

TO GET LOOM INTO THE HOUSE

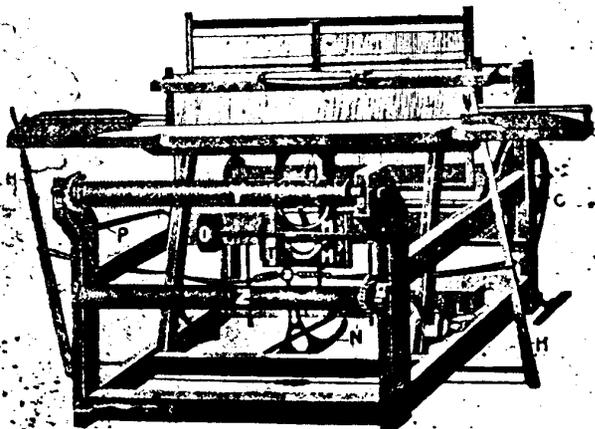
First remove cylinder filling machine and all other loose parts and packages that are packed inside loom frame. Knock off beards that are nailed to bottom of loom frame.

The warp roller is packed securely in front of loom frame. If loom reaches you with lay removed you can easily take out the warp roller after removing all the other loose parts which are packed inside the loom frame.

When the loom reaches you with the lay in place it may be necessary to loosen the outside nuts at end of long iron rod under upper front roller. You can then spring front posts apart at the top enough to allow roller to be removed easily. Don't move two inside nuts so when you tighten the outside nuts the distance between tops of posts will still be the same as when loom arrived.

If the door is narrow remove both front rollers, iron rod below upper roller and lower front cross piece of loom frame, when loom will easily pass thru an ordinary door.

When replacing rollers be sure bearings are on right, or levers L. and P. will not work.

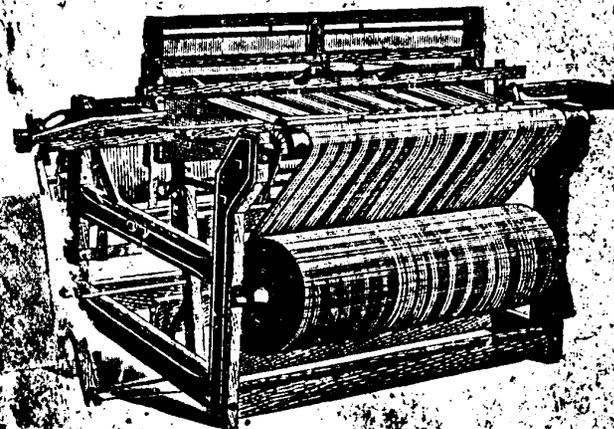


FRONT VIEW

1

INSTRUCTIONS
FOR
SETTING UP AND OPERATING
THE

WEAVER'S DELIGHT 4-HARNESS CARPET, RUG AND CLOTH LOOM



FACTORY NUMBER _____

Always Give Loom Number Every Time You Write

MANUFACTURED AND SOLD ONLY BY

NEWCOMB LOOM CO.

DAVENPORT, IOWA

PRICE 25 CENTS

Note: this is a scanned facimile of the 1913 edition of the Weavers Delight Manual. It was created by Nancy M McKenna

(c) 2000 Nancy M McKenna.

As of 2000, loom parts and entire looms are available from: Great Planes Loom Company; Rt. 2 Box 182 Newton, KS 67114

When the loom arrives crated the harness frames and lay are removed and must be put in place next in the following way:

The harness frames are numbered 1, 2, 3, & 4. No. 1 should always be used in front, No. 2 frame just back of it then no. 3 and then no. 4.

The Lay

By looking at it you can get a good idea of the way it goes together. It consists of four parts, the right and left lay, back piece and front piece. Place right and left lay in their proper position with ends together and shuttle wings to the front.

Back of them place the back piece with finished edge up and groove to front. Bolt together with four bolts you will find in back piece. The front piece can be fastened only one way. Fasten it in place with three long screws you will find in their proper place on the front of right and left lay.

Put lay on loom in proper position as shown in cut. Bolt to ends of upright piece called swords.

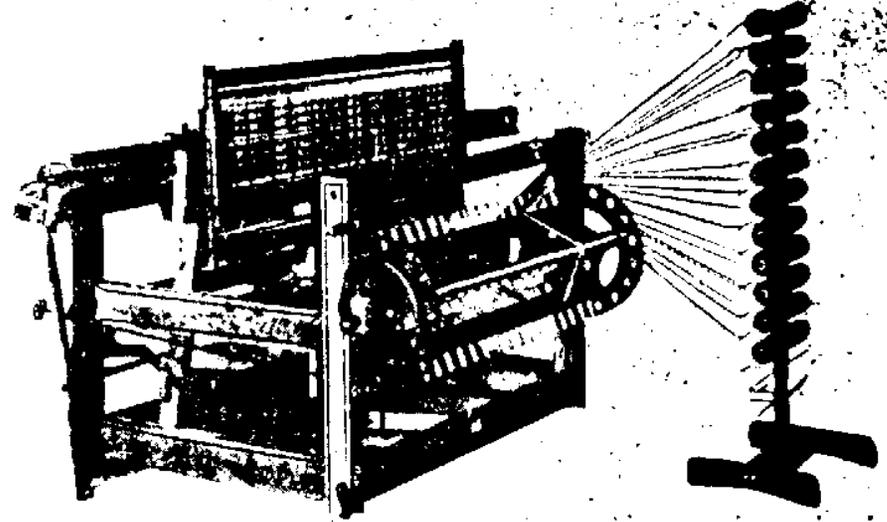
One side of reed rests in groove of lay. You may not be able to get it in place without loosening the four bolts which go thru back piece. Be sure to tighten them after reed is in groove. Place hand rail over reed and push down until top of reed fits in groove of hand rail. Fasten thumb screw at each end.

Next drive out hinge rods at bottom of swords until they project 10 inches outside of loom to center of bolt hold. Fasten by tightening the staple bolts.

Now put the picker sticks (H) in place. The small end goes thru the staples in leather shuttle thrower in groove at end of lay. Have straight edge of stick towards loom. Bolt lower end of stick to hinge rod.

If your loom was not crated, the lay and harness frames will be in place and you should drive out the hinge rods 10 inches as directed above.

Next place the trigger stick through fork (W) with straight edge down. Insert end of stick in opening in center of lower near frame of loom and fasten with pin. Have other end resting on stirrup (N).



WARP ROLLER.

Next hang warp roller in place. The pin at end of warp roller turns in a wood boxing which is bolted to rear post as shown in cut. Wood boxing hangs so pin is below bolt.

Before hanging roller, unscrew the long iron rod at right end of loom. This is the tension rod. There is an iron tension band on right roller head and an iron clip on each end of band.

Turn roller until both clips come directly in front of bracket on rear post. Run end of tension rod thru holes in end of clips and screw end of rod into hole of bracket on rear post.

Be sure that end of rod is screwed into casting on back post, see that both clips on tension band are directly in front of the casting and see that spring on rod is directly in front of clips.

You can now loosen or remove small bolt that was holding tension band around roller head.

Turn rod to right to tighten tension band, to left to loosen it. A few drops of oil on tension band will make roller turn more smoothly.

Tension will be about right for most weaving, if set tight enough so it is hard to move roller a trifle with warp roller crank.

While all bolts may require tightening for a few days

after starting loom, the four large bolts which hold cross pieces to roller heads should be kept extra tight to insure warp roller being perfectly rigid.

In order to pack warp roller so it will carry safely we have removed both rims from roller heads. Replace these after warp roller is hung in its regular position. The four steel semi-circles which form the two rims are in the package containing six shuttles.

Each rim consists of two half circles that form a complete circle just inside the outer edge of warp roller heads. The rims make the roller head extend outward as far as ends of wood pins. Place two pieces around one end of the warp roller at the proper place and fasten the outer edges together with two quarter-inch bolts which you will find in package in one of the cylinders. Have all bolt heads on inside of rim. Fasten inner edge of rim to roller head with eight bolts. Use half-inch bolts to fasten to left head N.5 and three quarter inch bolts to fasten to right head N.6.

TO SET THE PICKER STRAPS.

Pass the picker strap thru the loop on the picker stick (H) then thru the hole in the sword, then thru the spring on stirrup (N), then back thru the hole in sword.

Work lay until trigger stick is at right side of stirrup (N) when lay is back as far as it will go. Buckle strap to left picker stick tight enough to take up all the slack or just tight enough to pull the picker stick the full length of shuttle box when shuttle is thrown. If tighter than this you will be pulling the picker stick against the solid lay. This will place a useless strain on spring and strap. Next work lay forward and back so trigger stick is on left end of stirrup (N) and adjust right hand picker strap in same way.

You will find a spring with two cords attached. This goes under the loom. The cords are fastened to small hole in bottom of picker stick (H) as shown in cut. Have it tight enough so it will draw one stick back when you pull the other toward the loom.

When weaving it will draw back the picker stick just ahead of the shuttle as it enters the shuttle box.

THE LEVERS.

Lever P is the tension lever and lever L the take-up lever. Lever P turns the tension roller (Y) which holds

the carpet firmly and which pulls it forward steadily. Your tension is entirely between the warp roller and the tension roller (Y). The feed is automatic but must be regulated by the operator, who adjusts the tension by tightening or loosening the tension band on warp roller head until loom feeds as desired.

The take-up is also automatic and needs no regulating. Place the weight on lever (L) and fasten with set screw.

There will be little or no strain on the carpet between the two front rollers, as the lower roller is intended only to roll up the carpet loosely as fast as it passes the upper front roller. Two pawls connect lever (P) with the ratchet wheel on roller and a small pawl above ratchet wheel prevents roller turning back. Two pawls work the lower roller. Always see that the weights, levers, pawls, and connecting parts are in place and working properly.

TO FASTEN TO THE FLOOR.

Place loom on a perfectly level solid floor or we can not guarantee it to work properly.

Use the clips as shown on the back posts, loosen the bolt in the casting and turn it down so it will be even with the back of posts, and fasten the clip over it with screws. This clip forms a hinge so the loom may be raised in front to clean the floor.

THE SHUTTLE WINGS.

Place rubber bands on shuttle wings so they will always stay open for shuttle to enter freely. The wings are adjustable as you will find by loosening the bolts which hold them in place. Adjust them so shuttle will lock itself in box and stay there until thrown out by the picker stick at the proper time. If wings are too loose the shuttle will jump back or out of the box. If too tight the shuttle will bind and leave with a jerk and the lay will appear to stick on the return stroke when about five inches in front of harness frames.

THE CAMS.

The set consists of 14 cams as follows:

Four cams No. 1 and 2. Two No. 4 and 5. Two No. 3 and 6. Two No. 8 and 9. One No. 7. One No. 10. One No. 12 and 13. One No. 11 and 14.

Where a cam has two numbers, such as 8 and 9, if you place it on the cam shaft with No. 8 in front, it is a No. 8 cam, but if it has No. 9 in front it is a No. 9 cam.

The four cams No. 1 and 2 are on loom when shipped. Remove nut on end of cam shaft and change these cams by placing a No. 2 cam on first, a No. 1 next, a No. 2 next, and a No. 1 in front. Then screw nut on tight. These are the cams used for 2 harness work. When weaving, the first and third frames will always be up while the second and fourth are down.

OILING.

Use plenty of good machine oil on rack (B), shaft of star wheel, stirrup (N) where trigger slides, the edge of cams where they work against harness frames; in fact, oil wherever there is any wear.

Also oil inside of shuttle boxes, the groove in which picker stick works and the outside of shuttles. Do this for several days and the oil will soon fill the grain of the wood and make it wear long and work smoothly. Rub oil in well and rub off all surplus. When loom is empty, clean working parts with kerosene to cut off gum and dirt.

NOW TRY THE LOOM.

After oiling loom well, place a shuttle in place and try it. Swing lay forward the proper distance, which is about 11 inches. As you do so, watch closely the gear in center of loom and you will see rack (B) catch a point of the star wheel and turn it a fourth of the way around. The cams turn with the star wheel and this raises two harness frames and lowers two others to make a cross in the warp behind the filling when weaving.

The turning of cam shaft turns cogs Z and Y, which moves Fork (W). This carries trigger stick from one side to other of stirrup (N) and sets it in position to trip the shuttle, throwing parts, on the return stroke of lay. When you pull the lay forward the opening in rack (B) will clear the point of the star wheel. Now push the lay back and the rack will slide past the star wheel which does not move. This keeps the frames crossed.

When the lay is within five inches of the frames the walking beam strikes the trigger stick and forces it down on stirrup (N). This pulls one end of picker stick and throws the shuttle. Pull the lay forward again and the frames will change, crossing the warp behind the filling which the shuttle carried thru the warp. Throw the lay back again and the shuttle flies in opposite direction.

Remember the gear works only on the forward stroke and the shuttle is thrown only on the return stroke. Work the lay a few times and watch the loom closely so you will understand just how it works.

THE SPOOLING MACHINE.

This consists of one main bed piece, one large wood drive wheel, one long wood spindle, one belt and one iron clamp. The bed piece is 17 inches long by 5 inches wide and has an iron pin in one edge near the end. There are two wood boxings near other end. Lay bed piece flat on edge of bench or table with pin toward you and boxings up. Place iron clamp through hole in center of bed piece and fasten it securely. Place the drive wheel on the iron pin and fasten with spring key. Unscrew wood box nearest you, slip small end of spindle through other boxing until head of spindle is in line with drive wheel. Fasten boxing and place belt around drive wheel and head of spooler spindle, crossing it between them. The bobbins and spools will fit on spooler spindle when you can quickly wind them full of warp or yarn.

THE SWIFT.

The bed piece is 10 inches long by 5 inches wide and there is a hole near the end. Lay the bed piece flat on a table with end nearest you that has hole in it. Have the long iron pin pointing upward. Clamp same just as you did the spooler bed. Next take the two cross arms, which are long pieces with three holes near each end. Lay these together crosswise and drop them on the iron pin so they will turn around. The four wooden pins are set in holes to suit the skein of warp or yarn you wish to unwind. Place a spool or hobbin on the spooler spindle and you can spool up skeined material for warping or fill bobbins for filling. Always tie the end of warp fast to spool when you commence so it will not run off in warping and lose the end.

THE SPOOL RACK.

The spool rack is shipped in two parts. Drive upright part into base and fasten with two small nails.

For convenience we furnish two spool racks with each Weavers Delight.

Use one where design calls for less than 29 spools to each section and use both where more spools are used.

HOW TO WARP AND WEAVE.

You are now ready to start a carpet. We want you to try a 4-harness weave as it is as easy as any and will give you a chance to see what the loom will do. We suggest the following design which is for a yard wide carpet with three six inch stripes in the warp and three six inch spaces of plain warp, or ground work between the stripes.

WARPING.

(Note: Instructions are for a number 10 reed. If your reed is different use a little more or less warp to each section, according to the reed table on a following page.)

Where selection of reeds is left to us we usually furnish one number 11 and the other either a number 10 or a number 8. The number 11 is standard for 2-harness work and can also be used single sleyed for plain twills with a light warp, or double sleyed for twills with an extra heavy warp.

Use the coarse reed double-sleyed for most of your twills and other four-harness weaves. Single sley it for fluff rugs.)

The stripe in warp has 18 threads of black in the center, 18 green on each side, 18 canary next to the green and 18 black on each edge, 126 threads in all. The ground work between stripes will be 126 threads of all one color, say brown or drab.

(Don't follow these color suggestions if others will be more suitable for your filling. We use these merely to help make the directions more clear.)

Set both spool racks about 6 feet back of the loom. Place 18 spools of black warp in the two middle rows of the spool rack and in each outside row place 12 spools of green. This will give you 18 spools of black and 24 of green. Directly in front of each spool is a guide through which the warp thread should pass as it unwinds. Each guide is slightly open for convenience of placing warp in guide.

Each warp thread should be drawn through a different hole in the thread guide which is attached to upper rear roller. Draw the black threads through the center and 12 green on each side of the black. As soon as all 42 threads are drawn through the guide make one knot of all the ends and fasten this knot to end of tape in second section of the warp roller. It does not matter from which end you count but for convenience would suggest that you mark

numbers with chalk on one of the cross arms of the warp roller beginning at one and numbering up to 18 in rotation so each number will come between two of the pins.

The 18 pieces of tape are wrapped around one of the bars of the warp roller. Loosen and unwind tape before you attach the knot of 42 threads to the number 2 section.

When you finish weaving out the web of warp the pieces of tape will reach from warp roller to a point just back of harness frames so you will not lose so much warp at the end of the piece.

Have tension band loose so warp roller turns freely and set the thread guide so all threads wind between pins of same section. Watch spool rack and see that all spools are unwinding. Turn the warp roller and wind the 42 threads around the second section until you get the length of warp desired.

Make your first web short so you can warp two or three patterns for practice as this will be better than undertaking a long piece for if you make a mistake the damage will be small.

There is a shrinkage of 6 or 8 inches to the yard when weaving and you must allow for thrums (see Weaver's Dictionary) at start and finish. It is one yard around warp roller so make as many turns as will be required to give you warp enough for your first piece.

There is no fixed rule to follow in regard to shrinkage in length so you must watch this closely until you learn by experience what to allow. Better have your first piece plenty long as you can't splice it if it runs short, but if it is too long you can easily make a short piece for a sample. After you have filled the second section of the warp roller cut the warp between the guide and roller and be careful not to let warp slip through guide. Make a knot of all the threads just as you did at first and make a knot of all the threads on the second section. Slip this knot over one of the pins of the warp roller so you can get at it easily later when you start to draw through the harness and reed. Handle the threads carefully so they will not be tangled later on.

Now move the thread guide over the 8th section of the warp roller and fill it just as you did the second one. Next fill the 14th section in the same manner, as all three of them are exactly alike. This completes the center of the three stripes.

Empty the spool rack and put in 18 spools of black,

18 canary and six green. Have the canary in the center, 18 black to one side and 6 green on the other side. Fill the first section with this warp and draw it through the thread guide so the 6 green come next to the 12 green in the second section, the 18 canary in the middle and the 18 black next to the roller head. After you fill the first section fill the 7th and 13th as all three are alike.

The 3d, 9th and 15th are also the same except that the colors are reversed. Change the spools in the rack and guide so that when you fill the 3d section the green will come next to the green of the second section, have the 18 canary in the middle and 18 black so it will wind next to the 4th section. Fill the 3d, 9th and 15th with the warp arranged in this way.

This will complete the three stripes. Next fill your spool rack with 42 spools of the color desired for your ground work and fill the balance of the sections one at a time. This will give you 42 threads of the same length in each of the 18 sections.

Important. Turn warp roller so top of roller turns away from spool rack.

This web of warp will make a nice carpet if you weave six inches of hit and miss filling and six inches of stripe in filling to match stripe in warp. If you do not care for stripe in filling use all hit and miss filling, or filling of one solid color. If your carpet rags are dark use light colors in the warp and if filling is light, use dark colors in the warp.

SOME DON'TS.

Don't try to put on a part of the warp for a section at one time and a part at another, or you will lose it. If the design calls for 24 threads, put 24 spools in your rack. If you have not that many, get more.

Don't allow your customers to bring their own warp.

Don't try to use skeined warp. All the warp mills now put up warp on spools and the price is only one-half cent a pound more than formerly charged for skeined warp.

If you are a beginner don't get an old weaver to help you, as they will likely try to warp the old way and that may cause you to lose your warp. An inexperienced person who will follow our directions will help you, but a weaver with ideas of their own may cause you trouble.

If you have ever done weaving before, forget what you

know and follow our instructions to the letter. Don't try to warp the old-fashioned way. Don't try to take a lease or cross in the warp. Don't try to run this loom your way. There is a good reason for each particular way of doing each particular step of the work.

THREADING THE HARNESS.

Remove hand rail, reed and upper front roller. Provide yourself with a 5-inch block of wood. Lift up all four frames and place block under all four frames close up to the yokes, (No. 50). This will hold them all level and clear of the cams.

Next loosen the heddle rods so you can slide the heddles wherever you want them. To do this first loosen the hook at one end of each of the upper heddle rods.

Next move the heddles a few inches away from one of the hooks that hold the upper rod in place on number one frame. Grasp rod and upper part of harness frame with your hands at each side of hook and give a quick squeeze which will lift the rod off the hook.

Lift rod from other upper hook in same way and then you can easily get the lower rod off the two lower hooks. Do the same thing with the other three harness frames. Now you can move the heddles wherever you need them. You had better fasten the hooks again at end of rod.

Loosen all 18 sections of warp from the pins on the warp roller and unwind the roller until the warp threads will reach from warp roller over upper rear roller and through harness and reed.

Don't run the warp from roller straight into harness frame, but be sure warp goes over upper rear frame of loom.

Begin with the first section and the first thread should be the one next to the warp roller head. Thread the warp threads in rotation toward the opposite end of the roller.

Have all the heddles in all the harness frames pushed away from the end of the frame where you are going to thread first. The first section consists of 18 threads of black, 18 canary and 6 green. Untie the knot in the first section and see that all of the threads are spread flat over the upper rear roller, just as they will unwind from the warp roller.

Have someone in front of the harness with the flat hook, which is a reed hook. Place hook through eye of the first

heddle in the rear, or number 4 harness frame. Lay the first thread of black on the hook and draw the thread through the heddle. Move the heddle to the end of the frame and then place the hook through a heddle in the number three harness. As soon as the threads are drawn through hold them in your left hand so they will not slip back through the heddles. Draw the next thread through a heddle in the number two heddle frame. Draw the next thread through a heddle in the number one harness frame.

This is all you do with the first four threads until you draw them through the reed. Remember, the same thread goes through only one heddle and remember that you thread the heddles in the different harness frames in rotation. Take the next four threads and thread them exactly the same as you did the first four. Use all the heddles in rotation just as you come to them so you will have no empty heddles between full ones.

As soon as you have drawn the 42 threads of the first section through 42 heddles make a knot of the 42 threads in front of the harness frames. Now untie the second section and thread it exactly the same way. Keep the different colors in their right places.

Thread 12 green first so you will have them next to the 6 green in the first section. Then thread 18 black and 12 green. If the last thread of the first section was drawn through a heddle in the number 3 frame, the first thread of the next section should be drawn through a heddle in the number 2 frame, otherwise there will be a break in the twill.

The third section consists of 6 green, 18 canary and 18 black with green next to the second section. This completes one stripe. The next three sections are ground work and should be drawn through in exactly the same way except that you have no different colors to keep separate. This will complete one-third of the width of your web. Repeat this operation twice and you will have the entire web drawn through the harness frame.

Always thread the harness frames in rotation, as described above, for both two and four harness weaves of all kinds, except the zigzag weaves and heavy rugs, where the threading is a little different.

DRAWING IN THE REED.

Remove the hand rail so you can lay the reed flat on the lay just in front of the harness frames. Lay two narrow boards on top of the lay and let one end extend to the rear through harness frames and on top of the upper rear roller. Let the other end extend a few inches in front of the lay so you will have two supports on which the reed will lay flat.

Your warp will fill 38 inches of the reed so measure $3\frac{1}{2}$ inches or count 35 openings from end. At this place take the two threads you drew through harness first and pull them through the same opening in the reed.

Draw the next two through the next opening toward the center of loom. Repeat this, drawing two through each opening until all are in reed. As soon as you have drawn through all the threads of one section, knot them under the reed.

If you will draw four threads through the last opening at each edge of the web it will make a stronger edge on your carpet. When threading work with only one thread through each opening in the reed, draw two threads through each outside opening. Some like to use double the amount of warp in from two to five outside openings, but the best weavers claim you should double the warp in only one.

If more are doubled it makes it harder to sew the strips of carpet together and the warp is so close together it makes a streak along the edge that looks bad.

TO START THE CARPET.

Place cams 8, 7, 9 and 10 on the cam shaft so you can make a piece of Kersey Twill first. Remove block from under harness frame and replace front roller, reed and hand rail.

Take a stick, an old broomstick will do. Place it through each of the 18 sections between the reed and the knot. Tie a good strong cord near each end of the stick, pass the cords over upper front roller, and make fast to the carpet roller. Tighten tension on warp roller head. Pull up each section and adjust knots so there is no slack between stick and warp roller. Work the lay two or three times and see that the warp comes straight over the upper rear frame, thru the harness and reed. Separate the heddles at the hooks and lift the heddle rods on the hooks before weaving.

Fill a cylinder with some coarse old rags. Hold the cylinder over shuttle, with a foot of rag out. Run the wire hook under shuttle spring and hook onto end of rag. Pull rag through and drop cylinder into shuttle chamber. Always have the seam of the cylinder down so it can never catch and break warp when shuttle goes through the shed.

Place shuttle in shuttle box with open side up and eye to left. Hold end of rag in one hand and with the other bring lay forward about 11 inches, or until it is about an inch from front frame. Now throw it back quickly as far as it will go and use enough force on last five inches of stroke to throw the shuttle across to opposite shuttle box with a bang. Repeat about six times.

Next fill a bobbin with warp and weave about one-half inch of warp for a binding or heading.

Next fill a shuttle with the rags you intend to use and start the carpet. After the carpet is taken out of the loom, cut between the old rags and warp binding, ravel out the old rags and use again for starting another carpet.

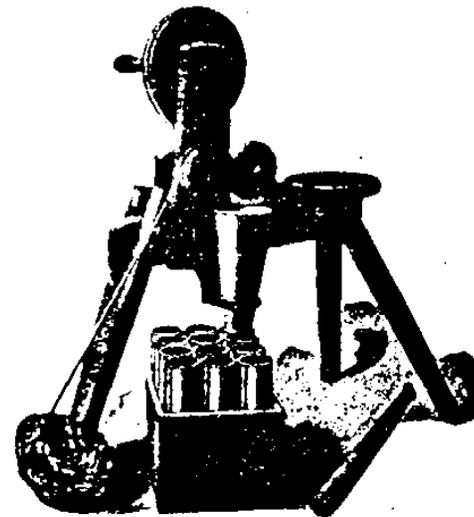
As soon as you get carpet started, set the temple so it is as wide as the warp in the reed. Turn the button so you can lift up the middle of the temple. Push teeth down firm in carpet near edge and close up to beating point. Push down on middle of temple and turn button. This will keep piece spread full width. After you weave two or three inches of carpet set temple again.

(Note: Some weavers dislike the stick and cords for starting a carpet. They use an apron. You can easily make one of old ingrain carpet, grain sacks or burlap. Tack one end to carpet roller and have it long enough to reach to starting point. Make a hem in end and work 18 button holes or place a rod inside hem and attach 18 hooks.)

HOW TO WIND A BOBBIN.

Put bobbin on spooler spindle. Turn large wheel with right hand and let warp run through left hand. Start winding against large end of bobbin and build filling up against it. When filled, bobbin should be same size as large end, for about three-fourths its length, when it should taper to a point. Do not wind filling so it is too steep or it will unwind in bunches and tangle. Do not make too long a taper or it will unwind hard and may break the threads. With a little practice you will soon learn how. Place the full bobbin in the shuttle that is equipped with a bobbin holder. Have small end of bobbin toward shuttle eye.

FILLING THE CYLINDERS.



Oil all bearings so filling machine works easily. Set the box of cylinders on the floor under the cylinder filling machine, so the funnel will enter a cylinder, thread the rag through the guide and between the rollers. Turn the large wheel with right hand and with left hand pound down the rag as fast as it enters the cylinder by working the plunger up and down rapidly and continually. Keep the plunger smooth, so the ravelings will not

catch on it and tangle the rags.

If the shuttle flies out on the left side when weaving it is because you have not taken pains in filling your cylinders and the rags are tangled or you do not throw the shuttle quick enough, or the spring in the shuttle eye may be too strong for the rags you are weaving. If this is the trouble, bend the spring a little so it will not pinch the rag so tight. If the shuttle wing is too tight, or the picker strap too tight, it may cause the shuttle to miss the shuttle box even if both loom and shuttle are empty.

TO REGULATE TENSION AND FEED.

The principle on which the loom works is very simple. Keep a full stroke of the lay and beat as many times as needed to make a firm weave. If the warp feeds too fast, tighten the tension; if it does not feed fast enough, loosen the tension, until the warp is feeding just as fast as you weave in new filling.

Don't expect to see the warp move. The warp should let off so slowly that the only way you can know it is feeding at all is because your beating point stays in the same place regardless of the fact that you are weaving in more filling. Don't let the warp feed so fast that the lay strikes against the front frame as that will cause a loose

place in the weave which must be avoided by all means.

Don't get the tension too tight or the stroke of the lay will get so short the working parts will not move. The stroke of the lay should be 11 or 12 inches, or as long as possible without striking the front frame.

THE SELVAGE.

The two most important things in weaving are a firm weave and a straight edge. The loom is made so you can beat as many times as you wish, if you do not push the lay back far enough to throw the shuttle. Beat enough to insure a good firm weave.

If the rags run fairly smooth and you use care in filling cylinders the shuttle will pull up the rag enough to make a smooth edge. Watch closely and never beat if the rag is pulled in too much or not enough, without loosening or tightening the filling with your hand. You can almost do this without stopping and this extra care can make a big difference in your work.

Remember—it is the operator who is responsible for the quality of the work. The loom lets off the warp, rolls up the carpet and throws the shuttle back and forth, but it is purely mechanical and if it fails to get the filling just right, you must help it out. Your work will reflect the care used in weaving it.

WHEN YOUR FIRST CARPET IS FINISHED.

If you have followed directions you should have a nice piece of Kersey carpet with the warp running in a twill diagonally through the piece.

If you have put in a little more warp than your first piece will require, weave a binding of warp and then make a short piece of carpet to keep for a sample.

Weave another binding and put on cams 12, 10, 11 and 3 and weave a piece of double thick. Next put on number 13, 5, 11 and 6 and make a piece of double width with both selvage edges on the same side and with the selvage closed on the other side. When you take it out of the loom, it will be two yards wide.

Put on cams 1, 2, 1, 2, and make a sample of plain 2-harness work. Next put on cams 3, 11, 5 and 12 and weave a bobbin of warp. You will then have a seamless sack weave closed at the bottom and at both sides.

This will give you some idea of what you can do with

the loom. It will pay you to warp a little extra whenever you put in a pretty pattern so you can make a short piece at the end for a sample. In this way you can soon secure a nice lot of samples to show your customers.

TWO-HARNESS WORK ON A 4-HARNESS LOOM.

With the Weavers Delight you can produce any weave that can be made on any 2-harness hand or fly shuttle loom.

Always use all four harness frames and use cams 1, 2, 1, 2, so first and third frames will always be up while the second and fourth will be down.

A half of the warp will be in the first and third frames and all of that warp will weave into the piece exactly the same as the warp in a front frame of a 2-harness loom. The warp in second and fourth frames will weave the same as warp in the rear frame of the 2-harness loom. Two-harness designs are threaded through the harness the same as Kersey Twill, that is through 4, 3, 2, 1 and repeat. As a rule only enough warp is used to single sley the reed. However, this is a matter of taste as some folks like warp extra thick in plain weaves as it makes an extra good carpet just as you make an extra good carpet if you use lots of warp and weave it in the twill.

A No. 11 reed single-sleyed is standard for 2-harness work and all the following designs are made for it except where otherwise noted. If you have a different reed, use a little more or less warp according to the reed table.

While the designs given from this page, over to the department of four-harness designs, are for 2-harness work, you can make nearly all of them in a plain twill by using the Kersey cams instead of the 2-harness cams. Of course, they will show up better if more warp is used but it is not really necessary to use more warp for the 4-harness work than for the 2-harness work.

Many of the rag rugs are really better woven in twills, or double thick, with more warp. Fluff rugs are made only in a 2-harness weave, as is checker board, honey comb, block work, etc.

FLOATING THREADS.

Sometimes a thread will fall to weave in along the selvage edge when starting a piece or when changing cams. In this case thread through a different heddle frame until you get it where it will weave in.

If your shuttle runs empty and you beat once you must work the lay back and forth three times before you start the shuttle again. Otherwise there will be a break in the will.

THE UPPER REAR ROLLER.

The bolt holes in end of upper rear roller are not in center but to one side. By loosening bolts and twisting roller with your hand you can raise and lower it a little.

The lower part of shed should almost touch the lay. If much higher than this lower the roller. If web is light, say 400 ends or less, set roller nearly as high as it will go. If the web is heavy the roller can be placed a little lower.

The nearer it comes to balancing the frames the easier it will work.

WRITE US.

If there is anything you don't understand write us at once. We will be glad to help you out.

If the loom works a little hard at first it is because the parts are rough and new. Plenty of oil and a few days use will make a big change.

Don't become discouraged if everything don't go right on the start. You must get acquainted with the loom and at first you will do everything the hardest and most awkward way.

We have tried to be plain and practical and if you will follow these instructions carefully we believe you will be well pleased and that you will find the new loom will be a money maker. If you use proper care the loom should last you for many years and be a source of pleasure and profit.

RAG CARPET

About Reeds.

Reeds are numbered according to the number of openings to each inch. The No. 11 is the standard reed for ordinary two harness carpet and rug weaving. The No. 13 is as fine as should be used. If more warp is required it is better to use a coarse reed with two threads through each opening. A fine reed requires more warp and less filling, but the carpet will not wear as well as one made in a medium reed where the filling takes part of the wear.

REED TABLE.

This table shows the different reeds and opposite each is the number of threads required to thread 38 inches of reed single sleyed, and the number of threads to use for each section of the warp roller.

1	2	3
No. of Reed.	No. of threads to 38 inches.	No. of threads to section of warp roller.
No. 6	228	13
No. 7	266	15
No. 8	304	17
No. 9	342	19
No. 10	380	21
No. 11	418	23 or 24
No. 12	456	25
No. 13	494	27 or 28
No. 14	532	30

The numbers in third column are not quite correct, but are safe enough to follow. The number of threads in 38 inches can not always be divided into 18 equal parts. With a No. 11 reed 23 to each section gives only 414, while 24 to each section gives 432. In order to thread exactly 38 inches of reed, you should warp 23 to part of the sections and 24 to balance.

ABOUT MATERIAL.

Every weaver should have some folders printed with the following suggestions about preparing rag carpet.

All goods intended for rags should be washed. Starchy goods will not beat up closely and dirty rags means a dirty carpet. Poor carpet costs as much for warp and weaving as a good carpet.

Cut or tear light goods, such as calico, muslin, etc., about $\frac{3}{4}$ of an inch wide, woolen and other heavy goods $\frac{1}{2}$ to $\frac{3}{4}$, extra heavy goods as fine as can be cut to hold together and knit goods very fine and across the grain, around and around.

Do not tear back and forth almost to the end, but tear clear across. Cut out seams, hems and rough places. Keep cotton and woolen rags separate. Throw out any that will not stand a smart jerk, as they will bother the weaver and will make a poor place in the carpet.

Take pains in sewing to make a smooth even joint with

no loose ends or corners to stick up through the warp. Have but two ends to each ball and never wind around sticks or rocks. Wind each color separately. If for hit and miss, mix colors well and leave out white unless you want a light carpet. Don't cut goods on bias. Don't cut for carpet rags, dress stiffenings, collar canvas, suspenders, curtain shades, oil cloth or similar goods. Don't tie knots in rags.

AMOUNT OF MATERIAL TO THE YARD.

Each yard of carpet will require from a pound and a quarter to a pound and three-quarters of rags.

AMOUNT OF WARP TO THE YARD.

At least ninety-five per cent of the weavers use the ordinary, light, 4-ply spooled carpet warp, which is a staple article in the dry goods line. One pound will make three yards of common carpet.

Furnish your own warp and save your customers the bother of buying a small lot for their work. You can get it a little cheaper than at retail if you buy in lots of 100 pounds or more.

If a customer insists on bringing their own warp let them do so as long as they bring it spooled. Put it in your stock and warp their piece as you would any other.

TO MAKE STRIPE IN WARP A CERTAIN WIDTH.

When warping for a carpet a yard wide each section of the warp roller holds enough warp to make two inches in width of carpet. If you want a six inch stripe, use three sections of warp roller, for a four inch stripe use two sections, etc.

HOW TO DIVIDE STRIPE IN FILLING SO RAGS WILL COME OUT EVEN.

First sort all the colors and if balls are all of same size, use just as many shots as you have balls of each color.

Suppose your customer brings 4 balls of yellow, 8 blue, 6 green, 2 red and 20 of hit and miss. Lay your stripe same as above by weaving 4 shots of yellow, 8 blue, 6 green, 4 red for center, then 6 green, 8 blue and 4 yellow. This requires the use of each color twice in each stripe, or twice as many shots as balls. Also double the shots of hit and miss. As you had 20 balls, put in 40 shots hit and miss between each stripe. This will always work out even,

provided the balls of rags are all of the same size. If some are very coarse, use one or two shots less of that color.

ANOTHER WAY.

Weigh each color and multiply the number of pounds of each by 16, to get it into ounces. Use a number that will divide into the smallest number of colors you have. This number is determined by the length of your piece and the number of times your stripe is to appear in each yard. If your piece is 20 yards long and you want three stripes to the yard, multiply 20 by 3, which will give you 60, or 60 stripes in the full piece.

Divide the total number of ounces of each color, by 60 and you have the number of times that color can be used in each stripe. Plan your stripe accordingly. Weigh the rags used for ground work and divide by the number of times the ground work appears and you have the number of shots you should weave between stripes.

TO MAKE A STRIPE IN WARP TO MATCH STRIPE IN CARPET.

Use same colors for stripe in warp as you do for stripe in filling, but use 2 threads of warp for every shot of rags. To illustrate: Divide your filling as explained above, so colors will come out even. Use 8 ends of yellow, to match yellow in stripe in filling. Next 16 blue, 12 green, 8 red, 12 green, 16 blue, and 8 yellow. This completes the stripe which will fill a little over three sections. Fill balance of next three sections with ground work. Repeat twice to fill balance.

TO WEAVE MORE OR LESS THAN A YARD WIDE.

For a 30-inch carpet use one-sixth less of warp; for a 42-inch carpet use one-sixth more. Odd sizes can be figured as follows: Figure how many threads it will take to thread reed as wide as piece will be when finished. Add to this the regular allowance for shrinkage at the rate of two inches to each yard. Divide the total by 18 to determine how many threads to warp to each section of warp roller.

For work less than a yard wide it is not necessary to use all 18 sections. If less are used divide the total number of threads by the number of sections used.

HOW TO MEASURE AS YOU WEAVE.

Sew a hook at end of tape line, a yard long. Fasten at start of piece and move when a yard is made. The

piece is stretched tighter in loom than it will be when on the floor, so make a slight allowance for shrinkage.

WHAT TO CHARGE FOR WEAVING.

There is no fixed scale of prices charged for weaving and your prices must be governed by local conditions and prices of others near you.

In the country and small towns most weavers charge 10 to 15 cents for hit and miss and 15 to 20 cents for striped carpets and extra for warp. In larger towns and cities nearly all weavers furnish warp and weave at 35 to 50 cents. In the following pages we give you the usual range of prices.

WEAVING TERMS.

Honey-comb:—Two colors drawn in front and back frame alternately until desired width, when colors are reversed by changing colors in harness.

To illustrate: Warp equal amounts of two colors, say black and white.

Draw a thread of black through No. 4 harness, white through No. 3, black through No. 2 and white through No. 1. Repeat until you have six of each threaded. The last will be white in No. 1 harness. Next draw white through No. 4, black through No. 3, white through No. 2 and black through No. 1. Repeat until six of each are threaded. Next thread 12 just like you did first lot of 12 threads and then 12 like second lot of 12 threads. Keep repeating until all are threaded. Nothing is nicer for ground work between stripes in 2-harness work.

Block-work.—Warp honey-comb, filling one shot rags, one shot warp until blocks are square. Then two shots of rags to change color of square, then rags and warp as before. Also called Dice and Checker-board.

Brick-work.—Same as block work except you change color of square twice as often so blocks are only half as long as they are wide.

Girthen Stripe.—A narrow stripe in carpet threaded same as honey-comb, or a narrow fancy stripe all double sleyed next to a single-sleyed ground work.

Snow-flake, Polka-dot or Pin Check.—Use any two colors of warp, say black and white. Use one-third white or 1 spool of white for every two spools of black.

Thread through harness as follows:

White, black, black, white, black, black. Repeat.

Basket Weave.—With different size blocks alternately, as for brick work. Use equal amounts of two colors, say black and orange. Thread orange in back harness and black in front harness until you have 17 ends of each. Then thread black in back harness and orange in front harness until you have nine of each.

Start again just as you did at first and keep repeating all the way across.

Use black and orange filling. Weave enough black to square the black block and then enough orange to square the orange block. Repeat.

Gilt Edge.—Two threads of orange double sleyed on each edge of stripe, makes what is called a "gilt edge" and is very pleasing with all colors but red, as red and orange do not harmonize.

Herringbone or Feather Stripe.—Twist together two rags of contrasting colors, such as black and white. One-half should be twisted in one direction and the other half in the other.

Weave six or eight shots of rags twisted in one way, then one or two shots plain in center for the "bone" then six or eight shots twisted in opposite direction.

Twist on a spinning or twisting wheel, or if you have a spooler, place a slim nail in end of spindle and bend nail in shape of hook. You can also twist by hand as follows:

Hold ends of two rags between thumb and finger and wind rags around hand, then with other hand, take hold of ends between thumb and finger and pull out. Wind in opposite direction for other half of stripe.

HARMONY OF COLORS.

Every color when placed beside another, is changed in appearance—each modifies the other. Much depend on what shade of a color is used for where one shade of a color will look handsome another will look plain. The ability to arrange colors well, brings a weaver work, as many customers do not know how and you will get more credit for weaving an attractive carpet of homely rags than you would if rags were pretty.

Green will harmonize with all colors but blue. Orange with all but red. White and drab go with anything (Drab is a good shading for brown.) Red harmonizes with all

colors but orange, brown with all colors. Blue with all but green, black or purple. Purple with all but blue.

Always use a good, bright color for the outside stripe. You will have to judge the width of each color from the amount of rags or warp which you have. Too many colors will spoil a stripe entirely. Better not use more than six colors for any stripe and never less than one-half inch of color, except in a very few cases.

Below are a few combinations:—

Yellow, blue, orange, brown, turkey red.

Pink, purple, orange, brown, turkey red.

Orange, brown, yellow, blue, scarlet, green.

Scarlet, green, pink, brown, turkey red, black, one thread of white, two shots white and black twisted center.

Purple, pink, black, brown, orange.

Black, brown, purple, scarlet, black, pink.

Turkey red, black, brown, pink, green, scarlet.

To get a good harmony of colors always use the following order: Yellow, blue, scarlet, green, turkey red, purple, orange, black, brown and pink. For instance, next to orange put purple, black or blue. By keeping the colors in the above rotation you can make an endless variety of beautiful stripes.

CARPET DESIGNS

ABOUT FIXED DESIGNS TO COPY

The object of this book is to teach the ground work of weaving rather than to offer a lot of fixed patterns to copy.

Only a few designs are printed and they should be used only for such suggestions as you can utilize in planning your work. Plan your own patterns, blend colors and develop your ingenuity. The result will be work of some character and individuality.

STRIPED CARPET.

1st Section.—12 yellow, 10 black, 2 red.

10th Sec.—Same.

4th and 13th Sec.—Same except colors are reversed; thus, 2 red, 10 black, 12 yellow.

2nd Sec.—10 red, 4 blue, 4 white, 4 blue, 2 white.
11th Sec.—Same.

3rd and 12th Sec.—Same as 11th except colors are reversed.

This will complete two stripes each eight inches wide and leaves room for two stripes of ground work between, each 10 inches wide.

Fill balance of sections with 16 brown and 8 white, mixed well in rack and guide. Thread 2 brown, 1 white, 2 brown, 1 white, and repeat.

For filling, weave ten inches of dark, or hit and miss rags to correspond with ground work in stripe. Next 6 shots yellow, 5 black, 6 red, 2 blue, 2 white, 2 blue, 4 white, 2 blue, 2 white, 2 blue, 6 red, 5 black, 6 yellow.

This should make a half yard of carpet. Repeat it through the piece; 15 to 20c; warp extra.

STRIPED CARPET WITH HONEY-COMB GROUND WORK.

Try above design except use half brown warp for ground work. Mix well in rack and guide. The ground work is threaded as follows:

Draw white through rear harness and brown through front harness alternately until you have six of each threaded. The last will be brown in front harness.

Next start with brown in rear and white in front harness alternately until you have six of each. The last will be white in front harness.

Thread the next 12 as you did the first 12 and then thread 12 more as you did the second lot of 12 threads. Repeat this until all of ground work is threaded. 15 to 20c; warp extra.

DICE, BLOCK-WORK OR CHECKERBOARD.

Thread entire carpet as for Honey-comb. Weave a shot of rags and a shot of warp alternately until you have enough to form a square. Then weave two shots of rags which will change color of square, then warp and rags alternately, and repeat.

(Note:—The use of two shuttles makes this work go too slowly to be profitable.)

ANOTHER WAY TO WEAVE CHECKERBOARD.

Use several colors of warp and warp it in stripes, each stripe about four inches wide, solid color, and between

each stripe or color put in two threads of orange. To weave use all plain colors of rags. Weave four inches of one color, then put in four shots of orange warp, and then weave four inches of another color of rags and the four shots of warp. This will form a border around each square.

BRICK-WORK.

Same as first Block-work design, except colors of blocks are changed twice as often as blocks are twice as wide as they are long.

SIZE OF SQUARES.

The squares in block-work, brick-work or checker-board can be of any size. If threaded like honey-comb design they will be small, about half an inch square. Thread about 12 in each frame before changing color and you will have blocks about one inch square.

SNOW DROP.

Ground work of blue and white, threaded alternately. Three blue in front frame, 2 white in back frame, then three blue in back, 2 white in front and repeat. Warp stripe as follows:

1st Section.—4 white, 8 red, 4 white, 8 green.

10th Sec.—Same as first.

3rd and 12th Sec.—Same as above except colors are reversed.

2nd and 11th Sec.—4 green, 4 white, 8 orange, 4 white, 4 green.

This completes 3 six inch stripes.

Ground work. 9 white and 15 blue mixed well in guide.

SEERSUCKER OR PUFFED CARPET.

This requires only half as much warp as ordinary work. Draw a certain number of threads through the reed and skip the same number of splits and repeat.

To illustrate:—Draw four threads through the reed, single sleyed. Skip four splits, thread four, skip four and repeat.

The number threaded and skipped may be changed to suit your fancy. The skipped spaces gives the material a puffed appearance, hence the name. This weave is

largely used in curtain weaving and also fluff rag rugs. It is also popular with some for rugs woven from heavy rags.

A PENNSYLVANIA WAY.

All of the designs already given are woven so both warp and filling show and the appearance of the carpet depends on the arrangement of colors in both warp and filling. In certain parts of Pennsylvania practically all carpets are made with fine rags for filling and with heavy 4 or 5-ply cotton warp for ground work and two or three stripes of wool warp. Enough warp is used to completely cover the filling, so the appearance of the carpet depends entirely on the warp. We mention this, because we realize you must do the kind of work your customers want. If our Pennsylvania customers have any trouble to secure heavy cotton and wool warp we will tell them where to secure it. Use a reed coarse enough to take two or three threads to each split.

Brown and white threaded as for honey-comb makes a good ground. Green and black threaded honey-comb and colors changed when six of each are in, also makes a good ground. Make a good, lively stripe.

PENNSYLVANIA CARPET.

WITH THREE WOOL STRIPES.

Use a No. 8 reed. Stripe of 3-ply wool and ground work of 5-ply cotton warp. For each section of ground work, warp 51 ends of cotton warp in any colors desired. For stripe, warp 34 ends of 3-ply wool warp in any colors desired.

When filling the warp roller use the following sections for ground: 1, 2, 3, 7, 8, 9, 13, 14, 15. Use balance for stripe. This will give you three, six inch stripes with six inches of ground work between stripes.

In drawing through reed, draw three ends of cotton through each split, but when you thread the stripe, draw only two through each split.

(As the wool warp is more bulky you will find it easier

to handle a web if you use one-third more cotton than wool to each section, as directed above.)

PENNSYLVANIA CARPET WITH TWO WOOL STRIPES.

Use No. 8 reed. Ground work, 51 ends to each section, heavy 5-ply cotton, triple sleyed in reed. Stripe 34 ends to each section, of wool warp, except black and white, which are 4-ply pearl cotton. Double-sleyed in reed.

Put one stripe in sections No. 7, 8, 9, and the other in 16, 17 and 18. Balance is ground work.

Use 25 white and 26 brown to each section of ground work. Mix well. Thread harness as for honey-comb and change when you have twelve of each color threaded. Draw three through each split of reed.

7th and 16th Sections.—3 black, 5 dark blue, 6 red, 7 medium green, 4 lemon, 4 orange, 5 light green.

9th and 18th Sections.—Same as 7th and 16th except colors are reversed.

8th and 17th Sections.—5 dark green, 4 white, 16 red, 4 white, 5 dark green. Draw two through each split in reed. This gives you two, six-inch strips with 12 inches of honey-comb ground work between. Ground work has 612 ends. Stripe 204 ends. Be sure to double-sley stripe and triple-sley ground work.

RAINBOW STRIPE.

This stripe is made by using the seven primary colors in the following relation. Red, orange, yellow, green, blue, indigo and violet. Wool warp comes in so many shades that you can shade the above colors and make a beautiful stripe.

RAG RUGS

Rag carpets have been made and used for many generations but, in recent years, there has been a general demand for the same kind of weaving in the form of rugs. The best and most durable rugs are made of cotton or woolen

rags, cut, sewed and woven in the regular old-fashioned rag carpet way.

They are usually woven one yard wide in two yard lengths, with a fringe of warp at the ends and suitable borders in the filling. The best of ordinary carpet rags may be used but new ones are better. The colors must be good, carefully chosen and not too many shades in a rug.

The range of material suitable for rug filling is so wide that you can make rugs of any color and suitable for any purpose. Where colored filling is used the dyes should be fast so the rugs will stand frequent washing.

For ordinary work, goods of such weight as ordinary muslin should be cut three-fourths of an inch wide but, if a heavy rug is desired one inch is none too wide. Goods of a lighter weight should be cut wider and heavier goods not quite so wide. White warp is to be preferred as far as possible, as colored warp is seldom dyed in fast colors and a faded warp will ruin the color combination and spoil the beauty of the most successful rug.

Where new goods are to be used there is a wide range of suitable material available. Every one can secure the unbleached muslin, canton flannel, ticking, duck, denim, cretonne, and prints. Odd ends from the bargain counter are as suitable as the same goods in the regular way.

Those who are fortunate enough to live near cotton mills can often secure "seconds"; that is a piece with a blemish in the weaving or badly marked by the dyer. There is a certain amount of waste in the manufacture of clothing, wearing apparel, and bedding. Often the waste is in long pieces that are just the thing for rug filling.

Heavy cotton yarns, as large as a lead pencil, can also be obtained and make a satisfactory filling for bathroom, and bedroom rugs.

Where material is purchased in the piece or bolt, it should be torn, if a rough finish is desired, or cut if a smooth finish is wanted. It can be cut on a Newcomb Cutting Table or you can make a tight roll of the material, tie it securely and slice off an inch or so at a time, from the end with a sharp carving knife, just the same as you would cut a loaf of bread.

To tear up a piece, first cut about two inches deep, the required space apart, which will insure the goods tearing straight. Tear quickly. If you will cut the piece the

right length, each strip can be made the proper length to fill one shuttle, thus saving sewing two or more pieces together. As soon as torn, wind into balls to avoid tangling.

At first you should weigh the material until you find how much is required to a yard. The cream color of unbleached muslin is better for white borders than true white, which has a staring effect that is anything but artistic.

THE WEAVING OF IT.

First weave four or five inches of coarse old rags to take up the space required for fringe. After the rug is out of the loom, ravel out these rags and keep to be used again. Next weave a binding, or heading, of warp three-fourths of an inch deep.

Weave just as you would an ordinary hit or miss rag carpet. When you have made the required length, weave a warp heading and enough coarse rags to take up space for fringe. If you have in warp for more than one rug, weave twice as much coarse rags so as to provide space for fringe at start of next rug.

White warp and plain blue and white rags, hit or miss, makes a very nice rug or long runner. As a rule the rugs should be twice as long as wide, but may be varied if the rug is to fit a certain space.

When the roll is taken from the loom, cut out each rug, ravel out the coarse rags and finish with a double row of knots and fringe at each end. To tie knots, take about 6 warp threads and make a knot in them close up to the heading. Do not tie a hard knot, but make such a knot as children make in the corner of handkerchiefs.

After making one row clear across, take half of the threads from first and half from second knot and make a knot of them but don't crowd it too close to first knots but have it so fringe will lay flat without drawing or puckering. Make next knot with remaining half of warp from second knot and half of warp from third knot of first row. Repeat until fringe is finished. Trim with scissors so all threads are three inches from last knot to end.

SUGGESTION NO. 1.

Weave about five inches of filling of the color selected for the body of the rug. Follow it with two inches of white (or other color to contrast with the body of the rug) then three inches of body color, then two inches of white and re-

peat so you will have three white bars, for a one by two-yard rug. (If longer rug is made make four or five bars.) Next weave 39 inches for the body of the rug, then three white bars and finish with heading of warp. Have enough warp in for several rugs. Weave in 10 inches of old rags and start a heading for the next rug.

These rugs may be woven with three white bars and body of any color, or hit and miss. If hit or miss, it is better to throw out all white rags and use for borders. Mix colors well when sewing and do not have pieces over a foot long. For warp and weaving 30 to 50 cents per yard.

NO. 2.

This is woven with three bars like style No. 1, white rags are used for body and colored rags for the three bars. Use warp of same colors as borders and use same warp for headings. 30 to 50 cents per yard.

NO. 3.

Use white warp. For filling, take a ball of white and one of any color desired. Wind both rags into shuttle at same time and weave both from shuttle together. If body is blue and white, make three bars of blue for border but weave two rags of blue together so border will be of same thickness as balance of rug. The body of rug will have a peculiar mottled appearance which is very pleasing. 30 to 50 cents per yard.

NO. 4.

Two-tone Effects.

Use rag of two different colors that harmonize nicely. Weave as directed for No. 3. Make border of the darker color. Another way is to use two shades of the same color and make border of the darker shade. Here are a few good combinations for rugs in two-tone effects:

- Body of red and green with red border.
- Body of two-toned blue with dark blue border.
- Body of green and yellow with green border.
- Body of two-toned green with dark green border.
- Body of two-toned red with dark red border.
- Body of baby blue and green with baby blue border.
- Body of red and black with red border.
- Body of green and pink with green border.

Body of tan and yellow with tan border.
Body of red and tan with red border.

NO. 5.

Two-tone Effect.

Use two shades of same color, say brown. Use only one shade at a time. Start with dark brown. Weave 18 inches and then follow with 36 inches of light brown. Finish with 18 inches of dark brown. One or two shots of deep red woven between the two shades, 18 inches from each end, will often give a touch of color that will add life to the rug. 30 to 50 cents per yard.

NO. 6.

Warp as for ordinary carpet or rugs. Draw three threads through three heddles in back harness and then three through heddles in front harness. Repeat. Draw three threads through same opening in reed, skip two spaces and draw three through next opening, continue all the way across.

If you keep a tight tension and beat up hard the warp will not show but the filling will be puffed up in a basket effect. This is one of the very best rug weaves and we urge every weaver to try it. It is a fine weave for knit goods, old corduroy, light weight woolen rugs or portieres.

For extra thick heavy woolen rugs it is better to draw 4 or 5 threads through each harness and draw 4 or 5 through the same space in the reed, skipping 3 or 4 spaces between.

The same style can be made by drawing two threads through each harness and threading two through every other opening in the reed. Keep a medium tension and the result will be a loose basket weave effect that is good for rugs of soft material, such as Canton flannel.

A good design for this weave is 6 inches of colored filling, then 12 inches of colored and white, woven alternately. Next weave 36 inches of colored filling and finish with 12 inches woven alternately and 6 inches of solid color.

Another good border. Weave 6 inches of color, 4 inches of white and color alternately, 4 inches of solid color and 4 inches of white and color alternately. 30 to 50 cents per yard.

NO. 7.

Any of the styles already mentioned can be made to appear entirely different if you will weave from one-half to one inch of solid color at regular intervals, say every 6 inches in the entire length of rug. To illustrate, suppose you are weaving a blue and white hit and miss rug. Weave five inches hit and miss and follow with 1 inch of blue. Repeat 12 times to complete the rug.

This will be better for a rug without border but the same effect can be introduced in body of rug with border. 30 to 50 cents per yard.

Borders

In planning a rug you should consider the material used, the colors and the probable use of the rug. As a rule it will be better to make heavy rugs in dark shades with plain bands, but dainty rugs in light colors, such as are used in the upper rooms, offer a chance for more elaborate designs.

Figured denim has a clouded effect when woven and makes a good border for rugs with plain body and three bars. If figured goods are used for body, the border may be plain, or one wide border may be used with some fancy arrangement of colors in border.

BORDER SUGGESTION FOR A BLUE AND WHITE RUG.

Start rug with three inches of blue. Stripe is made as follows: one shot blue and white twisted, 1 shot plain white, one shot blue and white twisted in opposite direction, eight shots white two blue, four white and two blue. The last two shots from the center of stripe. Reverse to make other half. Weave three inches like body and make another complete stripe which completes border at one end.

THIS BORDER WILL GO NICELY WITH NO. 8.

Weave five or six inches of body, two shots of colored filling, three shots white, one shot white and colored twisted, one shot white, one shot white and colored twisted opposite direction three shots white, four shots colored. This makes one-half stripe. Center is a feather stripe. Reverse arrangement for other half of stripe. This border can be used in other ways. The feather stripe may be different from the rest and different colors may be used between feather stripes.

BORDER ALL AROUND.

This effect can be secured by weaving a border at start and finish of the rug and by making a stripe in warp to match the stripe in border. Double sley warp the width of stripe.

BORDER TRIPLE WEAVING.

Thread warp as directed for No. 6. Weave body of any color desired. Start with an approach like main body of rug. Border consists of 12 shots of white, 18 shots of white and body-filling woven alternately, and 12 shots of white.

FLUFF RAG RUG.

For filling use carpet rags cut quite fine. Use exactly two-fifths as much warp as for common rag carpet and use your carpet reed. Thread thru the harness frames the same as for rag carpet. Single sley first four splits in the reed. Skip six splits, thread four, skip six and repeat. Weave the same as rag carpet.

Cut into strips lengthwise while still in the loom, by cutting thru the rags where there is no warp. When thru you will have your carpet roller full of strips of rag carpet a little less than one inch wide. Take out of the loom and thread loom as directed for Ingrain fluff rugs. Use strips for filling and weave the same as you do Ingrain rugs. Woolen rags make a much better rug as cotton mats easily. For warp and weaving charge from \$1.00 to \$1.25 per yard.

SHIRRED RUGS.

These are made from ordinary carpet rags, but light woolen or cotton is better, cut about $\frac{3}{4}$ of an inch wide. Run a strong needle and cord thru center and gather up tight. This makes a round roll. Use for filling and weave with loom threaded as for ordinary rag rugs or fluff rugs. For warp and weaving, charge 30 to 50c per yard.

ROOM SIZED RUG.

Weave in any style desired in two or more strips of the same length. Sew together carefully.

FLUFF RUGS FROM OLD CARPETS

When properly prepared and woven, old Ingrain and Brussels carpets make fine rugs. The work is so profitable that no carpet weaver can afford to neglect it.

The old carpets should be clean and free of tacks. Unless you have a carpet cleaning outfit, ask your customers to wash the old carpets. Ingrain and Brussels should never be woven together. Cut the old carpets into strips three-fourths of an inch wide. Brussels should be cut across and Ingrain lengthwise of the strip, and straight, so warp runs straight thru the entire length of each strip.

The carpets can be cut by hand but it is slow and in order to make a fair profit you should use a cutting table.

Fraying—The strips of old carpet should then be frayed. That is, a third of the warp along each edge of strip should be removed, leaving a third in the center to hold the strip together.

This can be done by hand but it is very slow and in order to make good wages you should use a hand frayer which costs but \$25 and which will pay for itself in two weeks steady use.

Reed to Use—You can use a common carpet reed but a No. 8 single sley is the best. Use all brown or drab warp. Thread thru harness and reed same as for common carpet.

THE CUTTING TABLE.

If you use a Newcomb Cutting Table, fold carpet six or eight times and clamp between tops, with warp or selvage running in same directions as slits in top. Saw must be kept sharp and worked straight up and down when cutting, otherwise some strips will be wide and others narrow.

THE TUMBLING CAGE.

After the cut strips are frayed the loose warp along the edge can be removed easily with a tumbling cage.

Make a wooden frame work, about four feet square and cover with fine chicken wire netting. Have one side hinged for a door. Hang it so it will revolve like the warp roller. Fill it about a third full of strips and a few minutes tumb-

ling will knock out the cut warp leaving the strips with a nice fluff edge ready for weaving.

THE SELVAGE.

This is a very important part of the work. You should double sley one or two splits at each edge. When weaving binding at start and finish do not pull in too much at edge or it will make rug draw in at corners when finished.

To make a firm, straight, tight edge is the aim of every good weaver. The Ingrain strips are pulled in quite tight at the edge, just the opposite of the binding.

Do not weave in strips with end even with edge of rug but long enough to hang over. After beating turn back end of strip for start of next shot and pull up tight.

Use judgment in this work. Do not pull in too much. If warp looks puckered or pulled together you have pulled in too far.

Weaving—This is strictly hand work so disconnect the shuttle throwing part of your loom. Weave $\frac{1}{2}$ inch of warp, jute or wool for binding. Use heavy wool yarn for fringe. Cut it in 18 inch lengths. Place four together. Lift up three warp threads and slip wool threads thru. Get ends even on top and tie in a knot. Repeat the full width and you have a fringe for one end. Next weave a half inch more of binding and you are ready to weave the frayed filling for body of rug. Sharpen one end of a yard stick, or something similar, and place a needle or brad at the point. Place end of a carpet strip on point of stick and push it into place between the warp a strip at a time, allowing strips to lap one inch, until you have enough to reach across the rug. Beat up hard with a tight tension.

Some work the strips in by hand by giving it a peculiar flip which places it just where it is wanted. This may seem slow but you will be surprised how rapidly you can weave with a little practice. The standard price for weaving from Ingrain is \$1.25 per square yard and \$1.50 for Brussels.

Brussels must be well twisted after it is frayed as the nap is all on one side. Otherwise it is woven same as Ingrain.

When rug is of proper length finish with fringe and binding. It will pay to warp for several at once. When one is finished, weave an inch more of binding and start fringe

for another rug. When roll is taken out of loom, cut binding between rugs.

Hem each end of rug, lay it on floor and sweep with stiff broom and if needed, clip surface with shears.

FLUFF RUG DESIGNS.

The color of the rug is determined by the old carpet your customer brings you. When weaving several rugs for different people it is common practice for weavers to exchange a few strips for border as it adds greatly to the appearance of all.

It is also a good plan to buy old carpets so you will have plenty of contrasting colors to exchange.

PLAIN FLUFF RUG.

Weave entire rug of carpet strips cut from same piece of carpet and finish with fringe as directed above.

FLUFF RUG WITH PLAIN BORDER.

If rug is 30x60 inches in size, weave about six inches filling. Now borrow or exchange enough filling so you will have some good, lively colors for border. Weave an inch of filling of a very pronounced color such as bright green or red. This is called a dado. Next weave about three inches of a contrasting color that will harmonize well with body of rug. Next weave another dado to cut stripe from body of rug, then weave body and finish with same border, 6-inch approach and fringe, as on the start. The fringe should be the same color as the dado. Use care in selecting and harmonizing colors for borders and fringe and you can put life into what would otherwise be a very dull rug. When weaving long narrow rugs as for hall ways, weave two or three bands at each end, depending of course, on the length of rug.

FLUFF RUG IN TWO COLORS.

Suppose your carpet is of two kinds. If you have an equal amount of each, start with either, but if unequal use the large amount for center of rug. Start with the kind you want for the two ends and weave until one-half of that kind is used. Then weave about an inch and a half of bright color and follow with other carpet for center. Fol-

low with another stripe and finish with remaining half of the kind first used.

ANOTHER WAY.

If you have carpets in two distinct colors such as green and tan or red and green, weave an approach of one color same as above. Then weave an inch or two of color, same as center of rug. Follow with an inch or two like approach, and then weave body. Follow with a stripe like approach, then one like center and finish with the approach. A dark color for approach and a light shade for center works well together.

BORDER ALL AROUND.

The above designs are the kind mostly used. Fancy borders are slow and hard to make and can not be made at all times.

Persons who wish to try something of the kind we suggest the following:

Use two contrasting colors, dark for border and light for center or with a center of two or more colors well mixed.

Weave 5 inches of approach of dark material. Next secure two pieces of chalk line. Suppose the border is to be 6 inches wide all around. Measure six inches from edges of rug and select a warp thread at that point. Follow it and mark where it goes thru reed. Run chalk line thru that split in reed and thru frames, but not thru a heddle. Attach a weight and let end hang down back of upper rear frame or roller of loom. The end in front of reed is turned into warp shed and woven in at next shot to hold it in place.

You still have an inch of approach to weave. Lay in filling as usual except that when you come to chalklines you pass filling under it; pull filling up and turn back to prevent cord showing.

When you have laid in the last shot of approach, start across again with dark filling and when you come to chalk line pass filling under it, draw up thru surface and turn back toward edge so it will be out of the way. Now take a strip of light filling and double end around chalk line and let strip extend to right in warp shed. Continue with light filling until you come to other chalk line. Pass light strip around cord just as you did the dark one on opposite edge. Then double dark strip around cord and fill in to

edge, beat and fill in to cord. Turn dark filling up. Then take end of light filling which you pulled up last time across and turn down into shed and put in more light filling until you reach line again. Pull up light end. Turn down dark end into shed and continue to edge. Beat and continue in the same way until you get center made. Weave part of the approach, cut off chalk lines about two inches from beating point, tuck ends into shed and weave in with filling.

FLUFF RUG WITHOUT FRAYING.

Cut Ingrain one inch wide on true bias. Run strips thru sewing machine and make a long stitch with coarse thread. Lap ends of strips about an inch so strips will be in same shape as carpet rags. Wind or reel into skeins and tie each skein securely in several places. Wash and rinse thoroughly, dry well and weave with hand shuttle with loom warped as for Ingrain Fluff Rugs. The washing process ravel or frets the edges so they make a handsome rug with long nap. It requires considerable work but weavers can often induce their customers to prepare the material and bring it ready for the loom.

NOT FIT FOR WEAVING.

Good rugs can be made from good carpets only. The best rugs are made from all wool Ingrain and body Brussels carpets, no matter how badly they are worn. Some other kinds make fair rugs and some are not worth the effort required to weave them.

Tapestry Brussels make only a fair rug and Wilton and Velvet Brussels not as good as Tapestry. Moquette and Axminster make a poor grade of rugs and are hardly worth weaving but can be mixed with Ingrain to good advantage.

Granite carpet has jute center and wool covering and is not fit for rugs. Any carpet with jute, hemp or cotton cords is not fit for weaving. Cotton Ingrain mats down easily and never looks as nice as wool but wears well.

Chenille curtains can be cut up for rugs but are cotton, soils easily, cannot be cleaned and gives poor satisfaction.

SILK CURTAINS

Use silk, satin, or velvet cut one-half inch wide and sewed like carpet rags. A square yard will require from one pound to a pound and a quarter of filling.

For warp, use carpet warp, heavy spooled linen, mercerized cotton or silk. Warp and thread as directed for seersucker or puffed carpet, or double sley 6 openings and skip 12 all the way across.

Divide filling equally before starting so both curtains will match. Keep a very light tension and press, rather than pound the filling.

Warp should be as near color of filling as possible. Weave with hit and miss or all plain filling. Several one or two inch bars near end will add to appearance.
75c to \$1.00 per yard.

WARP DESIGN.

Use No. 11 reed. Double sley eight splits at each end of the reed for strength. The balance consists of four splits, double sleyed and 10 splits skipped all the way across.

PORCH PILLOW COVERS

They should be woven in bright colors. High school or college colors may be used to good advantage.

Thread up loom as for ordinary carpet or rugs, a yard wide. Use warp of one color and a shade that will go nicely with the filling.

Weave as if you were making a rag rug a yard wide, but only a half-yard long. Be sure to leave warp for fringe at each end. It will look well if made up with a fancy border at each end, just like a rag rug with nearly all of the center or body left out.

After it is taken out of the loom, fold double, so selvage edges are together. This will make it a half-yard square.

Next knot the fringe, but take half of the warp for each knot from top and half from bottom, in order to close the two edges. This will leave it open on selvage side only.

COUCH COVERS.

Rich couch covers can be woven in the same manner as silk curtains or portierres.

TABLE COVERS.

Weave same as silk curtains, in form of squares with bright hit and miss filling. Edge with heavy silk or chenille fringe.

FLY NETS.

Weave with orange warp. Use blue warp for fringe. Use same amount of warp as for common carpet 30 inches wide. Double sley one inch of reed, skip one inch, double sley one inch and repeat. Weave two pieces for each net, each 30 inches wide and about 60 inches long. Sew two pieces together. A small piece can be woven for neck. \$2.25 per pair.

HAMMOCKS.

Double sley reed about 42 inches wide. Leave one yard of warp empty; then weave in warp filling for two or two and a half yards. Leave another yard empty. After it is taken out of loom, twist end warp to form cords and tie to ring. Have outside cords shorter. Put in enough warp for several. Sell for \$1.00 each.

PORTIERRES.

Both warp and filling should be finer than for carpet and rug weaving. For warp use mercerized cotton, linen or silk. Fifteen or twenty threads to the inch is about right. Use a medium reed double sleyed, or better still, a fine one single sleyed.

The filling should be new goods cut very fine, so it will look more like a strand of yarn when woven. Use any white goods such as fine cotton, serge, or other light wool goods. Worn sheets and pillow cases may be dyed and used with white filling to give the necessary color to the weave.

Weave without borders. Where a tinge of color is wanted, weave in short pieces of colored filling at irregular inter-

vals. Draw two warp threads thru every other opening in the reed as directed for style No. 6 of Rag Rugs.

WOOL RUGS.

These should be plain and in deep shades. Any loom owner who keeps sheep and knows how to spin can weave up the coarsest and least valuable wool and use for rug filling. It should be spun loosely and as large as a pencil.

This yarn can be used for both warp and filling. Use No. 6 reed. The warp and filling will show equally and some splendid effects can be secured by using one color for warp and a different one for filling.

You can also weave these rugs with the heavy wool filling and ordinary cotton or wool warp. Use a medium reed—a No. 10 or No. 11 will be about right. Warp as directed for rag rugs, style No. 6. Draw 4 threads thru each harness, thread 4 thru same opening in reed and skip three openings. Beat up filling extra tight so warp does not show.

Dye filling deep dull red, blue, orange and black. These with white will give you the best colors for such work and the combinations you can work out will be surprising. Start and finish the rugs as you would a rag rug and weave it in the same way.

Here are some suggestions for color combinations:

Border 8 inches plain red. Body of red and white woven alternately. Weave red and black alternately for one foot at each end. Center plain red.

Border one-half inch orange, one-half inch black alternately for 18 inches. Body of orange.

Border of plain blue about 20 inches deep. Center blue and white in alternate stripes one inch wide.

Border 8 inches of black, one inch orange and two inches black. Center blue and orange woven alternately, or one strand of each woven from shuttle at same time.

DYEING

While most weavers leave the preparation of filling to their customers, yet a weaver may often wish to do some dyeing for special work. For this purpose there is nothing better than Diamond Dyes and similar package dyes. Splendid results can be secured with vegetable dyes. You may need the help of some one with experience in home dyeing as this is a subject not fully covered by books.

Many women have had experience with indigo blue. It is a color that will neither run or fade if used right. Cotton goods dyed orange and dipped in a medium blue gives a good fast green. The package dyes in both orange and red can be relied upon. This will give you orange red, blue, green and white, which is variety enough for almost any weaving.

Different shades can be secured by changing the length of time the goods are in the bath. Ordinary copperas gives a good yellow or buff color. An after dip in indigo gives a dull green. Walnut bark or hulls give various shades of yellow and brown.

For dyeing use only vessels of brass, granite, copper or porcelain. Avoid iron, tin or enameled ware with any spots worn thru to the iron beneath, as the iron will quite likely ruin the color. Use soft water as lime in well water makes it unfit for dyeing.

DIRECTIONS FOR INDIGO DYEING.

Reduce a pound of powdered indigo to a paste with water. Add three and three-quarter pounds of fresh slacked lime and stir well. Add two and three-quarter pounds of green copperas (clean crystal) and stir briskly.

Stir at frequent intervals for two days.

The material to be dyed should be clean and free from grease.

Put a part of this mixture in the dye vessel and dilute with water according to the shade desired. The weaker the solution the lighter the shade will be.

Place the solution over a fire and bring to a simmer. Put material in the dye wet. Poke, push and stir the material for about two hours.

If the shade is too light, add more dye; if too dark add hot water and keep goods in bath until you get the shade desired.

Don't be discouraged if the first trial proves a failure but experiment until you can get the desired result every time.

ANILINE DYES.

Anyone who weaves new material exclusively and who does their own dyeing should buy aniline dyes in bulk. These can be purchased by the pound from dealers in dye-stuff.

DESIGNING.

We have given you a number of designs and the cams that make them. The black squares represent the warp threads and the white squares the filling threads. To plan a design, first make a square composed of 16 small squares, four each way like the following, which is the design for union cloth:

1 2 3 4 HARNESSES

■ ■ ■ ■ 1 pick or show

□ □ □ □ 2 " " "

■ ■ ■ ■ 3 " " "

□ □ □ □ 4 " " "

In the first pick No. 4 harness will be up, No. 3 down, No. 2 up, No. 1 down; the second pick, No. 4 and 3 up and 2 and 1 down, and so on. To find the cams for the above, you will find the cam for No. 4 harness. Reading down it will read up, up, down, down. You must find a quarter cam that will go on the shaft so one corner will be up and the other corner to the right; you will find No. 9 will do this. No. 3 harness reads down, up, up, down. This requires another quarter cam, as two are up and two down; but it must be down at the first pick, so you must find a cam which will point to the right and down. Cam No. 7 will do it. No. 2 harness will want cam No. 10 and No. 1 harness, No. 8. One design does not show the weave complete, but by joining four or more designs together you will then get a good idea how the cloth will look. Remember, if over half of the squares are black, then the warp will show more than the filling; but if over half are white, (like satin) then the filling shows more than the warp.

ZIG-ZAG WEAVES AND FANCY THREADING.

Zig-zag weaves are simply a variation of Kersey Twill. Suppose you want to make warp run four threads in each direction, start same as for Kersey by threading through fourth harness, then through 3d, 2d and 1st. Now change direction of the twill by threading the next through 2d frame, then the 3d and 4th. Next goes through 3d, 2d, 1st and so on. As long as you thread this way you can make a very pretty twill with warp running zig zag, four threads in each direction.

A pretty effect is secured by threading two colors, say red and white. Put one color through 3, 4, 3, and the other through 2, 1, 2, and repeat.

Try this for a stripe the width of 2 sections then put in 4 sections of plain ground work such as all brown or black. Repeat three times for a yard. Thread stripe with one color in 4th and 3d frames, then the other color in 1, 2, 1, then the first color in 3, 4, 3, and repeat. Thread ground work 4, 3, 2, 1, and repeat and ground will be Ker-

sey with three fancy stripes between, each 4 inches wide.

Another pretty effect is produced by threading through 4, 3, 2, 1, and repeat. Then change by threading next through 2, 3, 4, 1, 2, 3, 4, then change as on the start and repeat. This will make a zig zag of 8 threads in each direction.

Try red in 4, 3, 2, 1, seven white in 4, 3, 2, 1, 2, 3, 4. Then red in 1, 2, 3, 4, 3, 2, 1. Then seven white, seven red and so on, threading twice through the frames in each direction.

Try 4 white, 7 red, 4 white, 13 green and repeat.

You can run a twill as far as you wish by threading it in same direction. You can thread the twill half way across the piece in one direction and the other half in the other direction. This will bring the twills to a point in center of piece.

By experimenting a little you will see there is actually no limit to the different ways you can thread up and weave on your loom.

DOUBLE-WIDTH CARPET AND RUGS.

This is a 2-harness weave and can not be made in twills. Use the same reed as for 2-harness carpet or rugs, but use just twice as much warp and your finished carpet or rug will then have warp as thick as 2-harness work a yard wide.

Use cams No. 6, 11, 5 and 13. Put on 13 first, then 5, 11 and 6, and both selvage edges will be at the left side of the loom.

Have extra threads at left, so selvage edges will be stronger. Do not use any extra threads at right or it will make a streak of crowded warp which will be in the center of the piece after it is taken out and laid flat. Some claim it is better to leave next to last split empty at right, as it overcomes this tendency.

Set your temple so you can keep piece as wide as reed is threaded. Be sure it reaches through both upper and lower fold and change the temple frequently.

Watch the closed side closely and make it perfectly straight or the piece will not lay smooth.

This work requires great care but is worth the extra effort.

KERSEY DRESS GOODS.

Use two-ply cotton warp for chain and home spun wool yarn or Germantown yarn for filling. Draw four

FOUR HARNESS DESIGNS

We will now offer a number of 4-harness designs, many of them original with our customers.

(Note:—While our 4-harness designs are for a No. 10 reed double-sleyed it is not necessary to use that amount of warp unless you wish. You can single sley any reed and weave with Kersey cams or you can double sley a coarser reed such as No. 8 or No. 9 and in this way you can vary the amount of warp at will. However, the 4-harness work will be better if made with a No. 9 or No. 10 reed, double sleyed. While it requires considerable warp it makes an extra fine carpet, different in appearance from any other carpet and which will outwear any common carpet.)

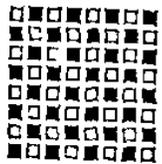
CAMS TO BE USED FOR DIFFERENT WEAVES.

Below we give you the names of different weaves and opposite each the set of cams used to weave it.

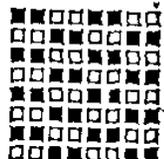
Plain cloth	1, 2, 1, 2	Basket Weave	1, 6, 1, 4
Double plain	2, 2, 1, 1	Double thick	12, 10, 11, 3
Jeans	5, 6, 3, 4	Double Width	6, 11, 5, 13
Satinet	5, 3, 6, 4	No. 1	2, 2, 1, 2
Kersey Twill	8, 7, 9, 10	No. 2	6, 8, 12, 7
Tweed	2, 1, 1, 2	No. 3	11, 13, 1, 2
Birdseye	10, 7, 2, 1	No. 4	3, 4, 1, 2
3-ply	14, 7, 8, 3	No. 5	12, 6, 2, 9
Seamless bags	3, 11, 5, 12	No. 6	9, 9, 2, 1
Double thick		No. 7	12, 4, 6, 4
Cassimere	1, 14, 3, 10	No. 8	6, 3, 1, 2
Herringbone	4, 11, 6, 13	No. 9	6, 1, 4, 3
Union Cloth	9, 7, 10, 8		

DESIGNS.

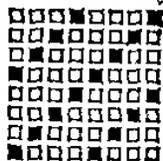
Here are cuts of the above weaves. The black squares or dots represent the warp and the white squares the filling:



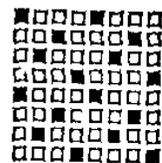
Plain Cloth.



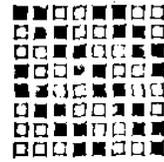
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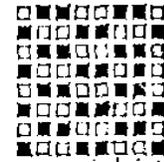
Jeans.



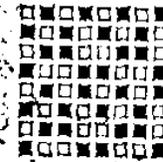
Satinet



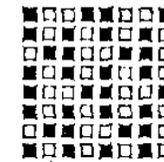
Kersey.



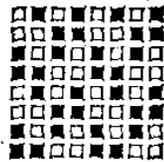
Tweed.



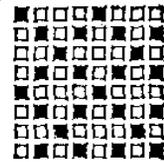
Birdseye.



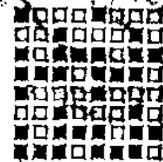
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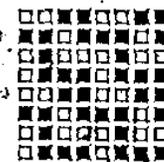
Union.



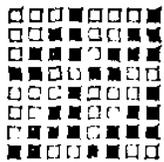
Basket.



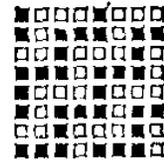
Double Width.



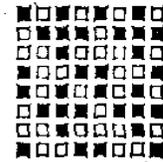
Two-Ply.



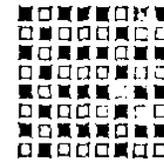
Three-Ply.



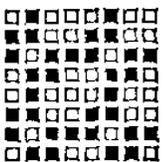
Seamless Bags.



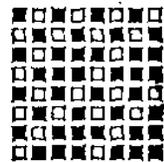
Double Cassimere



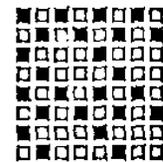
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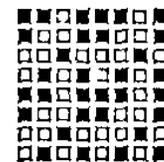
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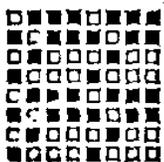
No. 3



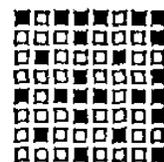
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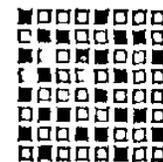
No. 5



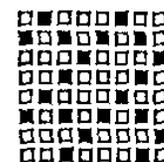
No. 6



No. 7



No. 8



No. 9

threads of warp through each split of the reed and use Kersey Cams. Change the front rollers, placing smooth roller above and keep a very light tension.

SATINET.

Use warp and filling as directed above, thread in the same way but use cams, 5, 3, 6 and 4.

UNION CLOTH.

Thread and weave as directed above, but use cams 9, 7, 10 and 8.

TOWELING.

Some of our customers make beautiful toweling with white cotton warp and filling. They can be woven in any of the fancy weaves mentioned above and finished plain or with a fringe.

LINEN.

Home-spun linen can be woven by threading and weaving the same as other fine goods. Linen suitable for weaving can also be secured from some warp dealer. If any of our customers wish to try this work and will write us, enclosing stamp, we will give them the name of some one who can supply them with the material wanted.

FINE ALL WOOL BLANKETS.

Double sley No. 12 reed, and use Kersey Twill cams. Thread the reed forty inches wide. Use all wool yarn No. 8 or 9 (8 or 9 cuts to the pound) for warp and filling. Ten or eleven cuts will make a yard, and ten yards or two pair, will require about 110 cuts. Weave two and one-half yards long and sew two widths together.

FINE MIXED BLANKETS.

Double-sley No. 10 reed, thread forty inches wide. Use No. 8 or 9 cotton for warp (strong enough for two threads to hold up a bunch or hank.) Tie two hanks or skeins together, boil out in soap suds (dry). Take lump starch and make starch as for clothes, dip each skein, but do not have starch too stiff. Shake and dry well, spool and put in as above. Use No. 8 wool yarn filling. This makes a heavy blanket and many prefer it to all wool.

These designs are furnished by one of our customers in Ohio, who states the all wool blankets are selling readily in her locality for \$7.50 per pair, and the mixed blankets for \$5.50 per pair.

SEAMLESS SACKS.

Use warp for warp and filling and draw either 2, 3, or 4 through each split, depending on how heavy the warp may be and how heavy you want the sack.

Start with cams 3, 11, 5 and 12 and weave the length of one sack, then put on cams 1, 2 1, 2, and weave two inches of solid cloth for bottoms of two sacks. Change cams and weave length of two sacks. Weave bottoms and change back again. When finished cut the seamless tube in the center and cut through center of solid weave. Hem open ends.

4-HARNESS TWILLED CARPET.

Use No. 10 reed double-sleyed, 756 ends to full width, 42 ends to a section. Sec. 1 and 18, 42 black. Sec. 2, 3, 16 and 17-42 light brown. Sec. 4, 5, 14 and 15, 42 dark brown. Sec. 6 and 13, 42 black. Sec. 7, 14 white, 14 brown 14 black. Sec. 12, 14 black, 14 brown, 14 white. Sec. 8, 21 red, 21 white. Sec. 11, 21 white, 21 red. Sec. 9 and 10, 42 red. Use cams 8, 7, 9 and 10.

4-HARNESS TWILLED CARPET.

First Sec. 21 black, 21 blue. 18th Sec. 21 blue, 21 black. Second Sec. 16 orange, 16 red brown, 10 dark brown. 17th Sec. 10 dark brown, 16 red brown, 16 orange. 3d Sec. 6 dark brown, 21 black, 15 red. 16th Sec. 15 red, 21 black, 6 dark brown. 4th Sec. 42 red brown. 15th Sec. same. 5th Sec. 28 black, 14 blue. 14th Sec. 14 blue, 28 black. 6th Sec. 11 blue, 21 orange, 10 red brown. 13th Sec. 10 red brown, 21 orange, 11 blue. 7th Sec. 11 red brown, 20 dark brown, 11 black. 12th Sec. 11 black, 20 dark brown, 11 red brown. 8th, 9th, 10th and 11th Secs. 11 black, 20 red, 11 black.

Use No. 10 reed double sleyed and Kersey cams.

AN ODD H & M 4-HARNESS DESIGN—DIAMOND PATTERN.

First, 3d, 5th, 7th, 9th, 11th, 13th, 15th, and 17th Sections, 19 white, 19 green, 5 red. Reverse the colors in the thread guide and fill the remaining sections. Your warp will now be nine stripes with red in the center, green next and white on the outside. Double sley a No. 10 reed. Start threading the first section and draw through No. 4 frame, the No. 3, No. 2 and No. 1. Repeat until all of first section is threaded.

The last thread of the first section should be in the second frame. When you start the next section draw the first thread through the third frame, next through the fourth, then thread the balance through 1, 2, 3, 4 and repeat. Thread the next section same as first and the next same as second and repeat.

Use hit and miss rags. Start with cams 8, 7, 9, 10. Weave about 43 shots, then reverse twill by changing cams to 10, 9, 7, 8. Weave enough to finish diamond, then change again as on the start and continue until carpet is finished.

ORIGINAL 4-HARNESS HAMMOCK DESIGN.

Double sley reed 45 inches wide with alternate stripes of red and black, each about 2 inches wide with about 10 threads of green between each stripe and two or three threads of canary in center of green stripe. Use red warp for filling and Kersey Twill cams. Weave 4 or 5 inches of warp, then thread a needle with warp and sew across the piece to keep filling from raveling. Leave one foot of warp empty, then start body of hammock and sew across it also. Weave body three yards long then sew across it again, skip one foot and finish with four or five inches of filling same as on the start. It is a good plan to warp enough for several hammocks and as soon as you have gone this far start another hammock and continue until you have woven out all of your warp. When hammocks are cut out of the loom, thread your sewing machine with as coarse thread as it will sew, about No. 36 is right. At each end, sew the five inches of solid weave to the hammock so you will have 6 inches of double warp at each end. Sew the five inch piece firmly to the hammock with two seams along each edge of the five inch strip. This leaves a place to slip in a stick to spread the hammock. Tack the hammock to the stick with two-pointed tacks. At one end, just below the place for the stick, make a one foot tuck for the pillow. Sew it two or three times at the top and once at the bottom about one-fourth inch from edge, to improve the looks, but do not sew it first to body of hammock at the bottom. The ends are finished with heavy seine cord. The rings should be about two feet from end of hammock. Tie the cord back and forth between the ring and the doubled warp. The hammock can be finished plain but is better made with valance for each side. This can be made in the following way:

Double sley the reed 12 inches, skip 12, then double sley 12 more. Use same colors and same filling as for the hammock. Weave about 8½ or 9 feet solid and you have

two sides for each hammock. As you weave, cut the warp in the middle after you have made an inch and tie it. This keeps it from raveling. Sew the selvage edge to the edge of the hammock with a needle threaded with warp and gather it slightly. This gives you a solid weave one foot wide with a nice fringe hanging down on each side of the hammock. A double row of knots in the fringe will add greatly to its appearance. The hammock will be about 43 inches wide by 7 feet long. \$1.00 worth of warp will make a plain hammock and \$1.60 worth will make the one with valance. The plain one sells readily at \$4.00 and the other at \$5.75.

TO MAKE FRINGE.

The best warp to use for fringe is saddlers' stitching thread. You can get it in several colors. It is much finer than warp and will not make so thick a binding for the fringe.

Draw in 4, 3, 2, 1, and put two threads in each split in the reed for 1½ inches, then skip 8 inches in the reed and draw in 3 inches, then skip 8 inches, draw in 3 inches, skip 8 inches, draw in 1½ inches; this will make 33 inches wide in the reed. Use cams for plain cloth, Kersey, Union or Satinet. Use good heavy yarn for filling. If you use saddler's thread put in 4 or more threads in each split, for the warp must be close together when woven. You will be making six lengths of fringe at once, so 10 yards of warp will make 60 yards of fringe. Cut apart when finished.

A FEW PRACTICAL SUGGESTIONS.

See that the shuttle does not rebound in the boxes.

See that the shuttle wings do not bind the shuttle. The shuttle must start without a jerk.

See that the dirt and gum is cleaned off every time the loom is empty.

Use good machine oil for oiling the loom and clean with kerosene.

See that the loom stands level and perfectly solid.

See that the cord at the bottom of the loom is tight enough to pull the picker sticks out to the end of the shuttle boxes just ahead of the shuttle.

If the pins on front roller catch your goods don't drive them into roller. They may be bent a little. If so, straighten them. If they still bother, take a file and make end smooth and round. Make a firm weave and do a good

job, of warping and beaming and you will have no trouble with the pins.

And finally, we have tried to be plain and practical, and if you will follow these instructions carefully we believe you will be well pleased and find the new loom to be a money maker for you. If you use proper care this loom should last you a life time and be a source of pleasure and profit.

HOW TO CONDUCT A WEAVING BUSINESS

Have a good location if possible and if not make some nice samples and have a display in a window on a prominent street of your city. If you are in the country have the display in your village store. Everybody wants rugs. If a woman has a green room she needs green rugs. Green denim and green warp will make fine rugs. Get a bolt of yellow and make some with yellow warp. Try blue wool rags with white warp for bed rooms and blue calico rags for bath rooms. Do a retail business in warp and if you have room, add a small dye house. The results secured in your rug work will make it pay. Advertise in surrounding towns that have no weavers or where weavers are not wide awake and up-to-date with their work. You can pay lots of your advertising bills in rugs for the newspaper office or the editors home. As soon as business will permit, have a single delivery wagon with your name, address and telephone number. Collect and deliver all work if you are in a city and always collect for your work on delivery. If there is a parade in the city have a float with your loom in operation and banners calling attention to the artistic work you are doing. Have a booth at all fairs and carnivals with loom in operation and a display of your work and you can secure enough orders to keep you busy for weeks. Never send out a poor piece of work. When you undertake a piece of work do it right even if you lose money on it. You will know how to make the next job and can charge enough to make it pay. Be a wide awake hustler and you can build up a fine business. Put your surplus cash into new machinery. Weave fluff rugs from old carpets, also portieres or anything else that will pay. Later get a carpet cleaning outfit and clean carpets and rugs. There is money in it. Some add dyeing and dry cleaning, pressing, etc.

There is no limit to the business you can work up in this line.

PRICE LIST OF REPAIRS AND SUPPLIES FOR WEAVERS DELIGHT LOOM.

Send Cash With Order. No Goods Sent C. O. D.

	Price at Factory	Price by Mail
Advertising Cards, per 100.....	.25	.31
Bobbin .....	.10	.15
Bobbin Holder .....	.10	.12
Cast Pawl for tension roller.....	.15	.19
Cylinders each .....	.10	.16
Cylinders per dozen	1.00	
(Cylinders cannot be mailed safely)		
Cylinder Filling Machine, shipping weight 20 pounds	5.50	
Cylinder Filling Machine Belt .....	.15	.16
Cylinder Filling Machine Funnel .....	.25	.32
Hand Shuttle .....	.05	.09
Heddles for Weavers' Delight, per 100.....	.25	.32
Heddles, 16 inch, extra heavy for rug looms, per 100 .....	.45	.55
Heddle Frame for Weavers' Delight, each.....	.70	
Per pair, 2 frames	1.40	
(Heddles are extra.)		
Heddle frames for rug looms made to order. Write for prices.		
Heddle rods, each .....	.25	.29
Heddle hooks, per dozen .....	.12	.15
Picker Stick, each .....	.25	.38
Picker Straps, each .....	.25	.27
Reeds. Our standard carpet reeds are 5 inches wide by 45 inches long, carried in stock with following number of openings to the inch, 6-7-8-9-10-11-12-13, 14 and 15. These are the highest grade reeds made and are guaranteed for 10 years. Price each	2.50	3.10
Rug Reeds, for weaving rugs from old carpets, on large looms, are carried in stock with 8 splits to the inch. Reeds are very heavy, 7 1/4 inches wide outside or 6 inches between ribs and can be furnished in any length. Other sizes made to order. Write for prices.		
Reed Hook .....	.10	.11
Rubber Bands, per doz.....	.25	.27
Shuttle, Newcomb fly shuttle, each.....	1.15	1.33

Shuttle Springs, per doz.		
Shuttle Wing Bolt	.25	.27
Spooling Machine	.25	.28
Spooling Machine Belt	2.50	
Spooling Machine Spindle	.20	.21
Spool Rack, holds 28 spools	.25	.28
Spools, hardwood, each	2.50	
Stirrup Straps, each	.10	.14
Swifts, each	.05	.06
Temple, 26 to 42 inch, each	.75	1.25
Temple, 21 to 26 inch, each	.50	.80
Temple, 14 to 24 inch, each	.50	.75
Tension Band	.50	.66
Tension Rod	.75	.90
Tension Roller spiked without ratchet, weight 6 pounds	1.00	1.28
Tension Spring	1.50	
Thread Guide	.25	.27
Warp Roller, complete	.75	.82
No Warp Roller Head (Right), 11 pounds	10.00	
No Warp Roller Head (left), 11 pounds	2.00	
Weight O for lever P, weight 12 pounds	2.00	
Weight for lever L, weight 8 pounds	.75	
Wrench	.15	.24

SEE CUT OF PARTS.

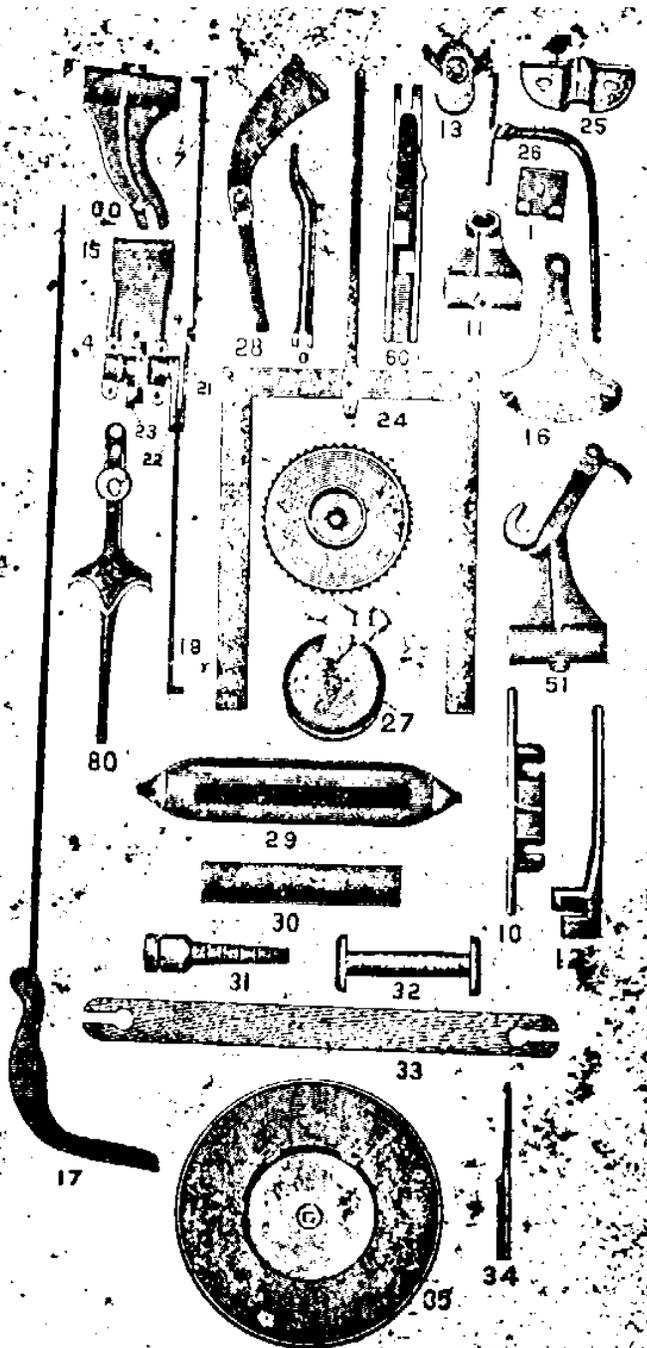
36. Lever Guide	.15	.21
37. Sled Runner	.40	.66
38. Gear Strap	.25	.33
39. Upper L Pawl	.15	.30
40. Lower L Pawl	.15	.19
41. L Spring	.08	.10
42. Upper P Pawl	.25	.28
43. Lower or Straight P Pawl	.25	.28
44. Lever P Spring	.08	.10
45. Sled Runner Clips	.15	.20
46. Lever P Roller	.10	.15
47. Ratchet Wheel on No. 3 (State if for upper or lower roller.)	.50	.71
48. Crank for Warp Roller	.40	.70
49. Yoke for Weavers' Delight	.90	1.29
50. Shuttle Wing	.50	.63
51. Floor Clips	.15	.21
52. Picker Spring	.20	.24
53. Big Bracket	1.50	2.05
54. Trigger Stick	.30	.50

Walking Beam Pinman	.25	.35
Sword Block, right side	.10	.12
Walking Beam Pin	.35	.44
Leather Shuttle Thrower	.60	.54
Weavers' Delight Yoke Slides	.15	.20
V Slide	.50	.60
P. Roller Strap	.15	.20
Burr on end of W. D. Shaft	.10	.12
Shaft	4.00	4.30
Gear complete, ready to put in loom consists of shaft, star wheel, and cog Z	6.75	7.50
A. Plate A	.25	.33
B. Rack B	.75	1.25
C. Cams 2-4, No. 8 and No. 9, each	1.25	1.40
G. Cams 2-4, No. 7, each	1.25	1.40
H. Cams 2-4, No. 10, each	2.00	2.25
I. W. D. Star Wheel	1.50	1.75
K. Cams, 1/4, No. 11 and No. 14, each	1.50	1.75
L. Cams, 1/4, No. 12 and No. 13, each	.75	1.16
M. Lever L	1.50	1.96
N. Stirrup	.75	.98
P. Lever P	1.15	1.25
R. Cams, 1/4, No. 3 and No. 6, each	1.15	1.25
S. Cams, 1/4, No. 4 and No. 5, each	1.25	1.40
T. Cams, No. 1 and No. 2, each	.60	1.00
W. Fork W	.50	.60
Y. Small W. D. Cog Wheel	.75	.95
Z. Large W. D. Cog Wheel		

ALWAYS GIVE FACTORY NUMBER OF LOOM WHEN ORDERING REPAIRS.

IMPORTANT NOTICE

The price of repairs by mail has been figured at the rate of one cent per ounce for fourth class mail matter and not under the new parcels post rates in effect Jan. 1st, 1913.



Weavers Dictionary:

Bobbin: a small tube or pin to wind thread onto sometimes called a cop, quill, etc.

Carpet Roller: The part on which the finished carpet is rolled.

Dent: One of the openings in a steel reed.

Double Sley: Putting two warp threads thru each dent in reed.

Floating Threads: A warp thread passing over several weft threads with out interlacing with them.

Harness: Any arrangement of framework or straps to perform some mechanical operation, as loom harness.

Harness Frame: 'shaft' A frame for holding the heddles in a loom harness, also called a heddle frame.

Heddles: a twisted wire or cord having in the middle a loop (heddle eye) to receive a warp thread, forming a part of a loom harness which by rising and falling cross the warp threads and form the shed for the passage of the shuttle sometimes called harness gear eye strings.

Heddle Rods: the rods on which the heddles are strung.

Lay: The swinging beam that holds the reed which beats up the weft or filling; also called lathe, batten, beater, etc.

Picker Stick: The long straight stick at outside of the loom, which throws the shuttle.

Reed: That part of a loom that drives the filling or weft against the woven fabric, consisting of two horizontal bars connected by numerous parallel strips (as cane or thin strips of steel), between which the warp threads pass: sometimes called a slay or comb.

Splits: or splints. One of the divisions in a cane reed.

Shed: Opening in the warp thru which the shuttle is thrown.

Shot: Each time the shuttle is thrown the warp shed.

Shuttle Race: Same as loom race, etc; the track of the shuttle on the lay.

Swift: A device for holding skeins of warp, yarn or thread.

Sword: The part of the loom that supports the lay.

Single Sley: putting one warp thread thru each dent in the reed.

Temple: A device used to keep piece from narrowing while weaving

Thrums: Ends of warp left in the reed and harness that cannot be woven.

Warp: The thread that runs the long way of a fabric sometimes called a chain.

Warping: The process of winding warp thread onto the warp roller

Warp Roller: The large sectional roller on which the web is wound. Also called the warp beam.

Web: All of the threads in a piece of fabric.

Weft: The cross threads of fabric carried by the shuttle.

Newcomb Loom Co.

DAVENPORT, IOWA, U.S.A.

Price List of Repairs and Supplies

To our Patrons:

This list of repairs and supplies supersedes all previous lists that have been issued.

Unless otherwise stated these prices are all f.o.b. Davenport.

Since the majority of the parts can be sent by parcel post, we have inserted the approximate weight of each article. By having the weight you can ascertain the amount to add to your remittance to cover the postage by consulting your local postmaster, as the amount is governed by weight and distance.

Letter "C" in "Weight Column" indicates that the article cannot be sent by parcel post, due to its weight, size or shape.

We suggest that you use our regular order form and designate the part or parts by number (where one is given) and description, and in every instance please give the factory number of the loom which is stamped either on the hand rail or on front post.

SPECIAL ANNOUNCEMENT



The "Long Wear" Aluminum Shuttle
for use in our Fly Shuttle Looms

Light in Weight — Practically Indestructible

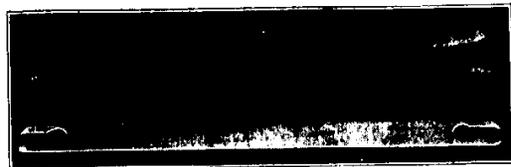
Constructed so our regular cylinders can be used.

#29 Price: \$9.25 each

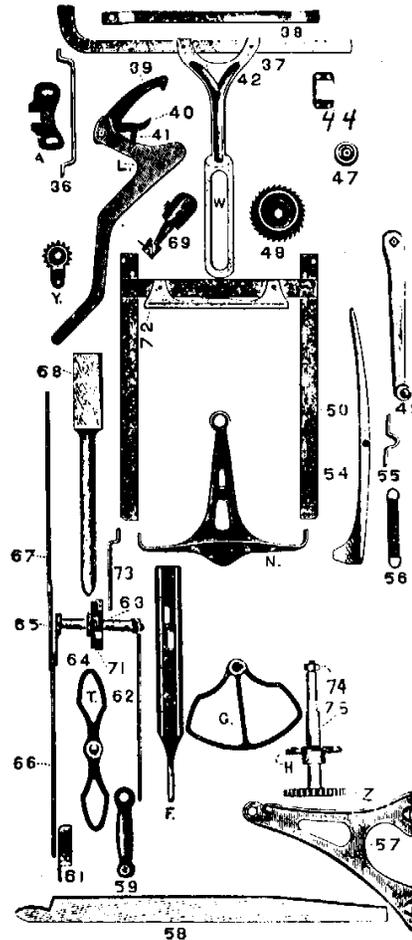
F.O.B. Davenport, Iowa
Shipping weight approximately 2 lb.

WOOD HAND SHUTTLES

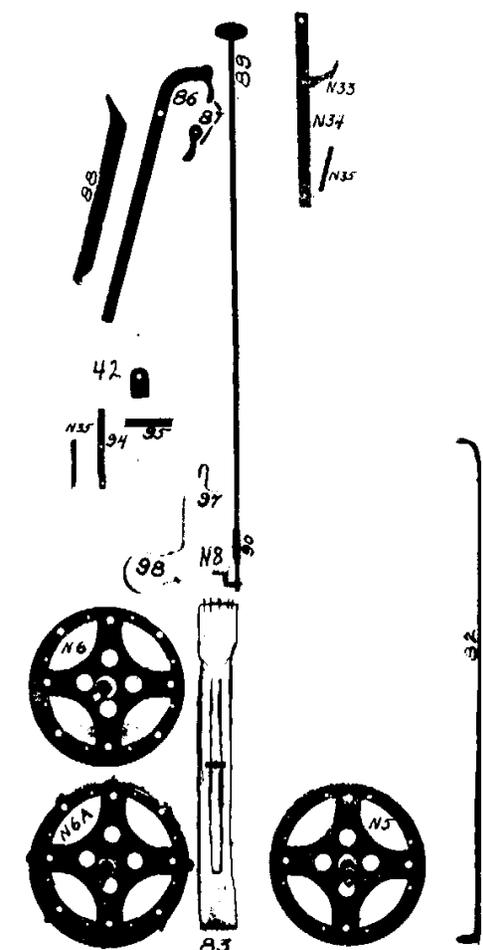
No. 2 Wood, \$3.15 ea. wt. 1 lb.



No. 1 Wood Flat open ends
\$1.70 each, wt. 6 oz.



5" wide, 45" long, ea. \$24.00
Following dents: 6, 7, 8, 9, 10, 11,
12, 13, 14, 15.
Extra strong — Highest grade steel



TEMPLES
(stretchers)
*83 Temple 26 to 36 \$5.85 2 lb.

SEND CASH WITH ORDER
No Goods Sent C.O.D.

All prices and quotations are subject to change
without notice.

Preserve for future use

REPAIRS--MISCELLANEOUS--SUPPLIES

Order by No. and description, always give factory No. of loom.

	Price at Factory	Approx. Shipping Weight
*69 Boot Heel, see shuttle thrower	4.75	6 oz.
Belt for cylinder filling machine	4.50	2 oz.
Bolt for Lever L	4.75	2 oz.
Bolt for Cog Y	9.45	2 oz.
Apron for loom, 41" wide, 32" long without rod	9.45	2 lb.
with rod	10.45	3 lb.
Bat for cyl. mach.	3.95	1 lb.
Cylinder Box	4.90	3 lb.
Cylinder filling machine	33.95	14 lb.
Tin Cylinders (Doz)	18.84	3 lb.
Funnel, cyl. mach.	6.45	1 lb.
Heddle rods	3.85	1 lb.
Heddle rod hooks (Doz)	5.04	6 oz.
Heddles 10" (100)	4.95	8 oz.
Heddle Frames, #3	23.00	C
Heddle Frames, W.D.	23.00	C
Instruction Book	3.50	4 oz.
Picker Sticks ea.	5.10	1 lb.
*56 Picker spring	1.55	4 oz.
Picker, Straps (Pr)	5.10	4 oz.
Rubber bands, (Doz)	.72	2 oz.
Rubber bumpers for shuttle box (2)	1.20	2 oz.
*34 Reed hook	2.47	1 oz.
*29 Shuttle, fly shuttle loom (See special announcement)		
*33 Shuttle, Hand loom (see special announcement)		
Shuttle spring, brass for eye in alum. shuttle (Doz.)	3.84	8 oz.
Steel spring, holds cyl. in shuttle, ea.	4.51	2 oz.
*54 Shuttle wings	4.20	1 lb.
Shuttle wing bolts	1.45	2 oz.
*69 Shuttle thrower	4.75	6 oz.
Cord & Spring	1.95	8 oz.

Spool rack (28 sps)	21.00	C
Spool rack wires (Doz)	12.84	2 lb
Stirrup straps, (2)	.90	3 oz
*49 Warp beam crank	4.65	2 lb
Extra sectional warp beam with N-5, N-6, cross arms	66.00	C

WEAVER'S DELIGHT REPAIRS
Prices shown are F.O.B. Factory

*44 Sled Runner Clip	2.05	1 lb.
*37 Sled Runner	5.90	2 lb.
*38 Gear Strap	2.90	1 lb.
*39 Upper pawl for "L"	4.45	1 lb.
*40 Lower pawl for "L"	4.45	1 lb.
*41 Spring for Lever L	.82	1 oz.
*48 Ratchet Wheel	6.00	2 lb.
*50 Yoke with V slide	9.70	4 lb.
*55 Floor Clips (2)	1.30	8 oz.
*57 Large Bracket	8.80	4 lb.
*58 Trigger stick	4.75	1 lb.
*59 Pitman for walking Beam	5.10	1 lb.
*68 Walking beam pin	8.60	1 lb.
*72 V slide for W.D. yoke	3.10	1 lb.
* Gear complete, consisting of shaft, nut, "H" star Wheel and "Z" gear	30.00	6 lb.
*A Iron plate on gear rail	3.85	1 lb.
*B Rack that operates gear	8.50	4 lb.
*C Cams VIII-IX	6.10	2 lb.
Cams VII, each	6.10	2 lb.
Cams X, each	6.10	2 lb.
*T Cams I-II, each	6.10	2 lb.
*W Fork (attached to sled runner)	8.10	3 lb.
*L Lever (no pawls)	10.00	3 lb.
*N Stirrup (no strap or spring)	8.25	3 lb.
*Y Small cog in connection with gear	5.45	2 lb.
N100 Ext. bracket for upper rear roller	4.10	3 lb.
Lower front carpet roller complete with ratchet	20.00	10 lb.
Hand rail (without handle)	16.00	7 lb.
Hand rail handle (metal)	5.90	2 lb.
*82 Tension band	5.80	2 lb.
*89 Tension rod	5.90	3 lb.
*90 Tension spring	1.30	3 oz.
Bracket For Band	1.10	5 oz.

*98 Thread guide	5.10	1 lb
*N5 Plain head for sectional warp beam	16.00	12 lb
*N6 Flanged head for sectional warp beam	20.00	14 lb
N8 Bracket for tension rod (rt. rear post)	3.22	8 oz
*88 Brace, Iron	6.95	2 lb
42 Iron box for carpet roller	2.25	8 oz
Boxes, wood for warp beam, pair	4.00	8 oz
Floor Irons, fasten loom to floor, each	2.95	8 oz
Hinge rod, picker stick fastens to loom rod	5.10	1 lb
(5-16" X 48 1/2")	6.62	2 lb
*94 Strap for Lever L Tension device	.95	4 oz
*95 Spring for Lever L tension device	1.55	4 oz
*97 Clip for Lever L tension device	.95	8 oz.
*47 Wheel or roller for Lever L tension dev.	1.35	8 oz.
Hook and thumb nut for Lever L tension	.75	8 oz.
New Lever L. tension and take up device	5.55	2 lb.
103 Right -Metal yoke slides	7.75	4 lb.
103 Left -Metal yoke slides	7.75	4 lb.

#3 Loom Repairs

14502 up eqpd. with 10" heddles		
P3 Right Metal slides	7.75	3 lb.
P3 Left Metal Slide	1.75	3 lb.
#3 Gear Complete	34.00	4 lb.
*P Rack that operates gear	9.75	4 lb.

*THESE ITEMS ARE ILLUSTRATED

ALL PRICES F.O.B. DAVENPORT
PLEASE ADD POSTAGE