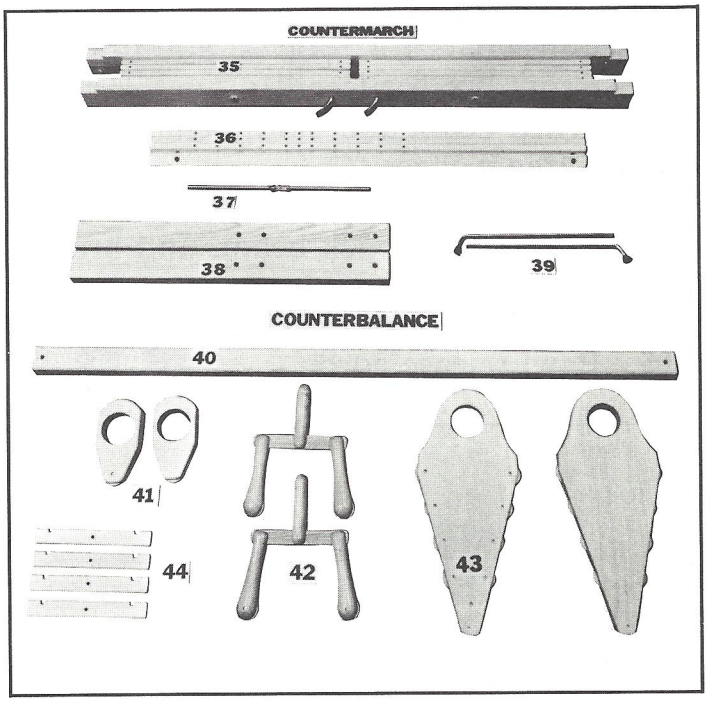
16. Beater side pieces (2)
17. Beater base
18. Beater handle (Beater cap)
19. Beater support bar
20. Beater pins (2)
21. Bench cross bar
22. Bench side pieces (2)
23. Wedges (2)
24. Dowels with carriage bolts (2) and wingnuts (2)
25. Bench seat



26. Heddle sticks (2 per harness)
27. Heddles
28. Tie-up kit
29. Harness racks (2)
30. Treadles (Number requested)
31. Upper lams (1 per harness)
32. Tie-bars (Apron sticks) (2)
33. Lease sticks (2)
34. Warping sticks (36)

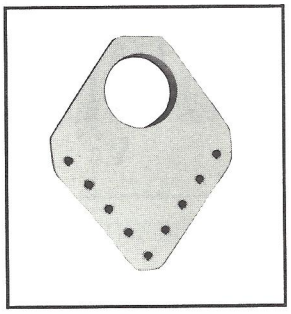
Countermarch parts:

35. Countermarch action
36. Lower lams (1 per harness)
    NOTE: Lower lams are longer than upper lams on Standard looms.
37. Lower lam support rod with pin
38. Tie up fixture
39. Locking pins for fixture



Counterbalance parts:

40. Pulley beam with 2 metal pins
41. Pulleys (2) for 4 harnesses
    - or -
42. Pulleys (2) for 5-8 harnesses
    - or -
43. Drall pulleys (2)
44. Horses (1 per harness)



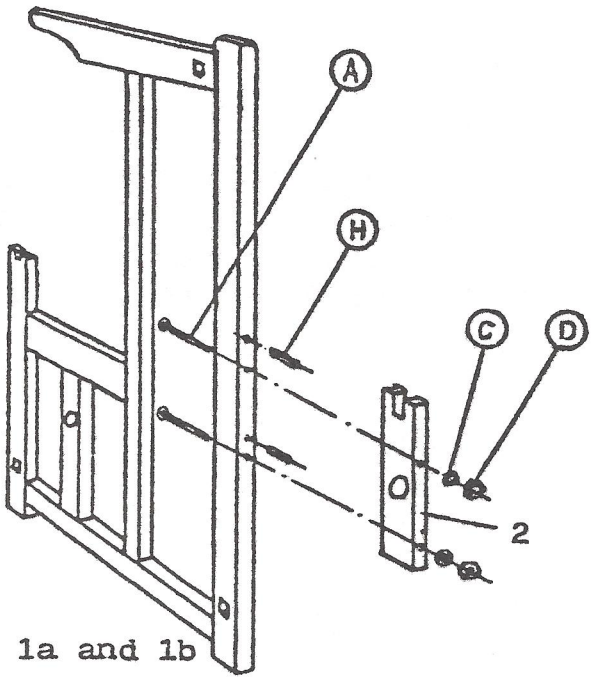
Note: This pulley replaces #43

HARDWARE

Ref.	*Description (Approximate dimensions)*	*Quantity*
A	5/16'' x 9''	4
B	5/16'' x 2-3/4''	2
C	5/16''	13
D	5/16''	6
E	1/4'' x 2-1/2''	5
F	1/4'' x 2''	2
G	1/8'' x 1-1/2''	2
H	1/4'' x 1''	4

LOOM ASSEMBLY

To facilitate loom assembly arrange the parts in groups as shown in the preceding photographs.



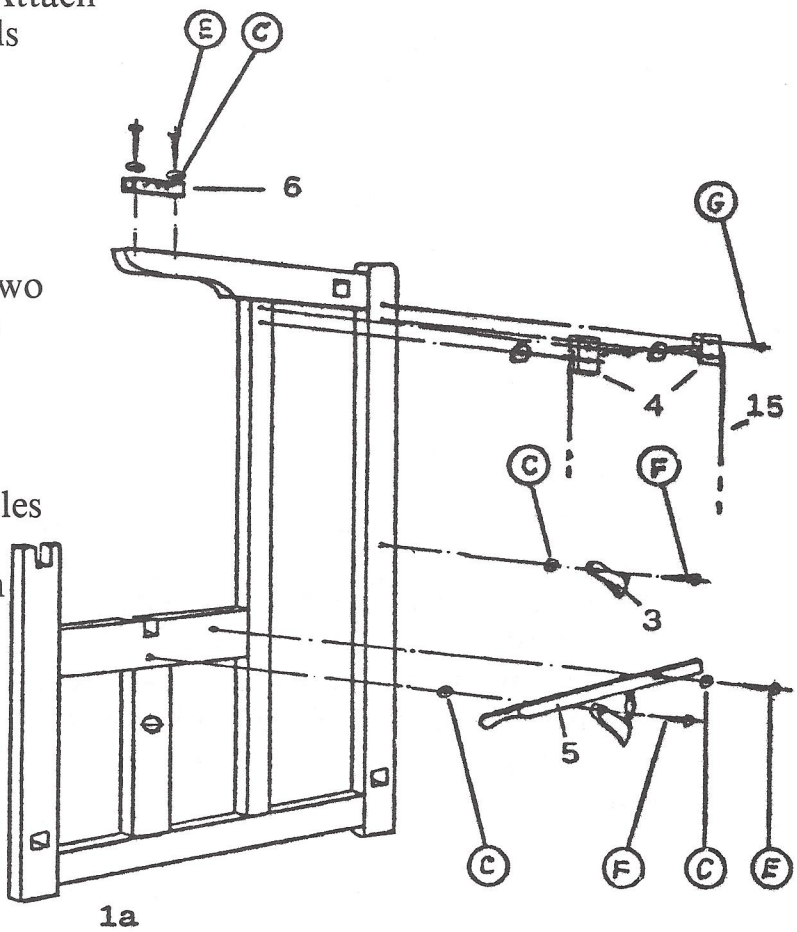
1a and 1b

Attach a warp beam support (2) at the rear of each gable (1a and 1b) using hardware items A, H (wooden pegs), C and D as indicated. Before securing bolts, tap each one with the mallet until the underside of the head is flat against the wood.

Fasten short screw on pawl cord (15) to pawl (3) and attach pawl to right gable (1a) using hardware items C and F. Attach pulleys (4) with pawl cord over wheels using hardware item G. Attach pawl release handle (5) using C, F, and E as shown.

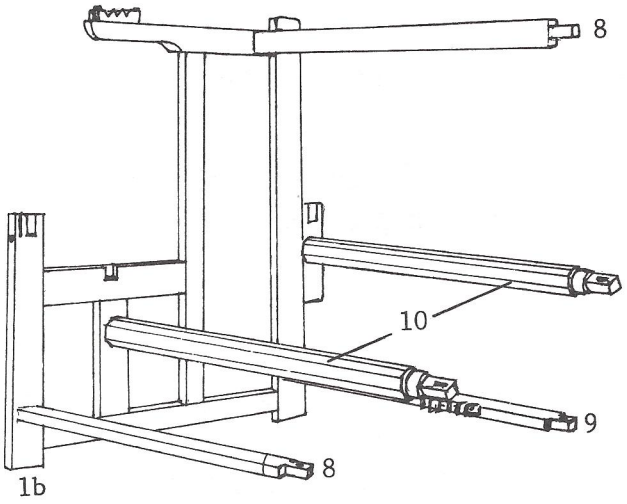
(The 160 cm and larger looms have two pawls to be attached to the left gable (1b) as well.)

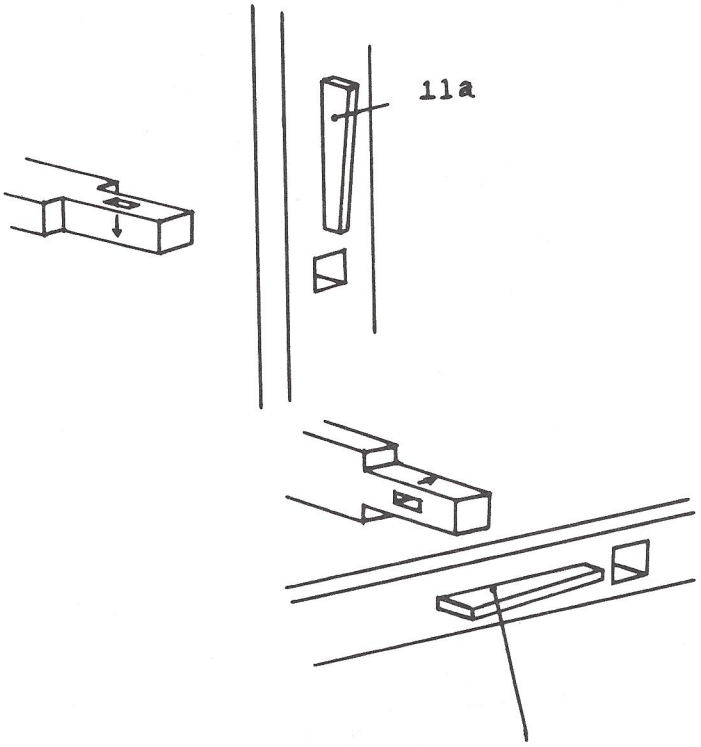
Attach beater cradles (6) to both gables using E and C, leaving one cradle somewhat loose for adjustment when beater is aligned, which will be described on page 8.



1a

Insert one of the crossbars (8) at footrest position in the left gable (1b) with arrow on bar pointing downward. Insert treadlemount (9) with metal rod facing front of loom. Lightly tap in wedges (11a) so that straight side of wedge and not sloped side touches gable surface.

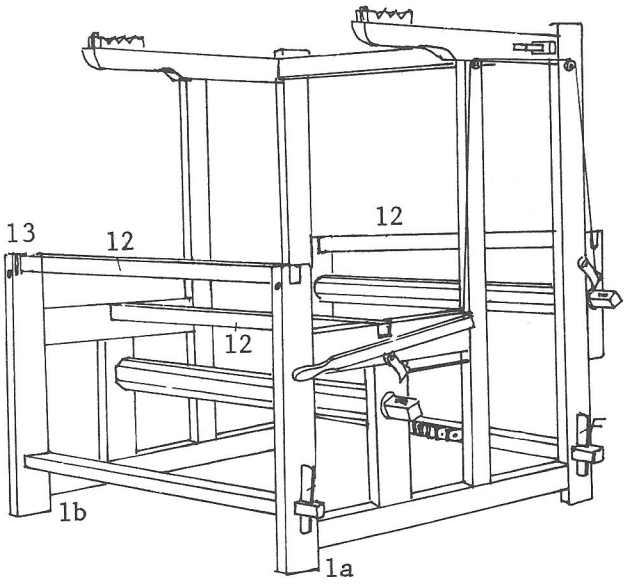




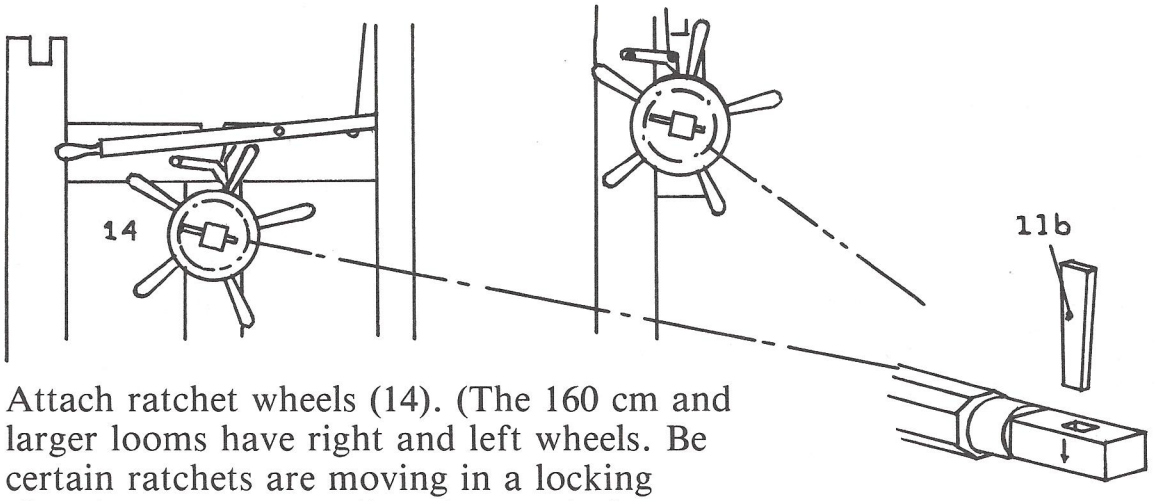
At this point loom can rest at a slight angle to the floor using crossbars for support.

Insert upper crossbar (8) so that arrow points to rear of loom and tap in wedge (11a) as illustrated. Place the ends (without slots) of the warp and cloth beams (10) in the gable. Loom frame should now appear as in the diagram at the top of this page.

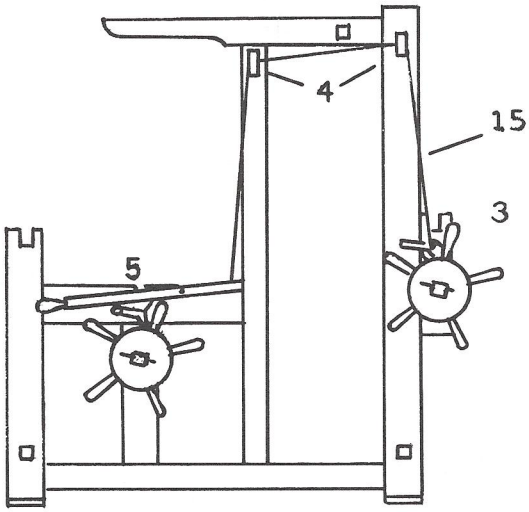
Ease right gable (1a) on extended sections of the warp and cloth beams (10) for support and slide the three crossbars (8 and 9) into appropriate openings on right gable. Secure by hammering wedges (11a) into crossbar slots as on left side. Put knee beam, back beam and breast beam (12) in position and place cloth cover board (13) in slots in front of breast beam.



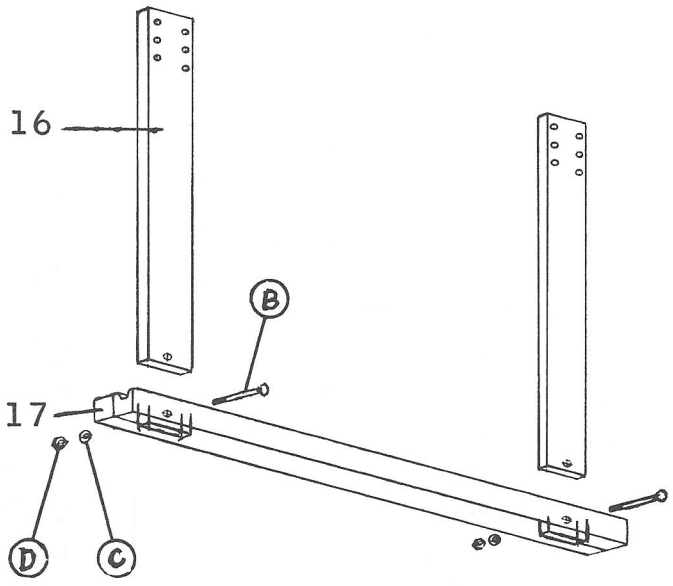
After the loom is in its final position, put rubber feet (7) on both gables.



Attach ratchet wheels (14). (The 160 cm and larger looms have right and left wheels. Be certain ratchets are moving in a locking direction.) Insert small wedges (11b) in direction of arrow printed on beams. The wedge should have the wide end centered between two wheel spokes to allow room for the mallet to hit the wedge end.



Attach pawl cord (15) to handle (5) and adjust tension on pawl screws if necessary. The cord should be adjusted so that the front pawl releases before the back pawl.



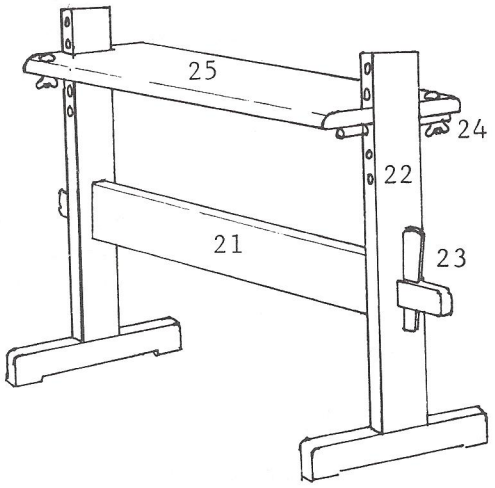
BEATER ASSEMBLY

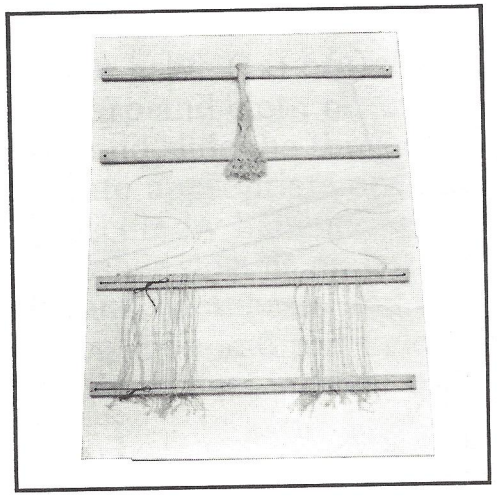
Gently tap beater side pieces (16) into slots of beater base (17). Insert bolts (B) at each end and nuts with rounded heads (D) using wrench provided.

Lower beater handle (18) over the side pieces (16) with groove for reed facing downward directly over the groove in the beater base. (Reed grooves are closest to the front.) Insert beater pins (20) at the same level on each side, and place beater in front notches of beater cradles (6) on loom. Align beater so that it hangs exactly parallel to the breast beam by grasping the middle of the beater handle with one hand and moving it forward to the corner posts. Slide the loose beater cradle until the beater touches both posts at the same time. Tighten screws using the wrench provided.

BENCH ASSEMBLY

Insert bench crossbar (21) into side pieces (22), making sure the proper side of the bar is up, (i.e. with smallest opening for wedge at the bottom.) Place wedges (23) in holes with straight sides on bench surface and secure tightly with mallet. Put dowels (24) in holes in bench sides at desired seat height, lower seat (25) over dowels and fasten bolts (which pass through seat and dowel) with wingnuts.

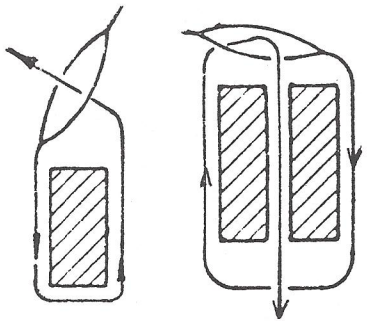




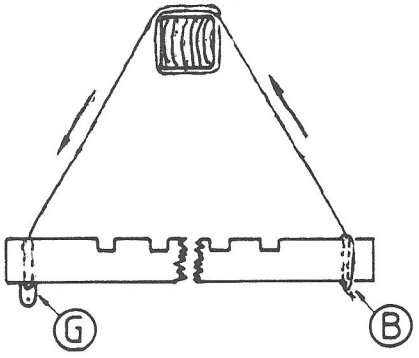
LOOM TIE-UP

Harness Assembly: Put heddle sticks (26) through upper and lower sections of heddles (27) without untying heddle packs. (Upper part of photograph.) Lay the harnesses on a flat surface, loosen the ties on the heddles and spread them over the sticks so that half are on each side of the center. (Lower part of photograph.) Tie a cord (shown in black) around the upper stick and another around the lower stick to be certain heddles cannot slip off the sticks. Arrange each harness in this manner.

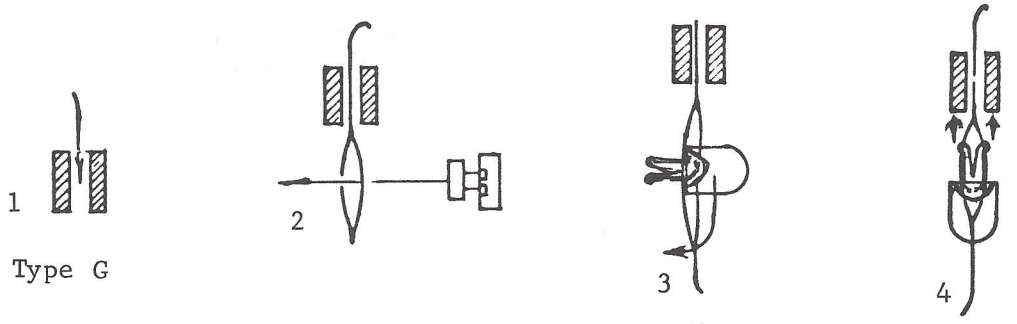
Using the cords secured with green bands from the tie-up kit (28) for countermarch looms and those secured with blue bands for counterbalance looms, put one cord at each end of the upper heddle stick as shown in the preceding photograph with a Type C knot. The polyester cord is similar to a chain with 1 cm long links. The Type C knot brings one end of the cord through the last fully secured link at the opposite end.



Tie the cords secured with white bands to the harness racks (29) as follows. On one end of the harness rack use a Type B knot circling the rack and bring one end through the last fully secured loop at the other end. Then thread the end up through the hole in the harness rack.



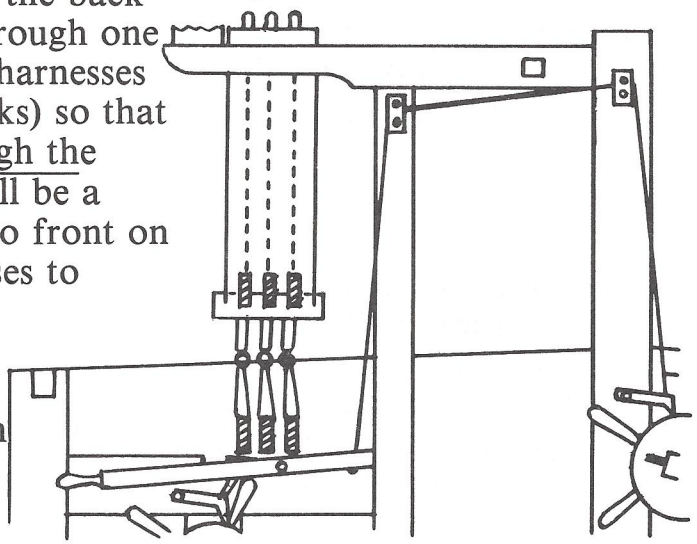
Using a Type G knot bring the cord down through the hole in the opposite end of the rack (1). Insert the button end of a plastic pin through one of the holes (at the desired height) under the rack (2 and 3) and insert legs of pin upwards into bottom (4) of hole until pin head is flat on wood surface.



COUNTERMARCH LOOM

(Counterbalance Loom continued on Page 14)

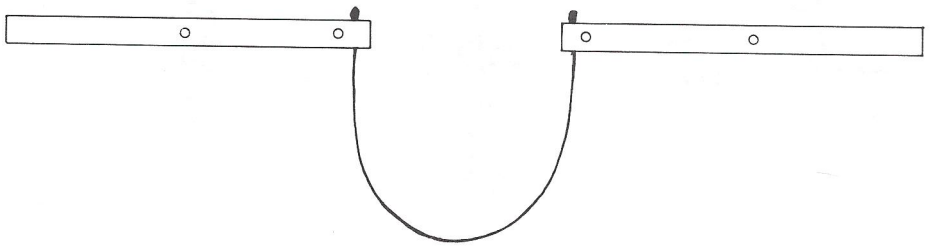
Hang one harness rack over each end of countermarch assembly (35) and place assembly on top of loom directly behind beater cradles (6). Suspend one assembled harness with heddles in each slot in the harness racks. Extend a cord from the back beam to the front beam passing through one heddle eye on each harness. Align harnesses (by adjusting height of harness racks) so that the center of the cord passes through the center of the heddle eyes. There will be a slight downward slope from back to front on looms with more than four harnesses to follow the incline of the warp.



NOTE: Be sure locking pins are in place in the countermarch action each time the loom is dressed or tie-ups are made.

Standing in the castle of the loom begin attaching the polyester cords of the front harness to the outer holes in the front pair of jacks by threading cord up through the hole and inserting a plastic pin at the correct height. Thread each succeeding harness in the same manner.

Insert a plastic pin into one end of each blue banded cord and thread down through the center hole on one of the front jacks in the countermarch assembly. Thread cord up through the center hole in the opposite jack, insert a plastic pin into the last secured loop and push into the hole. Proceed in the same manner for each pair of jacks remaining.

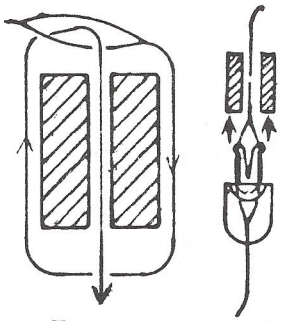


Attach the red banded cords to the U between the jacks using a Type E knot. Arrange the cord to fall behind the corresponding harness.

Type E

Attach treadles (30) to treadle bar (9). If holes on one side of treadles are countersunk, mount with countersunk side up. Insert the mounting rod (37) for the lower lams in the holes below the upper lam in the right gable. Attach lower lams (36) using the horizontal hole farthest from the treadle holes. Repeat the same procedure for upper lams (31) using lam rod in gable.

The lams should be suspended so that they hang approximately 4-5 cm (1½-2") higher at the unattached end than the mounted end. The upper and lower lams should be parallel to each other. If a tie-up fixture (38) is available insert the locking pins (39) into the upper holes in each position for the Standard loom and the lower holes for the Ideal loom.



Type B

Attach upper lam (31) to the lower heddle stick (26) through the center hole using cords tied with pink bands. The lower heddle stick should be tied using a Type B knot in the center hole with the end going down through the center lam hole and a plastic pin inserted upwards at the correct height.

Attach long cords hanging from the U between the jacks (passing behind the respective harness and upper lam) by threading down through the center hole of the lower lam and inserting a pin as for the upper lams above.

TREADLE TIE-UP

The treadle tie-up should be made according to the weave plan. The standard tie-up is explained below for four harnesses and six treadles. All harnesses must be tied to each treadle on either the upper or the lower lams. The upper lams control the falling shed and the lower lams control the rising shed. Therefore, when using a counterbalance draft, tie the upper lams to the marked harnesses and the lower lams to the blank spaces. When using a draft for a jack loom, tie the marked harnesses to the lower lams and the blanks to the upper lams.

NOTE: Be sure locking pins are in place in the countermarch action when tie-ups or adjustments are made.

COUNTERBALANCE LOOM

6	5	4	3	2	1	
	x	x	x			1
x			x	x		2
	x			x	x	3
x		x			x	4

JACK LOOM

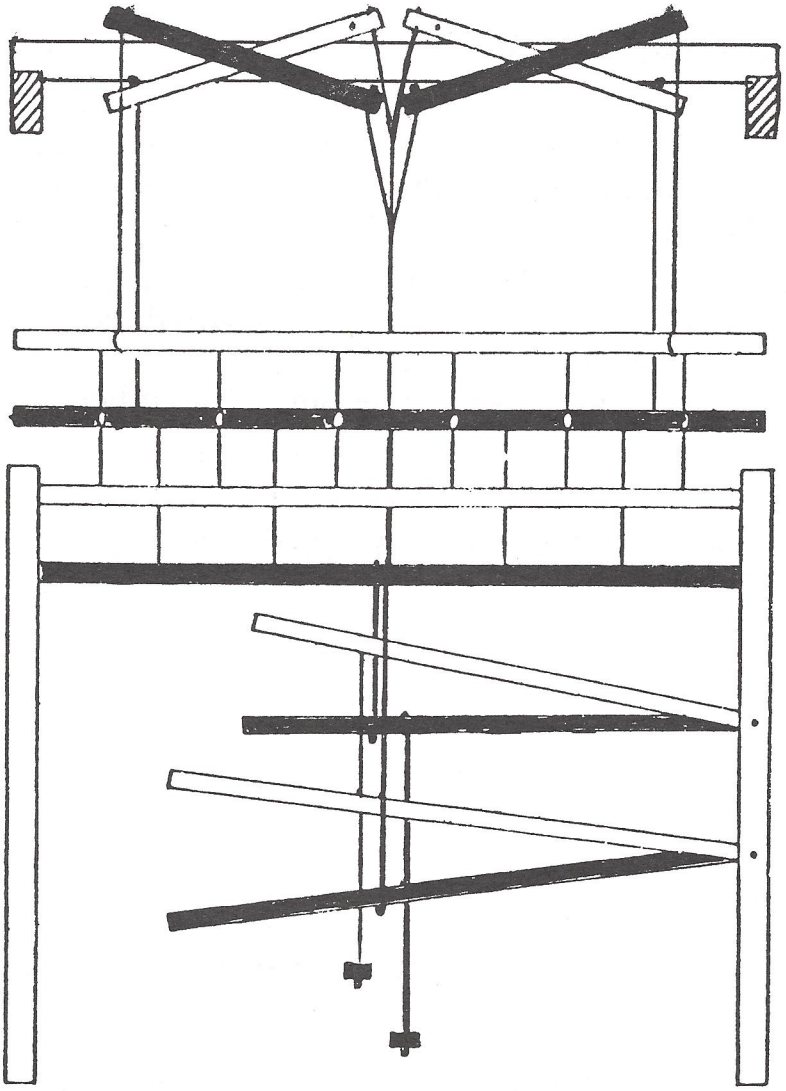
6	5	4	3	2	1	
o				o	o	1
	o	o			o	2
o		o	o			3
	o		o	o		4

COUNTERMARCH LOOM

6	5	4	3	2	1	
o	x	x	x	o	o	1
x	o	o	x	x	o	2
o	x	o	o	x	x	3
x	o	x	o	o	x	4

x = tied to upper lam for falling shed
o = tied to lower lam for rising shed

Tie the cords with brown bands to the upper lams using a Type B knot. Pass cord in front of respective lower lam and thread through the treadle hole directly below the harness and lam using a Type G knot (Page 8). Attach cords with yellow bands from the lower lams to the treadles in the same manner. The tops of the treadles should hang at footboard level. When making multiple harness tie-ups, tie the front 50% of the harnesses one hole looser on the cord than the back 50%.



This is how the countermarch action functions. (In the diagram the black sticks show downward movement and the white sticks show upward movement.) As a treadle is depressed, both the falling and rising sheds are put into motion. The harness tied to the upper lam is pulled down by direct action because the lam is tied to the lower heddle stick of the harness. The harness tied to the lower lam is pulled up by indirect action because the lam is tied to the center of the jacks, which when pulled down forces the outer ends of the jacks up, thereby lifting the harness.

On wider looms or looms with many harnesses it is advisable to tie on as many treadles to the lams as possible to counterweigh the jacks. (The harnesses may sink when the jack locking pins are released for weaving if there is insufficient counterweight for the jacks.) Tie unused harness jacks together when weaving or insert a small piece of dowel into the locking pin holes on the unused jacks.