

SERIES D

INSTRUCTIONS
FOR
SETTING UP AND OPERATING
THE
WEAVER'S FRIEND
Carpet and Rug Loom

Equipped with Sectional Warp Beam

FACTORY NUMBER _____

Always Give Loom Number Every Time You Write

MANUFACTURED AND SOLD ONLY BY
THE NEWCOMB LOOM CO.
DAVENPORT, IOWA

PRICE 50 CENTS

WEAVER'S DICTIONARY

- BOBBIN**—A small tube or pin to wind thread on; sometimes called 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 through each dent in reed.
- FLOATING THREADS**—A warp thread passing over several weft threads without interlacing with them.
- HARNES**—Any arrangement of framework or straps to perform some mechanical operation, as loom harness.
- HARNES FRAME**—A frame for holding the heddles in a loom harness, also called heddle frames.
- 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, etc.
- PICKER STICK**—The long upright stick at outside of 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 sley or comb.
- SPLITS**—Or splints. One of the divisions in a cane reed.
- SHED**—Opening in the warp through which the shuttle is thrown.
- SHOT**—Each time the shuttle is thrown through the warp shed.
- SHUTTLE RACE**—Same as lathe race, loom race, etc.; the track of the shuttle on the lay.
- SWIFT**—A device for holding skeins of warp, yarn or thread.
- SWORD**—That part of the loom which supports the lay.
- SINGLE SLEY**—Putting one warp thread through each dent in a reed.
- TEMPLE**—A device used to keep piece from narrowing while weaving.
- THRUMS**—End of warp left in the reed and harness which cannot be woven.
- WARP**—The thread that runs the long way of a fabric; sometimes called chain.
- WARPING**—The process of winding warp threads onto the warp roller.
- WARP ROLLER**—The large sectional roller on which the web is wound.
- WEB**—All of the warp threads of a fabric.
- WRIFT**—The cross threads of fabric carried by the shuttle.

How to Set Up “Weavers Friend” Loom

Equipped with Sectional Warp Beam

NOTE: (Front of loom is where you stand when weaving. Right side of loom is to your right when you stand in front of the loom, facing it. Loom should be placed on a solid level floor.)

Insert front legs in socket of End Plates, D-3 and D-5, using the socket just above the long points. The slot in leg fits in the lug in socket; drive legs in as far as you can.

Fasten legs securely by tightening up the set screws.

End Plate D-3 goes on right side. The long point of D-3 and D-5 should be in front and pointing down. Next insert the frame, with D-00 and D-52 attached, in the sockets, just back of the front legs—D-52 is to be to the right.

This frame forms the rear legs.

Place loom in position you want it. See that distance between front legs is same as between rear legs.

Fasten the front legs to floor with two lag screws.

Next see that hangers D-00 and D-52 are in proper place—there should be a space of three inches between end of end plates, D-3 and D-5, and end of hangers D-00 and D-52, the hangers to point away from loom.

Lay the Cloth or Carpet Roller, with ratchet wheel D-2 attached, in the slots of hangers—the wheel (D-2) to be to right in hanger D-52.

Next put frame, with warp beam attached, in the upper rear sockets of D-3 and D-5, so that head of warp beam N-6 is to the left.

Push the arms of this frame into the sockets as far as they can go and tighten up the set screws.

Notice the warp beam is suspended on hangers, N-2 and warp beam is in proper position; therefore, do not change it.

Next bolt "take-up lever" (D-9 with two pawls, N-13 and N-14 attached) on inside of End Plate, D-3; at same time attach the long steel upright with same bolt.

The Pawls, N-13 and N-14, are to rest squarely on ratchet wheel, D-2. If same is out of line, make the adjustment by moving hangers, D-00 and D-52.

This "take-up lever" is used for rolling up the woven material on Carpet Roller.

After getting Carpet Roller in proper position, insert the spring keys or cotters in hangers, D-00 and D-52, to keep Carpet Roller in place.

Now place the other steel upright in position by bolting it to End Plate D-5.

TENSION AND BRAKE.

Notice the steel band, called "tension band," encircling the warp beam head, N-6, has two castings attached, N-12 and N-16.

Slip N-16 into fork or slot of casting N-15, which is fastened to arm of frame that holds warp beam, and fasten with bolt.

The casting, N-15, can be adjusted by the set screws that hold it to frame. After the adjustment has been made so N-16 fits properly in N-15 tighten up the set screws in N-15 so as to hold it in place.

Next attach foot lever (this is the forging with angle on one end and a threaded hole in the other) by slipping it in groove of casting N-16 and fasten it with set screw.

The angle on other end of lever should point to inside of loom. Next slip the loop end of coiled spring over the "S" hook in foot lever, and fasten the cord to left arm of breast beam where it enters casting D-5. This fastening to be made after Breast Beam has been placed in position, drawing it tight enough to lock the warp beam so you can not move it. This is the condition it should be in when you start weaving a fabric.

However, before you are ready for weaving, this tension will have to be released again,—merely give you these instructions now so you may become familiar with the tension before the loom is threaded up.

Next place the roller with cords attached and steel pins in each end in the steel uprights. See that the two uprights are in line. They can easily be adjusted by pulling them one way or the other. After doing so, tighten bolts that hold these uprights to plate D-3 and D-5. The wood roller should fit tight enough between the steel uprights to prevent it from falling out when weaving and at same time will not prevent it from turning when treadles shift the frames. The adjustment can be made by either drawing the uprights in at top or spreading them, as case requires.

NEXT TO PREPARE YOUR HEDDLE FRAMES.

Open hooks on end of frame that holds the heddle rods; drive rod through frame about three inches, or so end of rod is just inside of heddle frame. Place a small stick across the frame. This stick is to rest on both sides of heddle frame and run under the heddle rods. This will raise up the heddle rods a few inches and makes it convenient for stringing the heddles on rod.

Divide the heddles, putting one-half on each frame.

Drop heddles on rod one at a time.

Put all on the same way, so smooth ends will all be on same side.

When all heddles are strung, remove small stick, place rods in original position and close the hooks on end of frame.

Two ropes are fastened to roller above loom. These are for holding or supporting the heddle frames.

Each rope should make one complete turn around roller.

Fasten one frame to the two ends which hang back of roller, the other frame to ends in front of roller.

Hang frames so smooth ends of heddles are down.

Adjust frames so shed will open full width of reed when weaving, by hanging the frames so there will be a space of ten (10) inches between bottom of roller and top of frames when both frames are on same level.

Next put treadles (the two pieces of hardwood with a notch near the end and two small holes near the center) in position by slipping them in the 5-inch space formed by a bolt and eyebolts in frame that forms the back legs; the notches in treadles to slip around the eyebolts.

Next place the four treadle bar hooks in position (these are the forgings that have a narrow hook on one end and a wider one on the other).

Slip the narrow end of two of these hooks over the lower rail of back heddle frame so hooks will be to the back, or outside (one hook at each end of frame).

Place one of the treadle bars in the large opening of the hooks. (The treadle bars are the two pieces of hardwood, about 3 feet 5½ inches long, 2½ inches wide and about 1½ inches thick, and have a small hole in them about 2¼ inches from center.)

Connect the treadle bar with treadle, with the steel rod about 9 inches long and thumb nut attached, by slipping this rod through the bolt in treadle from underneath and the threaded end through the treadle bar.

Handle the front heddle frame the same way, except have the hooks toward front of loom, and drop heddle bar in hooks so the hole in treadle bar will be over the treadle that remains unattached, and slip the other steel rod through this unattached treadle, same as above, except where you used the hole to back of loom for back frame use the one to front of loom for the front frame. This spreads the frames apart and throws all the projections to the outside.

Next place the swords in position by slipping the pins in the holes in the long point of D-3 and D-5, pins to enter from the outside. The cut-out or offset in the sword should be to the front.

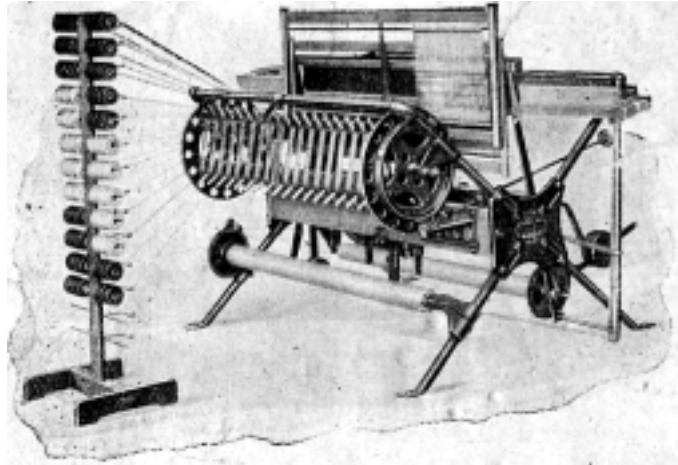
Next place the lay in position by slipping the narrow part of swords through oblong holes in lay. The beveled or uneven side of lay with groove in it is the top and the wide bevel of top should be to the front.

Next place the reed in groove in lay and slip hand rail with handle attached over the tops of the swords so reed will slip in the groove. Then put the bolts through holes in hand rail and sword. This will keep it in place.

Insert front frame or breast beam in sockets of End Plates D-3 and D-5.

THE SPOOL RACK.

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



The picture shown above is our Little Daisy. We use it to show Spool Rack and Sectional Warp Beam on your loom.

WARPING.

If you are a beginner, do not try a difficult piece. Try rag rugs a yard wide, with warp of one kind—white preferred.

(NOTE—Instructions are for a No. 11 reed. If yours is different, use more or less warp according to the reed table on following page.)

Place 24 half-pound spools in the spool rack, just as you see them in the picture. 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 in placing warp in guide.

Each of the 24 warp threads should be drawn through a different hole in the thread guide over warp roller. Knot all 24 threads together. Distribute threads equally in guide so warp will wind on roller flat and so it will fill space between pins evenly.

Now loosen up the tension band on warp beam head, N-6, by unscrewing the wing nut almost entirely; also untie the coiled spring on Foot Lever. This will release the pressure of band on N-6 and permit it to revolve freely. It must be in this condition when warp is being wound on warp beam.

If this method does not give it sufficient play, then take off wing nut, which will release the band entirely.

When you get ready to weave, replace the band, screw up the wing nut as tight as you can with fingers; also tie the spring on foot lever as outlined under "Tension and Brake." After you have drawn the 24 threads through the thread guide, knot all 24 threads together—that is, the entire 24 threads are to form one knot. Now the warp is ready to be wound on the warp beam.

Move the thread guide along the frame so that it will be directly over the first section to the right. Place the spool rack directly behind it, about 18 or 20 inches back of the loom.

It does not matter which section between pins you fill first in this instance, as all will be alike, but to aid in explaining work, begin at right and fill in rotation.

Remove tack from tape in first section and unwind tape; slip knot through wide part of metal loop on end of tape and draw it down to narrow part on extreme end. Now you are ready to wind it on beam. However, before proceeding further, we offer a few suggestions that will be of benefit.

SUGGESTIONS AND REMARKS.

The distance around beam is about one yard. 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; generally there is a shrinkage of from 6 to 8 inches to a yard.

Better have your warp for your first attempts plenty long, for you can't splice it if it runs short, while if plenty long, you can make a short sample piece of carpet or rug with the balance of the warp.

You must also allow for "thrums."

NOTE—Thrums are the end of warp at beginning of piece, also the end left in the reed and harness frames at the finish, which cannot be woven. The tape on warp beam reaches nearly to harness frames, so the loss at end of piece will not be very great.

Watch spool rack and see that all spools are unwinding.

Notice pins in warp beam are close to frame; therefore, keep hands off frame while warp beam is revolving.

Don't try to put on a part of the warp for a section at one time and part at another, or you will lose it.

If the design calls for a given number of threads, put that number of spools on spool rack; as in this case put 24 spools in 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 warp mills now put up warp on spools and the price is only one-half cent per pound more than formerly charged for skeined warp.

When putting warp on beam turn beam so top goes toward spool rack, or away from loom, which will make warp go downward and under warp beam.

When you have filled first section of warp beam, cut the warp between thread guide and warp beam, being careful not to allow warp to slip through guide. Make a knot of all the threads in guide, just as you did at first; also make a knot of all the threads on the first section you have just wound, and slip the knot over one of the pins in the warp beam so you can get at it easily later, when you start to draw through heddles in harness frames and reed.

NOW PROCEED WITH BEAMING.

Now move the thread guide over to the next section of the warp beams and fill exactly as you did the first.

Repeat this operation until you have the same number of threads of the same length in each of the 18 sections.

In order to have as little loss of warp as possible, care must be exercised in filling beam; that is, you must have the same number of yards on each section.

In the event you have, for example, two yards less on one section than the other 17, you could only weave to the length of the single short section and the amount left on the other 17 would be loss.

ANOTHER SUGGESTION FOR YOUR FIRST PIECE.

If you wish to make a carpet first, try this design which is for a piece a yard wide with three six-inch stripes in the warp. Filling can be all hit or miss or six inches of hit or miss and six inches of stripe alternately.

The stripe in warp has 12 threads of black in center, 10 green on each side, 10 canary each side of green and 10 black at each edge, 72 threads in all. The ground work between stripes will be 72 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.)

First put 24 spools in rack of color selected for ground work. Fill in rotation, sections 4, 5, 6, 10, 11, 12, 16, 17, 18. Follow carefully all the directions given on former pages for warping 24 spools of white warp.

Next provide yourself with 12 spools of black, 10 canary and 12 green, which will give you enough spools to warp the stripe. First fill spool rack with 12 spools of green and 12 black. Draw through thread guide so 12 black will come in center and 6 green on each side. Fill second section of warp roller, also 8th and 14th sections. This gives you the center of the three stripes.

Next fill spool rack with 10 spools of black, 10 canary and 4 green. Fill 1st, 7th and 13th sections. Draw warp through guide so canary comes in center, so green comes next to

green in center stripe and so black comes next to ground work.

The three remaining sections are the same, except colors are in reverse rotation, so leave the spools in rack, but rearrange them in guide and fill the 3d, 9th and 15th sections with warp in guide so black will be in center, green next to green and black on outside of stripe next to ground work.

THREADING HARNESS AND REED.

Remove the breast beam or front frame from loom for convenience, and get both harness frames on the same level.

Move the heddles a few inches away from the hooks. Lift heddle rods from hooks by squeezing heddle rods and top of harness frame together sufficiently to permit heddle rods to slip out of hooks.

Do the same with heddle rod running along the lower harness frame.

This will leave heddle rods free and permit you to slide heddles along rods where you want them.

Place one-half the heddles in each end of harness frames. Always commence in middle of reed and have the warp divided exactly in center.

Begin with the 9th section, unwind enough warp from warp beam to reach from warp beam over the upper rear tubular frame of loom and through harness frames and reed and enough additional to again permit you to tie the entire bout in a knot.

Untie the knot in end of 9th section and be careful to keep the threads spread flat in their proper places just as they come off the warp beam.

We again call your attention to be sure to see that the warp goes over upper rear loom frame then into the harness frames, and not direct from warp beam into harness frames.

Start with the first thread next to the 10th section and thread toward the 8th section. Let one person take the long slim reed hook, and place through exact center of reed and through the eye of a heddle in the rear harness frame. Drop the first thread on it and draw through both heddle and reed

at one operation. Place the hook through the next opening and a heddle in front frame and draw the next thread through. Repeat this, drawing through front and rear frames alternately. As soon as all of the 9th section are drawn through, knot them in front of reed.

Next begin with 8th section and thread the sections toward the right, one at a time, in rotation. You should double sley one or two of the openings at the outside of the piece in order to make a good, strong edge.

You now have a half of the warp drawn through. Complete it by starting with the 10th section. As you started the 9th section through the rear frame, you should draw first thread of 10th section through the front frame and continue just as you threaded the other half of the piece. Be sure to double-sley the outside split.

TO START CARPET.

Have knots in warp about a foot in front of reed and put the tension on warp beam as described in fore part of this book, under the heading "Tension and Brake." This will hold warp beam firmly.

Take a stick, an old broomstick will answer.

Press one treadle down as far as it will go.

Place broomstick through each of the 18 bouts between reed and knots.

Tie a strong cord or small rope around stick between 4th and 5th bouts from each edge, pass the cords or ropes over breast beam and make fast to carpet roller, which has holes in it for this purpose.

Pull up each bout and adjust the knots so there is no slack between stick and warp beam.

Work the lay two or three times and see that the warp comes straight over the upper rear frame of loom, through harness and reed.

Separate the heddles at the hooks and lift the heddle rods on the hooks before weaving.

Fill a shuttle with some coarse old rags by winding on shuttle like a figure 8, first on one side and then on the other. This will make the shuttle wide and thin, so it will go through the warp shed easily.

Hold one treadle down and throw the shuttle through; push other treadle down to cross warp behind filling.

Bring lay forward slowly about 11 inches, throw it back, pass shuttle through, cross warp and beat easily. Repeat this, beating a little harder each time, until you have a few shots woven.

Then fill a shuttle with warp and weave a half inch for a binding.

Then fill a shuttle with rags you intend to use and start your carpet.

(After the carpet is taken out of loom, cut between the old rags and warp binding, ravel out the old rags and use them again in starting another carpet.)

When you want to wind up the woven carpet on carpet roller release the foot lever on left hand side of loom by pressing it with your foot; this will release the brake or tension on warp beam. With your right hand operate the "take-up lever" on right side of loom and wind up the amount released.

As soon as you get carpet started set the temple so it is a yard wide. Turn the button so you can lift up the middle of temple. Push teeth down firm into carpet near edge and close up to the beating point.

Push down on middle of temple and turn button.

This will keep carpet spread full width.

After you weave four or five inches of carpet set the temple again.

NOTE—Some weavers dislike the stick and cords for starting carpets; they use an apron. You can easily make one out of old ingrain carpet, grain sacks or burlap. Tack one end to carpet roller and have it long enough to reach from carpet roller up over breast beam to starting point. Make a hem in each end and work 18 buttonholes, or place a rod inside of beam in front and attach 18 hooks on which to fasten 18 bouts,

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 section and 24 to balance.

ABOUT MATERIAL.

Every weaver should have some folders printed with the following suggestions about preparing carpet rags:

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, $\frac{1}{4}$ to $\frac{1}{2}$; 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 95 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.

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 $\frac{1}{6}$ one-sixth less of warp; for a 42-inch carpet use $\frac{1}{6}$ 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.

Honeycomb.—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. To thread, draw a thread of black through a heddle in rear frame, then a thread of white through a heddle in front frame. Repeat until you have six of each color threaded. Next change colors by drawing white thread through rear and black through front frame, until six of each are threaded. Change by threading as you did at first. Repeat until all are threaded. Nothing is nicer for ground work between stripes in warp.

Block Work.—Warp honeycomb, 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 Checkerboard.

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 honeycomb, or a narrow fancy stripe all double sleyed next to a single-sleyed ground work.

Snowflake, Polka Dot or Pin Check.—Use any two colors of warp, say black and white. Use one-third white or one 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 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 end 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 depends on what shade of 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 Section—Same.

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

2d Section—10 red, 4 blue, 4 white, 4 blue, 2 white.

11th Section—Same.

3d and 12th Sections—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 20 cents; warp extra.

STRIPED CARPET WITH HONEYCOMB 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 20 cents; warp extra.

DICE, BLOCK WORK OR CHECKERBOARD.

Thread entire carpet as for Honeycomb. 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.

THE SIZE OF SQUARES.

The squares in block work, brick work or checkerboard can be of any size. If threaded like honeycomb 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.

SNOWDROP.

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 Section—Same as first.

3d and 12th Sections—Same as above, except colors are reversed.

2d and 11th Sections—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 honeycomb, makes a good ground. Green and black threaded honeycomb 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 far for honeycomb 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 6-inch stripes with 12 inches of honeycomb 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 rotation: 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 woollen 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 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 border 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 place.

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 repeat 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 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 rags 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 3 threads through three heddles in back harness and then 3 through heddles in front harness. Repeat. Draw 3 threads through same opening in reed, skip two spaces and draw 3 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 portiers.

For extra thick heavy woolen rags 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 three or four spaces between.

The same style can be made by drawing 2 threads through each harness and threading 2 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 5 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 3 inches of blue. Stripe is made as follows: One shot blue and white twisted, 1 shot plain white, 1 shot blue and white twisted in opposite direction, 8 shots white, 2 blue, 4 white and 2 blue. The last 2 shots from the center of stripe. Reverse to make other half. Weave 3 inches like body and make another complete stripe, which completes border at one end.

THIS BORDER WILL GO NICELY WITH NO. 3.

Weave five or six inches of body, 2 shots of colored filling, 3 shots white, 1 shot white and colored twisted, 1 shot white, 1 shot white and colored twisted opposite deriection, 3 shots white, 4 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 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 through 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 through the rags where there is no warp. When through 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 three-fourths of an inch wide. Run a strong needle and cord through 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 50 cents per yard.

ROOM SIZE 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 through 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 \$30.00 and which will pay for itself in two weeks of 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 through 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 framework, 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 tumbling 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—Weave one-half 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 through. Get ends even on top and tie in a knot. Repeat the full width and you have 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 yardstick, 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 hallways, weave two or three bands at each end, depending, of course, on the length of the 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 a bright color and follow with other carpet for center. Follow 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 ordinary prices.

For those 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 6 inches from edges of rug and select a warp thread at that point. Follow it and mark where it goes through reed. Run chalk line through that split in reed and through frames, but not through 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 chalk lines 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 through 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 2 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 through sewing machine and make a long stitch with coarse thread. Lap end 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, can not 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.

75 cents 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 portiers.

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.

PORTIERES.

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 intervals. Draw two warp threads through 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 through each harness, thread 4 through 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:

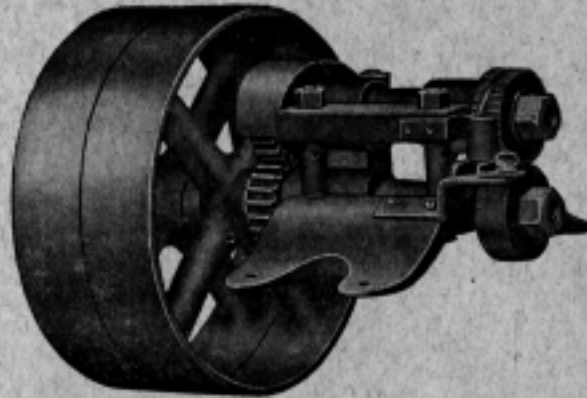
Border, 8 inches, plain red. Body of red and white woven alternately. Weave red and black alternately for one foot at each end. Center plain red.

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, 1 inch orange and 2 inches black. Center, blue and orange woven alternately, or one strand of each woven from shuttle at same time.

NEWCOMB POWER FRAYER Large Capacity Strong, Durable



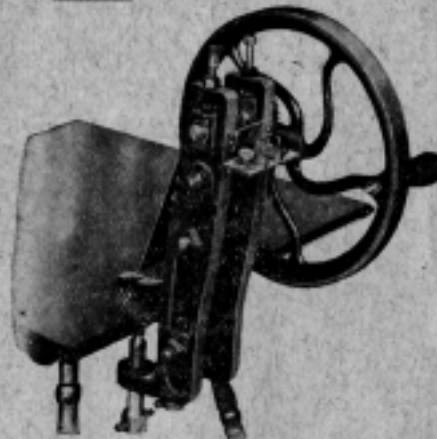
Made to stand the hard service and fill the demand of the larger fluff rug shops. The best power frayer on the market.

KROSS HAND FRAYER

Hundreds in Daily Use

**SIMPLE
DURABLE
EFFICIENT**

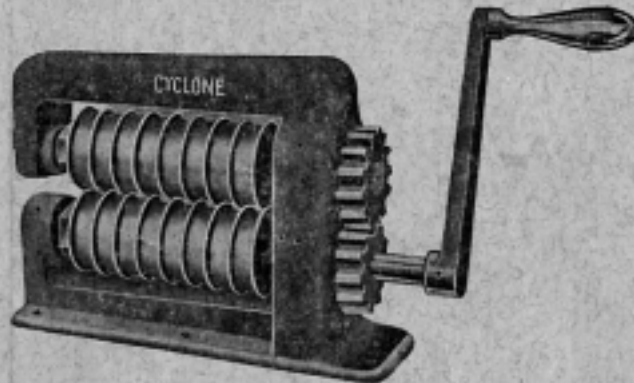
(Side View)



For fraying the edges of narrow strips of carpet produced by cutting machines. Just the machine for the weaver whose business will not justify the purchase of a power frayer.

CYCLONE CARPET CUTTER

Built for Service
Brings Results



Equipped with both crank and pulley, can be operated by hand or power. Will cut perfectly every kind of carpet, cloth or even leather. An indispensable machine for the fluff rug weaver.

(Front View)

NEWCOMB CUTTING TABLE

For Cutting Carpets, Cloth, etc., into
Strips—Well Made, Strong, Durable



Built of selected hard maple, is 12 inches wide and 4 feet long. Standard size cuts strips $\frac{1}{2}$ of an inch wide.

For the weaver whose trade in fluff rugs is small—not sufficient to justify the purchase of a Cyclone machine.