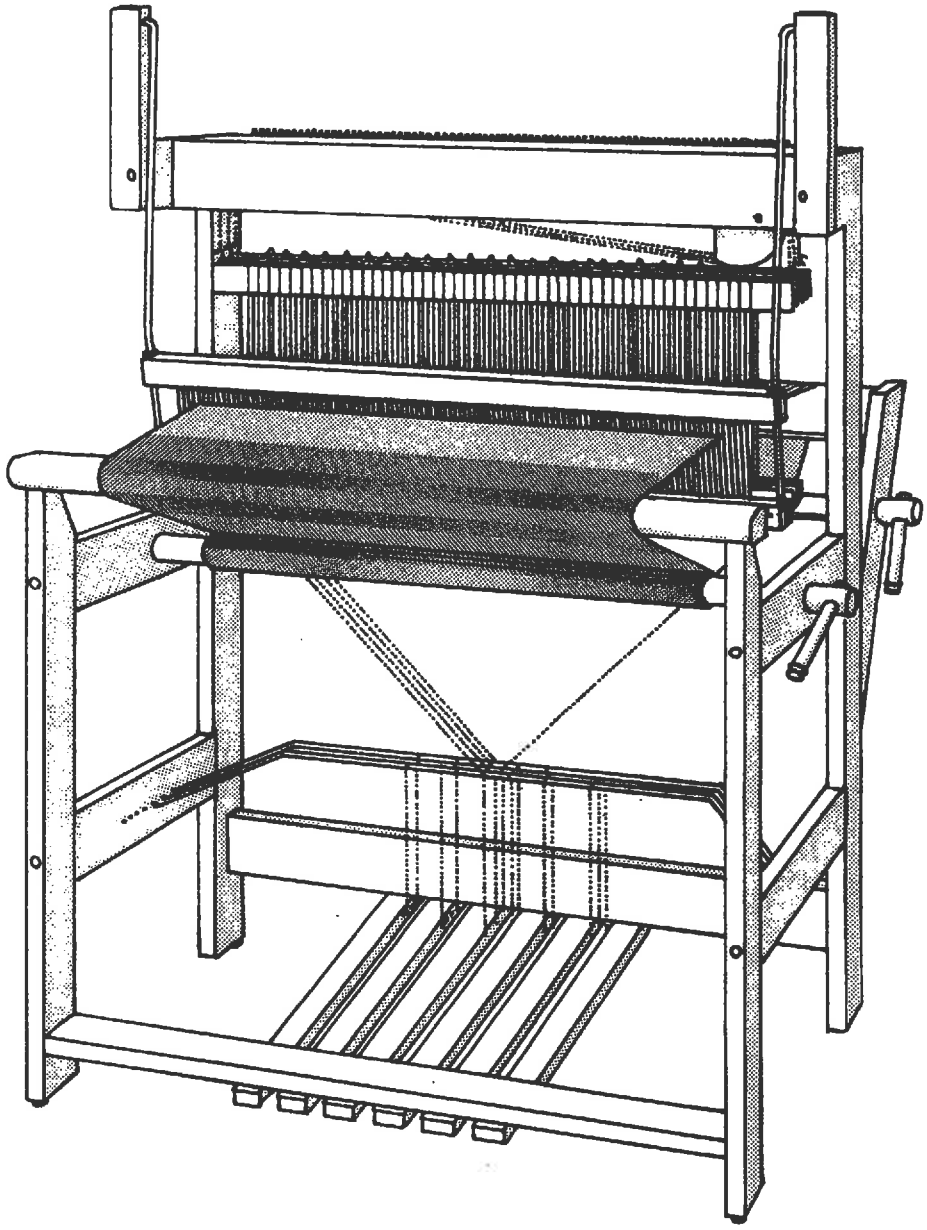
louët david

instructions for assembly



Congratulations! Your new loom is indeed "the David among looms" because of its compact construction and great capability. Altthough it takes little floor space, it can accept up to eight shafts and ten treadles, permitting you to create a wide variety of beautiful textiles. As you follow these instructions, you will learn more about your new loom.

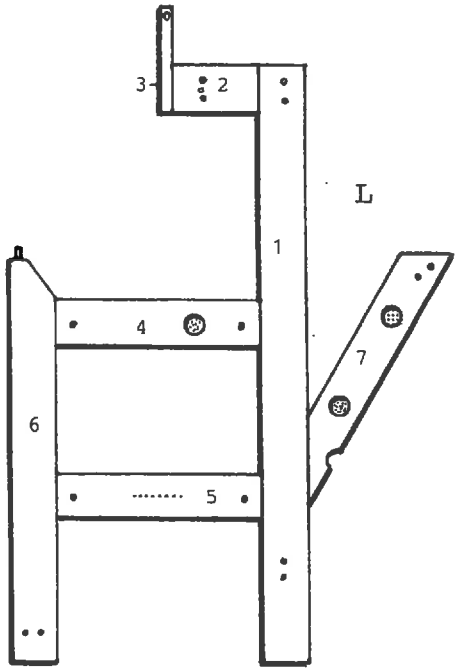
Instructions for assembly

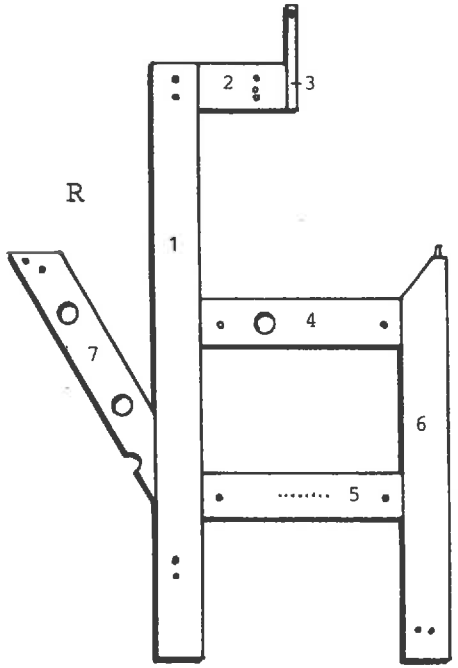
The loom assembly is broken down into sections with several numbered steps. There is a place at the beginning of each step for you to check off each one as it is completed. In addition, there is an estimate of how long each section takes to complete so you can plan your time.

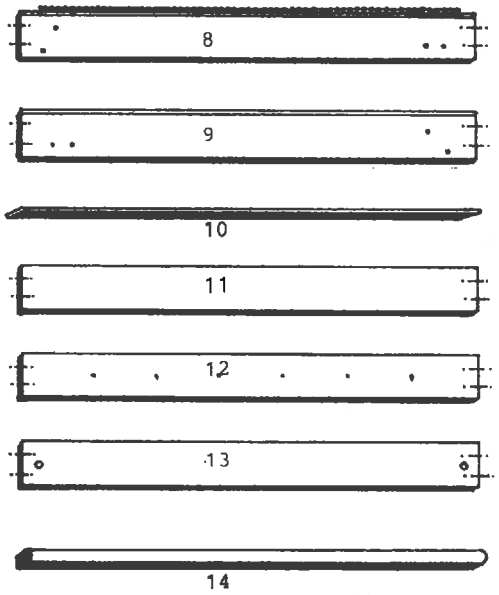
Since you are reading these instructions, you have already opened the boxes. Now take out the loom pieces and compare them to the list of parts on next page. It is helpful to mark the pieces with their part numbers using a soft lead pencil, which you can later erase. You will find five hardware bags, marked D1 through D5. **Do not open any of these bags until instructed to do so.**

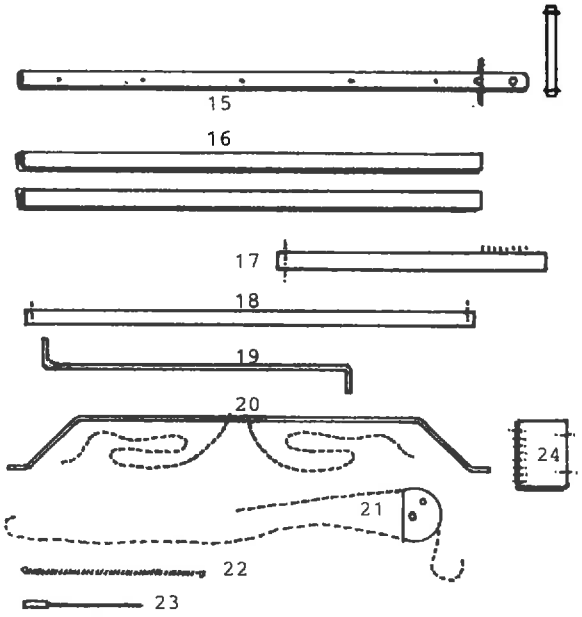
List of parts:

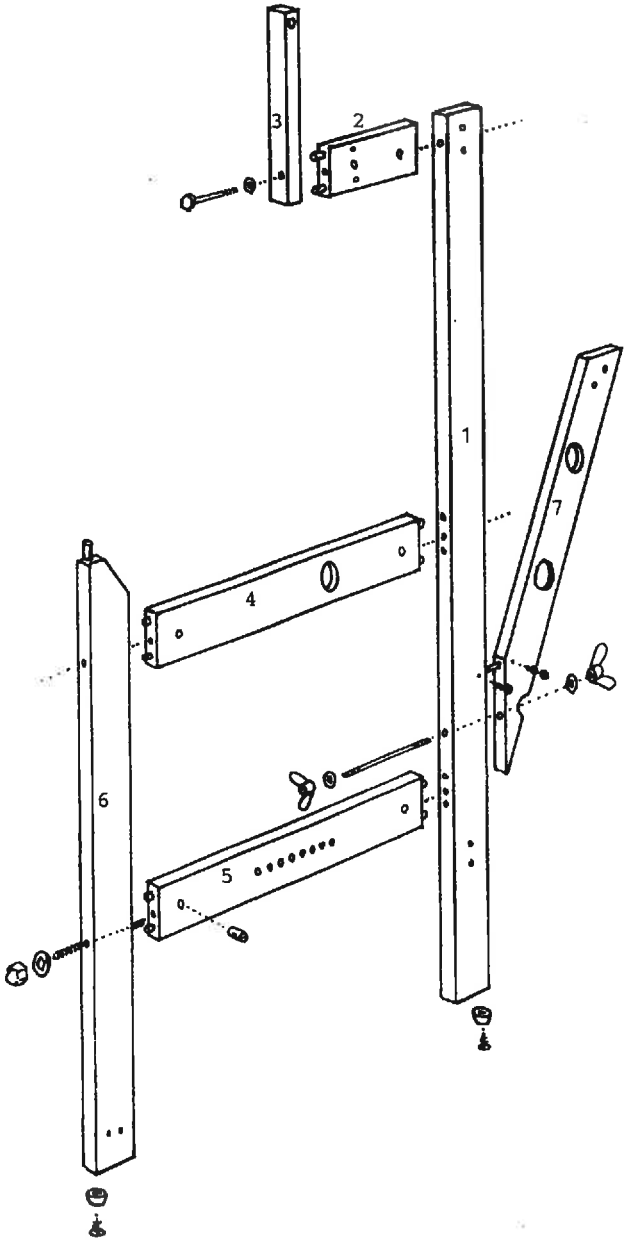
1 - back vertical pieces L=R
2 - upper side pieces L=R
3 - beater suspension bars L+R
4 - middle side rails L+R
5 - bottom side rails L=R
6 - front vertical pieces L=R
7 - warp beam supports L+R
8 - back top rail with raddle
9 - front top rail
10 - shelf
11 - bottom rail with buffer strip
12 - footrail
13 - back beam
14 - breast beam
15 - warp- and clothbeam + handles
16 - top and lower beater bar
17 - treadle 6x
18 - shaft bar 8x
19 - beater side supports L+R
20 - lam with cord 4x
21 - spring disk with cords 4x
22 - spring 4x
23 - lock pin
24 - lam square 2x (David 90 cm only)
apron bars 2x
lease sticks 2x
warp sticks 16x
400 or 600 texsolv heddles 280 mm
hardware bags D1, D2, D3, D4 and D5.

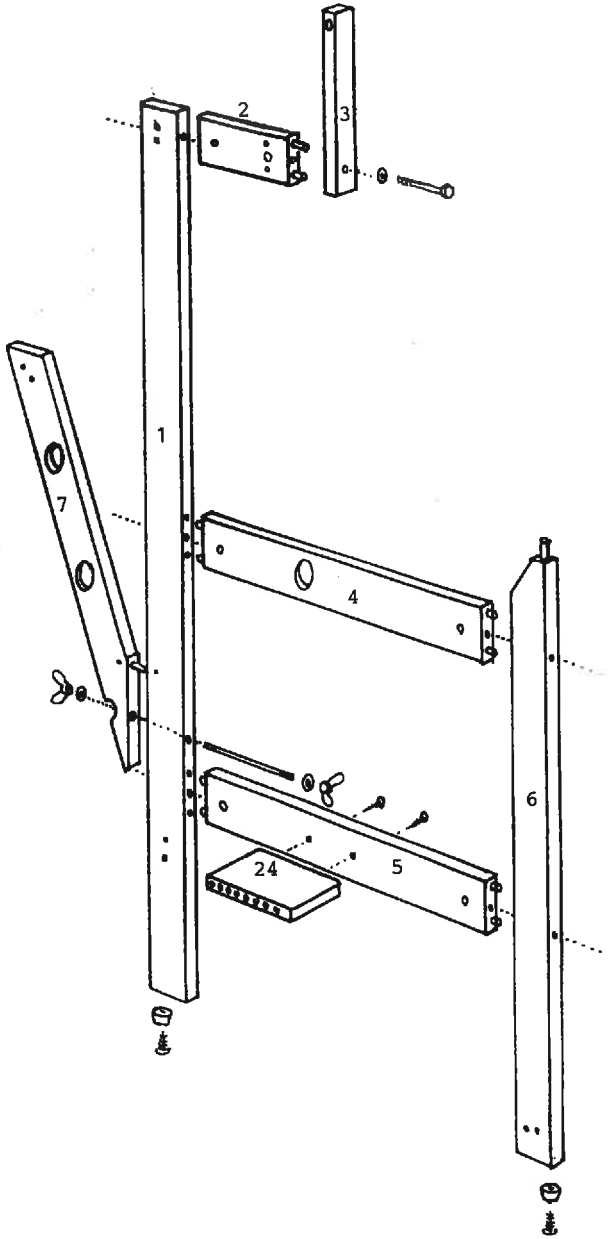

3
2
L
1
4
7
6
5


2
3
R
1
7
4
6
5


8
9
10
11
12
13
14


15
16
17
18
19
20
24
21
22
23


3
2
1
7
4
6
5


2
3
1
7
4
6
24
5

Loom side assembly
45 min.

___ 1. In a minimum of 6'x6' (2x2 meters), bring together hardware bag D1, and the parts1 up to and including 7. For a 90cm (35.5") David, you will also need the two lam squares (24). Open hardware bag D1 and sort out its contents so all like pieces are together. You will perform the same step for each side. By the time you have reached the end of this section, both sides will be complete.

___ 2. Attach the four rubber feet to the bottoms of the four vertical pieces, parts 1 and 6.

___ 3. Attach the middle side rails (4) and the bottom side rails (5) to the back vertical pieces (1), using the threaded ends with barrel nut, washer and cap nut. The diagram shows the inside of the loom sides. Keep the holes for the barrel nuts at the insides. The middle side rails should be mounted in such a way that the big holes (to insert the clothbeam later on) are closer to the back then to the front. The rail with the big hole is placed on the right and the rail with the blind hole is on the left (the hole does not go all the way through the side rail).

___ 4. Use the same hardware to attach the front vertical pieces (6) to the other ends of the side rails.

___ 5. Attach the upper side pieces (2) to the back vertical pieces (1), using the last pair of threaded ends with barrel nut, washer and cap nut, again the holes for the barrel nuts should face inside.

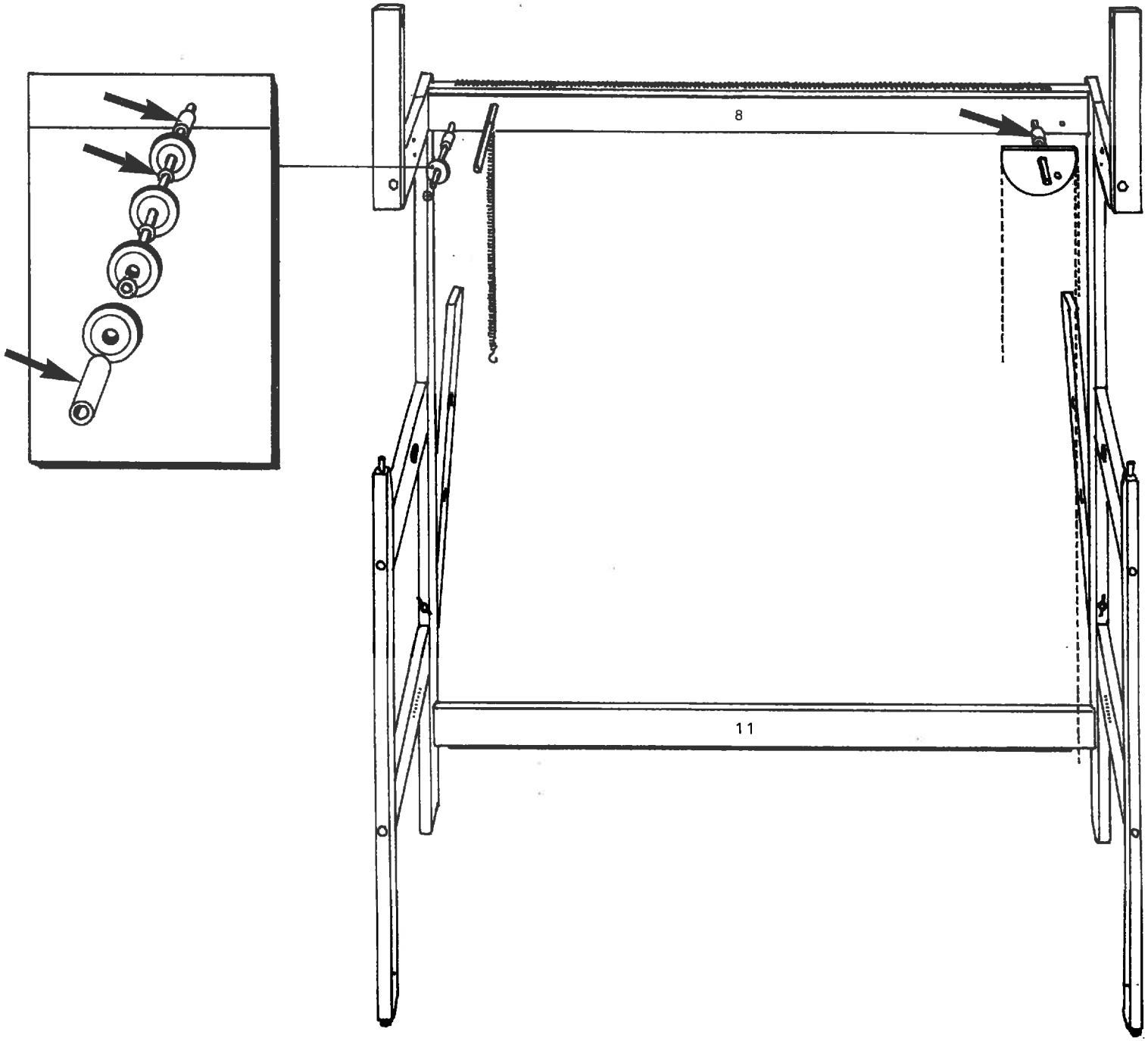
___ 6. Fasten the beater suspension bars (3) to the upper side pieces (2), using the two bolts with washer and barrel nut. The holes with the nylon bearings should face inside, if not, you have to exchange the left and the right.

___ 7. Attach the warp beam supports (7) to the back vertical pieces, after you inserted the flexible pegs into the appropriate holes of both parts. Fasten the parts with the two threaded ends with a washer and wing nut on each end, see diagram.

___ 8. Using the short scews and the pre-drilled pilot holes, secure the flexible pegs to both the back vertical pieces and warp beam supports. You will find one of the pilot holes in the back vertical pieces on the other side, that is because we made the left and right one identical.

This construction with the flexible pegs allows you to fold the back part of your loom to save space when you are not weaving.

___ 9. If you have the wider David, attach lam squares (24), as shown at the right loom side in the diagram.


8
11

Assembling the loom frame and shaft suspension system
30 min.

When you have completed this section, your loom will stand by itself and will take up a lot less room than the unlinked side pieces do now.

___ 1. You will need hardware bag D2, the horizontal back rails, upper and lower (8 and 11), front top rail (9), springs (22) and spring disks (21). Bring all these parts to your assembly space. Open hardware bag D2 and sort out its contents.

___ 2. Connect the sides of the loom by installing the lower horizontal back rail (11) using the screws and the pre-drilled pilot holes. The rubber bumper must face down.

___ 3. Install the upper horizontal back rail (8) with the groove facing the front of the loom.

___ 4. Following the diagram, put all three axles into the upper horizontal back rail (8).

___ 5. Slide the short nylon spacers onto the two outer axles.

When you are assembling an eight shaft David loom, now is the time to open the box of the extension. In next steps you will need the hardware bag, springs and spring disks of the extension kit.

___ 6. Slide the rollers onto the left axle, using the metal washers to separate the rollers.

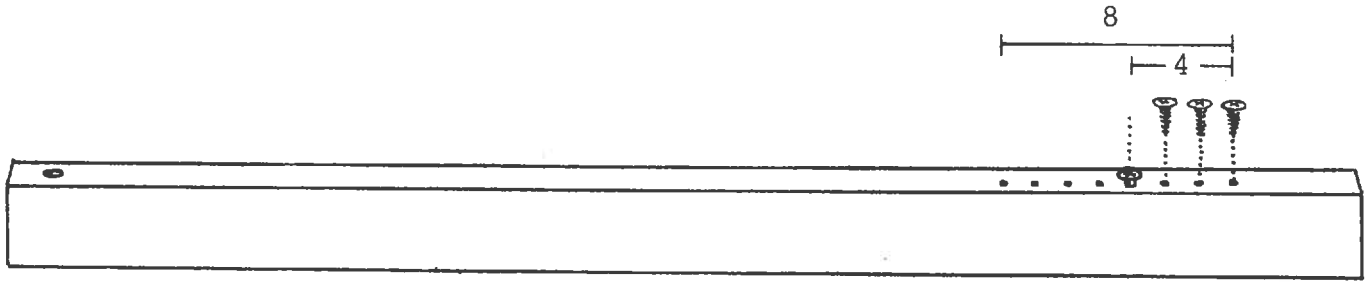
___ 7. The springs go onto the middle axle (toward the left of the loom). Notice that there are springs with, and without a protective sleeve. Alternate them on the axle: they enable the loom to operate quietly.

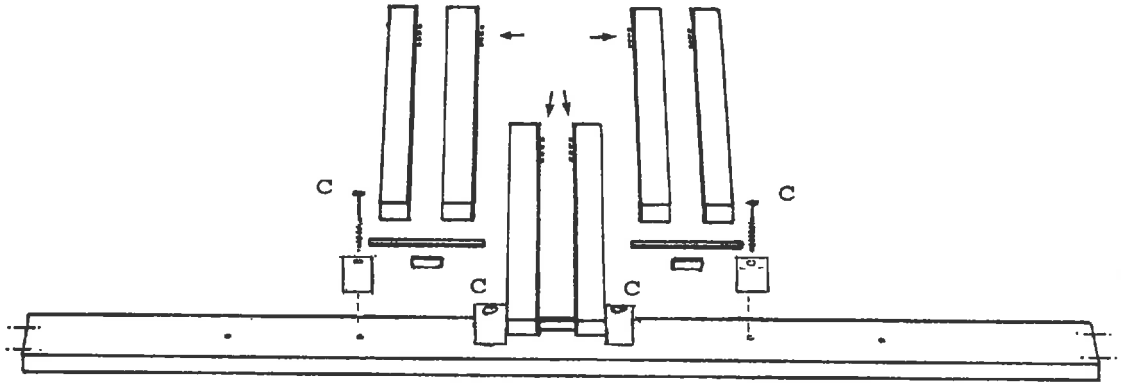
___ 8. Slide the spring disks (21) onto the right hand axle as shown in the diagram. The axle passes through the hole that has the nylon bearing. Notice that the round edge is down with the extra hole on the right side of the center. Put a metal washer on after the last disk.

___ 9. If you are assembling a four shaft loom, slide the plastic spacers onto the axles with the rollers and disks. If you will extend your loom to eight shafts in the future, these spacers will be replaced by extra rollers and disks.

___ 10. Slide the front horizontal rail (not shown in the diagram) onto the axles and screw it to the side pieces(2). Be sure, the screw holes line up with the pilot holes in the ends of the front horizontal rail.

Now your loom will stand by itself and is beginning to resemble a loom!


8
4


C
C
C
C

Treadle and footrail assembly
30 min.

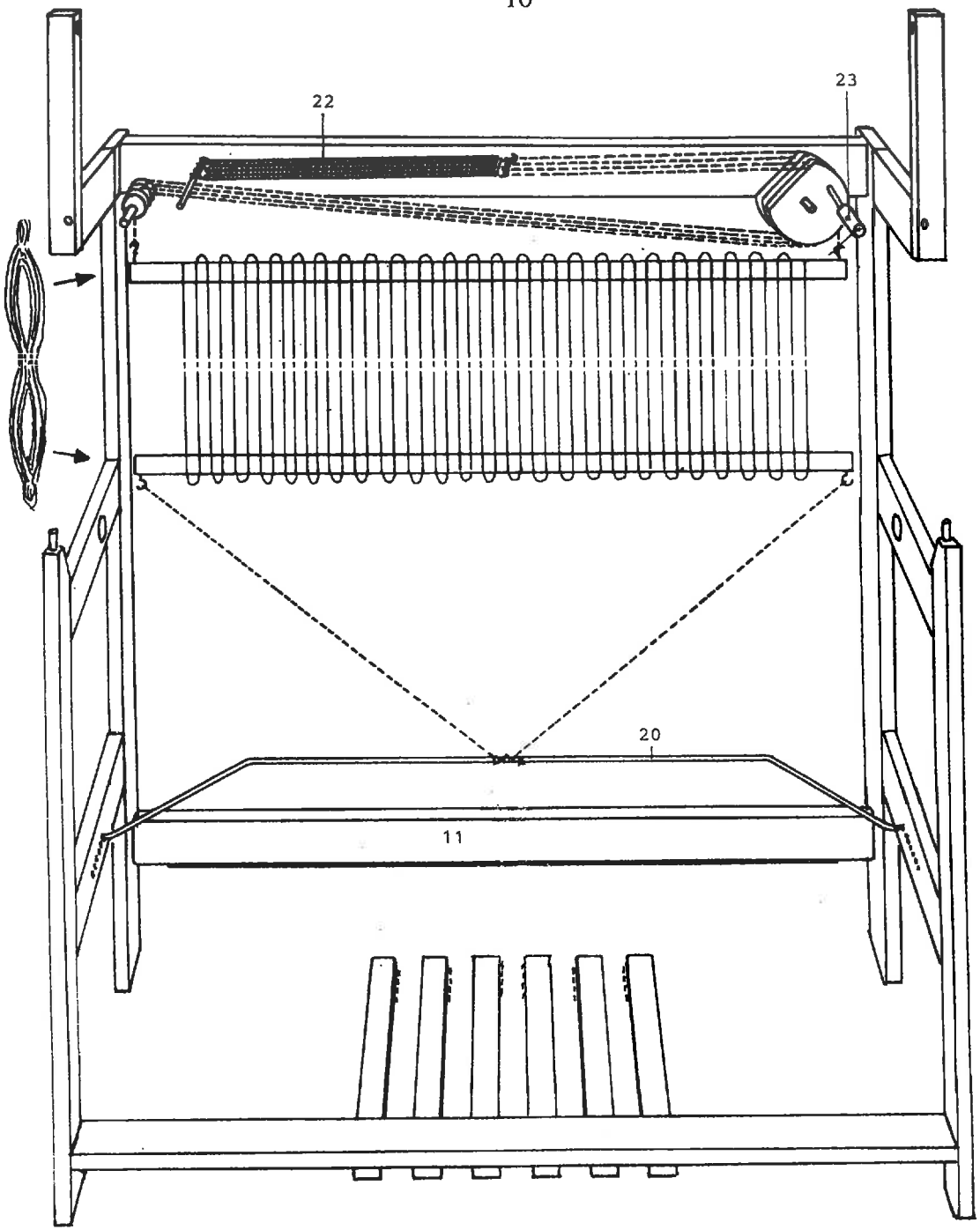
___ 1. Bring together the hardware bag D3, Footrail (12), and the six treadles (17). Assembling an eight shaft David you also need some hardware and four more treadles from the extension kit.

___ 2. Screw four little screws into the four holes at the far end of each treadle. For an eight shaft loom you will use all eight holes for screws (see diagram). Screw in the screws so that about 1/4" (5mm) of each screw is exposed above the wood. You will be attaching cords to these screw heads when you tie up your loom. This step takes most of the assembling time of this section. For an eight shaft David, the 56 extra little screws will take you an extra 20 minutes.

___ 3. Refer to the diagram now. Notice that one pair of treadles is installed in the center of the footrail using a metal bar, a horizontal spacer, wooden bar supports, and long screws marked C. Attach the middle two treadles first, so that the treadle sides with the little screws face each other. Do not tighten the long screws all the way, yet.

___ 4. Attach the other treadles pair by pair on both sides of the first pair. All the little screws in the treadles should face the center. Now tighten all the long screws marked C.

___ 5. Turn the footrail over, so the treadles are hanging from it, and fasten it to the sides of the loom, to parts 6, using the four left over screws.


22
23
20
11

Shaft and lam assembly
1 hour and 30min. (4 shafts)
2 hours and 30 min. (8 shafts)

___ 1. Bring the shaft bars (18), lams (20), and hardware bag D4 together. Open hardware bag D4 and find 4 or 6 bunches of 100 heddles (depending on the width of your loom), a locking pin, a bunch of tie up cords for the treadles, and wooden pegs for fine adjusting of cord length.

The lower side rails of your loom (5), have eight holes in a row lined, with nylon bushings. The lams fit into these holes. For a four shaft loom, only the back four holes on each side will be used.

___ 2. Take one lam and insert one end into the hole nearest the back of the loom.Twist and turn the lam to work it all the way into the hole. Flex the lam slightly and turn it as you insert the other end of the metal into the corresponding hole at the other side of the loom. Work the second end completely into its hole. Slide the cords exactly to the center of the lam; carefully measure this from the sides of your loom. Pull the cords to the sides to stretch the zigzag through wich the lam is threaded (see diagram). Repeat this operation with all the other lams.

___ 3. Using the locking pin secure the spring disks by putting the pin through the off-center holes in the disk and into the frame of the loom in the holes provided. In the diagram we left out the front top rail for the sake of clarity.

The Texsolv cords that are used in the assembly and operation of your loom allow you to make simple adjustments and quick tie-ups without knots that can slip, come undone, or create uneven lengths of cord. Look closely at the cord and you will see that it is a sort of knitted chain made up of small loops. These instructions refer to "the last loop" as you assemble and adjust your loom. This last loop means the loop 1/2" (1 cm) from the end of the cord. **The loop next to the cut is never used.**

___4. Hook the springs (22) to the last loop of the short cords that are attached to the disks in the direction of the springs.

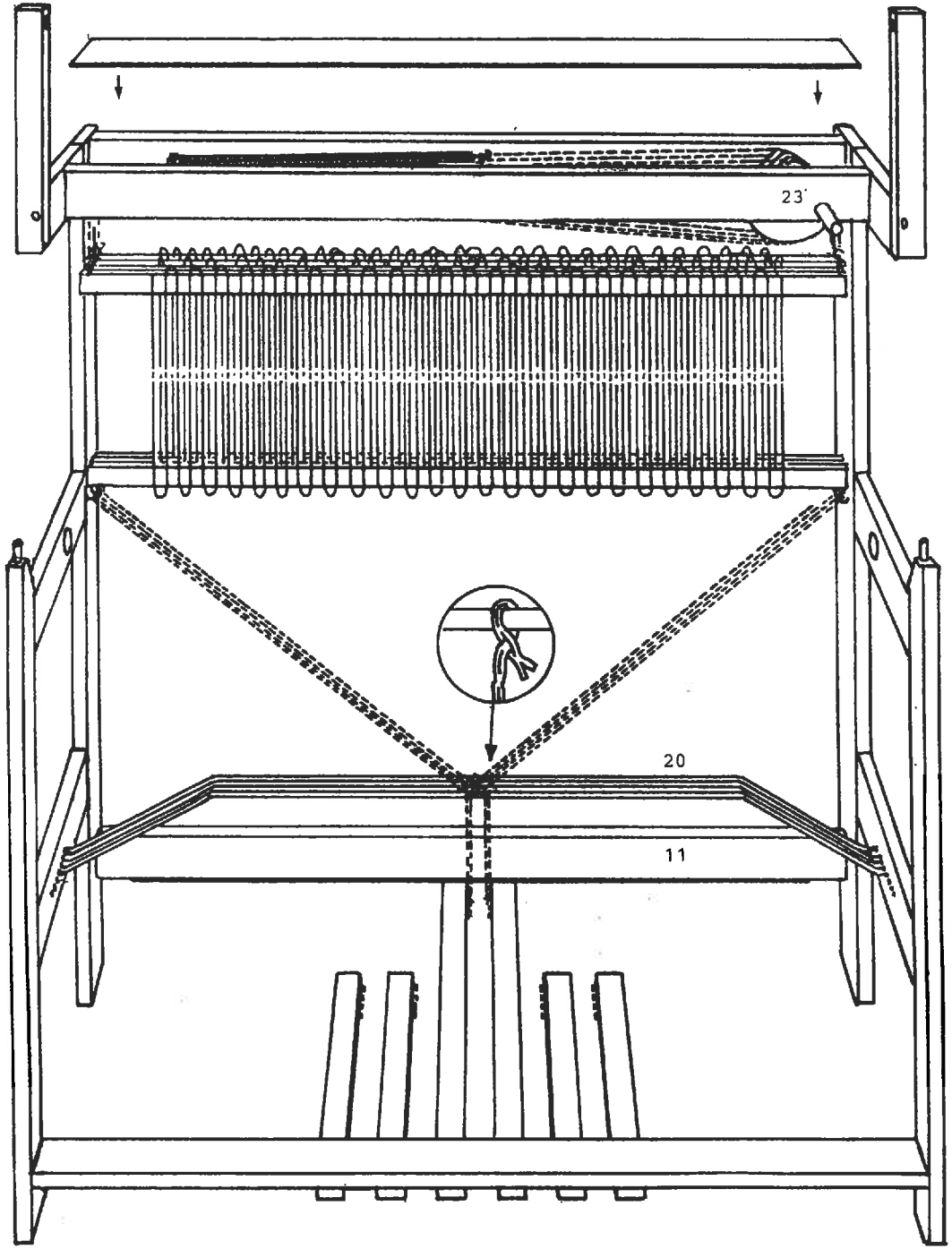
___ 5. The long cords atached to the spring disks should be brought up and over the rollers at E. You can secure them by putting a knitting needle through a hole of each cord just below the rollers.

Notice that the bunches of 100 Texsolv heddles are tied securely in four places. **To avoid them from tangling, do not untie these bundles until directed to do so.** If you need to split the bundles up, to divide them over eight shafts, first put the lease sticks through both loops of the bundle. Untie the bundle, count the heddles that you need for the smaller bundles, and tie each bundle again in four places. Now you can cut the bundles apart using a pair of sharp scissors and remove the lease sticks.

___ 6. Slip one bunch of heddles over a shaft bar (18), and hook that bar on to the last loop of the short cord hanging from the disk. Hook the other end of the shaft bar on to the second last loop of the long cord at the left side of the loom. The best way is to start with the rear shaft.

___7. Slip a second shaft bar through the lower loop of the heddle bunch and attach it to the ends of the cord coming from the corresponding lam below. Now, untie the heddles and spread them out along the shaft. When you remove heddles from a shaft, be sure to tie them in all four places.

___ 8. Repeat this operation for all the other shafts.


23
20
11

___ 9. For adjustment purposes, tie the middle two treadles to all the lams. Fasten a tie-up cord with a loop to the lam, as shown, and than slip that legendary last loop over the protruding screw head in the side of the treadle. You will never tie up this way to weave, because all shafts would sink, making no shed. It is just for adjustment.

___ 10. Remove the locking pin, while pushing the shafts down slightly with your hand. The shafts will be pulled up by the springs until the treadles hit the rubber bumper at the bottom of the lower rail. With the shafts in this position, it is time to adjust their height and make them parallel to the floor.

Notice the situation now: The shafts are pulled upwards by the springs. Because the lams are connected to the shafts, and the treadles are connected to the lams, treadles and lams are pulled upwards too. The upward movement of the shafts is blocked by the treadles that hit the bottom rail. **So the level of the shafts is determined by the distance between treadles and shafts and not by the lengths of the disk cords from wich the shafts hang. The level of the shafts has to be adjusted by adjusting the lengths of the slanting cords that connect the shafts to the lams.** When you shorten these slanting cords by one loop at the hooks of the lower shaft bar, the shaft will come down about 1". In most cases, that is to much. For finer adjustment, the provided wooden pegs has to be threaded through the cords as shown in the diagram.

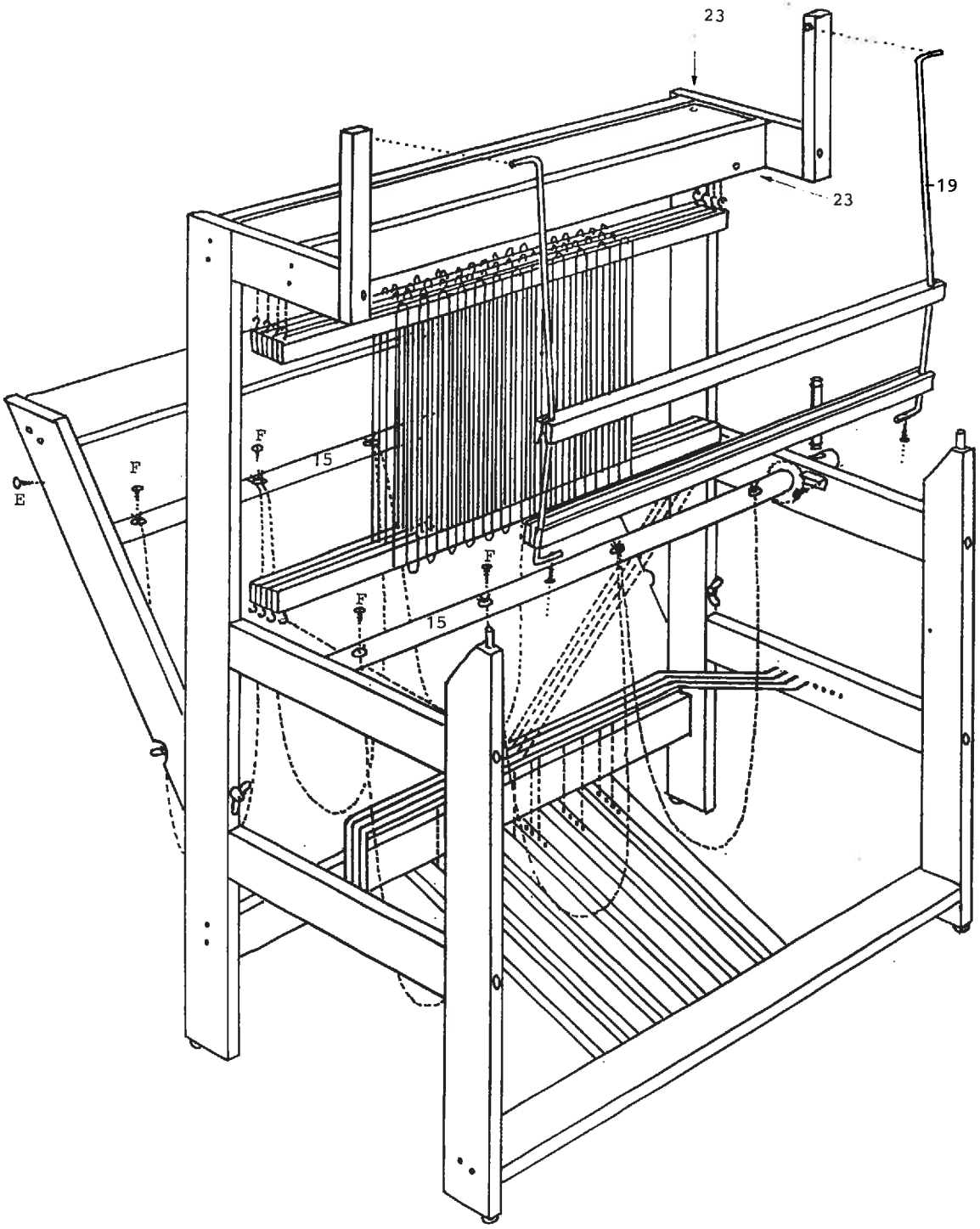
___ 11. Adjust the level of the rear shaft, it should hang about 1/2" (1,5cm) below the rear disk and your finger should fit in between. You should use a wooden peg at both sides of the cord and thread them through the same number of loops.

The horizontal adjustment is made by adjusting the lengths of the cord wich runs from the disks to the left side of the shafts.

___ 12. Measure the level of the shafts on both sides. If the difference is about 3/4" (18mm) or more, hook the shaft bar one loop higher or lower at the left side. Smaller differences should be corrected by threading a wooden peg through the cord in between the disk and the roller.

___ 13. Adjust the other shafts the same way. As you get closer to the front, the shafts must hang gradually lower, corresponding with the position of the lams. When you push the treadles and pull all the shafts down, the rear shaft will sink the most. Closer to the back, the bigger the movement the shaft has to make. This is all to ensure the production of an even shed.

When you block the shafts by putting the lock pin through the holes of the disks again, the shafts will hang in their neutral position, without tension on the heddles. This makes it easy to thread through the warp and tie it to the cloth beam.


23
23
19
F
F
F
F
E
15
15

Remaining assembly
30 min.

___ 1. Bring hardware bag D5 and all the other pieces to your assembly area. You are about to put the finishing touches on your loom.
___ 2. Install the cloth beam in the front of your loom.First, slip the end with the ratchet wheel into its hole on the right, then spread the loom sides slightly to slip the other end in place.

___ 3. Install the warp beam as you installed the cloth beam.

___ 4. Install the ratchets at the right side in front of the two beams, Screw them in place and then back off one-half turn to be sure that the ratchet can turn freely.

___ 5. Insert the beam handles through the holes in the beams and secure them in place by rolling the rubber O rings into the grooves around the handles.

___ 6. Fasten the back beam between the warp beam supports with the screws provided.

___ 7. Screw the little screw eyes, E, into the warp beam supports as shown. The lease sticks can be attached to these screw eyes. During weaving the lease sticks should always be between the warp beam and the back beam so that the depth of the loom can be utilized. Some weavers remove these sticks entirely while they are weaving; this is a matter of personal preference.

____ 8. Mount the beater supports (19) in the bottom beater bar. The bottom beater bar is the one with the grooves at the bottom side in wich the beater supports fit. They fit very tightly and need a light tap with a hammer.

___ 9. Hang the beater in the appropriate holes, see diagram, by inserting one side and then the other. Twist and turn it to work the beater all the way into the holes. Be careful to ensure that the curve in the beater supports is in the right direction, see diagram.

___ 10. Place the beater cap between the side supports, put the reed in place, and secure it by pushing the beater cap down.

___ 11. Atach the cords to the beams with the little screws (F) as shown.

___ 12. Put the shelf on top of the loom, with the hole at the rear right. In that hole you can store the lock pin.

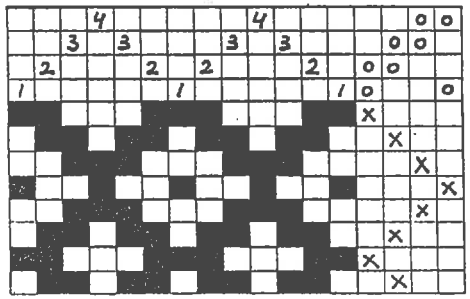
___ 13. Install the breast beam; the metal dowels on top of the front vertical pieces will fit in its holes.

If you find that the shafts don't rise again after you made a shed, the tension of the springs can be increased by hooking the springs one or two loops further down the texsolv cords.

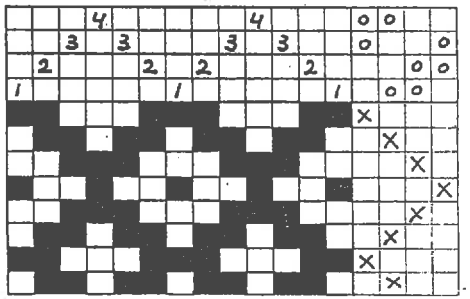
After your loom has been in use for some month, it may be necessary to retighten the screws and bolts holding the loom together. Don't forget the screws that connect the treadles to the footrail.

Accessories: Besides a bench and an extention kit for eight shafts, the following accessories are available: sectional warp system, second warp beam, and brake on the warpbeam.

Tie-ups: Standard jack looms in North America are designed to create a shed by lifting a set of warp threads. The David loom however, creates a shed by lowering a set of warp threads.
If you want to weave a project, following a pattern for a standard North American jack loom, you have to convert the tie-up pattern into the opposite, otherwise you will look at the backside of the pattern.



Jackloom



David