

#### HARNESS AND FOOT TREADLE ASSEMBLY

10.A. Place the back rocker bar in the slots provided in the back of the harness hangers. Remove the two round head screws at each end of the rocker bar. Screw two steel rush rods to each end of the roller bars. The slots at the other end of the steel push rods should be oriented end down. These slots drop over the screws in the harnesses. When screwing the push rods to the rocker bar, you must leave enough space between the screw head and the push rods so the push rods can move freely (approx. 1/8").

B. Place the harnesses into the harness holders. The harnesses should be oriented so that the screws in the inside of the harnesses are closer to the front of the loom than the back. If they are reversed, the harnesses will fail to move correctly. Now drop the top two slotted push rod ends over the shanks of the screws at either end on the top harness. Next drop the two lower slotted ends over the screws at either end of the lower harness. The harnesses are now assembled to the back rocker bar. They should move freely; as the upper harness moves forward, the lower should move backward and vice-versa.

11.A. Place two treadles with a treadle spacer block in between each set of treadle blocks. Secure them in place by sliding the 3/8" rod through each assembly.

B. Take the six threaded tie up rods and screw one each to the turnbuckle tighteners hanging from the rocker bar. To do this, thread the turnbuckle tighteners all the way up and thread the tie up rod into the end of the turnbuckle tightener until it stops, then screw the turnbuckle tightener down a few times. The tie up rods should now be hanging from the rocker bar, approximately over the treadles. Each set of treadles should now be assembled to a set of tie up rods. The harnesses should move freely in and out as you apply pressure to the treadles.

12. Examine the 4 pawls (2 for a 45" Ruthie), one for each ratchet; find the letter or number stamped there. Bolt the pawl to the loom or beam block to which it corresponds. The nut should be snug but loose enough to allow the pawl to move freely. To move the beams freely against the pawls it now will be necessary to spin them 360° backward so they do not engage the teeth of the ratchets.

#### HARNESSES AND HEDDLES

13. The harnesses are made to be taken apart for the installation of string heddles. Hold the harness in your hand or lay on a table and tap firmly on the end pieces with the heel of your palm or a rubber mallet until the cap piece slides off. This must be done evenly so the cap piece slides off of both the stretcher bars at the same time. Slide the string heddles onto the stretcher bars and reassemble the cap piece onto the bars being sure that the screws on the end cap pieces are oriented in the same direction. The holes on the stretcher bars are made to take the pieces of 1/8" steel wire supplied. These pieces prevent deflection of the stretcher bars when shearing against yams which ension warps and can be used or not according to circumstances. It should be noted that heddler cannot be moved from side to side of this wire when it is in place.

#### REEDS

14. The reed is removed by removing the two wooden nuts from the ends of the beater assembly and gently and evenly sliding the cap bar toward you on the wooden screws until the reed can be slipped out. The Ruthie takes a standard 5" steel loom reed.