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Simple Upholstery Methods

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Simple Upholstery Methods

By

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Almost every home has at least one piece of upholstered furniture which is neither comfortable nor presentable because of the need of upholstery repairs. Worn coverings, sagging webbing, or "broken springs" have no place in a well furnished home and can be corrected easily with a knowledge of simple upholstery methods.

The professional upholsterer possessing unusual ability can demand a high price for his work, not because upholstery supplies are expensive but rather because hours of hand labor are put into the task of upholstering. The craft is not too difficult for the average individual to master. As in any other form of craftwork, the best results in upholstering will be obtained by that person who chooses good materials, practices proper methods, and exercises the greatest care in workmanship.

Upholstering a Footstool With Springs

All the fundamental steps in upholstering any piece of furniture, with a frame deep enough for springs, are included in the making of an upholstered footstool with springs. The footstool offers a splendid means of learning upholstery principles. It is small enough to be transported easily to a demonstration meeting, simple enough in construction to be completed in a day's time, inexpensive, and a welcome addition to the comfort of the home.

Tools Required For Upholstering

Strong Shears

Hammer

Tack Puller

Large-eyed Darning Needle,
Mattress Needle or Straight
Upholstery Needle.

Curved Upholstery Needle

Pliers

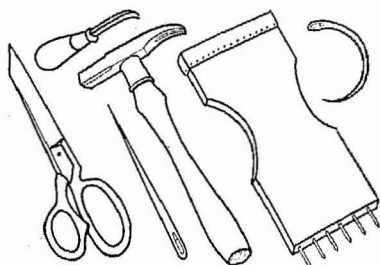


Fig. 1

Webbing Stretcher. The webbing stretcher may be made from a piece of wood $\frac{3}{4}$ " x $3\frac{1}{2}$ " x 7", preferably with the sides of the block curved in slightly to make it easy to grasp in the hand. Five or six 8-penny nails are driven into one end of the block, the heads are cut off, and the ends of the nails are filed to make sharp teeth about $\frac{1}{2}$ inch long. The other end of the stretcher is covered with rough leather, felt, or old velvet to prevent the stretcher from slipping and to keep it from marring the side of the frame, in case the wood is to be finished.

Materials Required For Upholstering

Footstool Frame. The outside measurements of the frame should be 18" long, 12" wide, and 3" deep. The frame should be made of $1\frac{1}{8}$ " thick white pine lumber, to hold the large number of tacks which will be driven into the edges of the frame and to provide adequate support for the footstool legs. The inside corners of the frame should be reinforced with small blocks of wood not more than 1 inch on a side (Fig. 2A), or with metal corner plates (Fig. 2B).

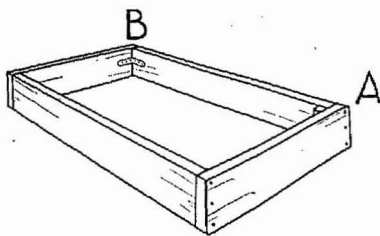


Fig. 2

Legs. Turned legs, 6 to 8 inches in height, may be procured from companies dealing in upholstery materials or may be made locally. They give a professional appearance to the finished footstool. They should be glued and screwed to the bare wood of the frame either after the top cover has been tacked in place or before the band of upholstery is turned down over the side of the frame. (See pages 17 and 18.) Square legs, tapered slightly toward the bottom and also 6 to 8 inches high, may be built into the frame, a continuation of the inside portion of each leg extending into the corner and taking the place of the frame re-inforcement mentioned in the paragraph on the footstool frame.

Screws. Eight screws at least $\frac{1}{2}$ inch longer than the holes in the legs are needed for attaching to the frame legs which are not built into the frame.

Tacks. Upholsterer's tacks in the following sizes and amounts are used:

- 1½ ounces—3-ounce (small for muslin and for outside cover)
- 1½ ounces—8-ounce (medium for webbing and burlap)
- 1½ ounces—12-ounce (large for spring twine)
- $\frac{1}{4}$ ounce—Gimp tacks or large-headed finishing tacks

Webbing. Two and one-fourth yards of 3½-inch webbing are required for one footstool. The quality of the webbing selected affects greatly the durability of the finished product. Closely woven webbing made of good material will support the weight to which it is subjected. Poor quality webbing (made of jute, loosely woven, and sized to give the appearance of better quality) will be a bad investment both from the standpoint of money and of time spent on the upholstering job.

Springs. Six strong springs, the same size top and bottom, are needed for the footstool. Springs should be twice the height of the box in which they are to be used, provided the springs are sufficiently strong. Weaker springs should be taller or should be used double. New springs of strong material may be procured at very small cost from upholstery dealers. Old automobile seats may yield springs which will serve the purpose very well. Care should be taken to match these springs for size and to stretch them back into shape if any of the coils have been mashed down.

A good test for a spring is to stand it on a flat surface and press down upon it with the palm of the hand. If the two end coils do not come together, if the coils do not bend sidewise, and if the spring pushes strongly against the hand as the pressure is released, that spring will wear well in the upholstered article.

Twine. Two kinds of twine are needed for upholstering:

Flax mattress twine (a medium weight twine of great strength) for sewing springs and padding

Italian flax twine (heavy weight, strong, smooth twine) for tying the springs. The greatest wear in a piece of upholstered furniture comes on the spring twine, as it is subjected to strain and to rubbing against the wires every time the piece of furniture is used. It is therefore most advisable that very strong spring twine be procured. For the sake of the upholsterer's hands, spring twine should be smooth.

Covering for Springs. The springs should be covered with closely woven burlap, either new material bought by the yard or a burlap bag in good condition. A piece 24" x 30" is the correct size for the footstool.

Padding. Two layers of padding are used over the spring covering:

- (1) For the first layer one pound or more of coarse padding is required.

- (a) Curled horsehair is best for the first layer but it is expensive. Often curled hair may be obtained from old automobile seats, in which case it should be cleaned. If the hair is in good condition, it may be cleaned by beating out the dust and sterilizing in a 300 degree oven for one hour; if quite dusty and dirty, the hair should be packed very loosely in a light weight muslin bag, washed in mild soapsuds, rinsed well, and hung in the air to dry.

- (b) The next best material is upholstery moss.

- (c) Least desirable of the acceptable materials is tow.

- (d) Excelsior should never be used for padding as it mats within a short time.

- (2) For the second layer of padding, a piece of smooth, thick cotton, approximately 16" x 22" is used. One-half sheet of cotton wadding or batting will be required for one footstool.

- (a) A good grade of upholsterer's cotton is best.

- (b) Cotton wadding or batting may be used if enough complete layers of the cotton are added to give the necessary thickness.

Covering for Padding. Heavy unbleached muslin, salt sack of firm quality, or piece of a bemis sack is used for covering the padding. At least 30" x 36" of this material should be provided for the footstool.

Outside Covering. Material for covering the footstool should be:

- (1) Closely woven and of comparatively heavy weight for durability
- (2) Harmonious with color scheme of room
- (3) Fairly dark in color value, as the footstool is in close relation to the floor.
- (4) Either plain or decorated with very small pattern to conform to the relatively small size of the footstool. If the rug is patterned or if there is much design in other areas in the room, a plain footstool covering would be the happiest choice.
- (5) Harmonious in texture with other articles in the room.

Materials commonly used for covering footstools are tapestry, rep, art denim, mohair, and other similar upholstery fabrics. Leather makes a very durable covering, but is less easily handled than a more pliable material.

Needlepoint and hooked pieces, the latter made of old silk stockings, offer possibilities for unusually beautiful coverings, provided the designs are comparatively small, the colors soft and well-blended, and the workmanship of high quality.

It will be found that a yard of 50-inch material is a sufficient amount to cover two stools, provided the cording is covered with contrasting material. Two inches more material will be required if the cording is covered with the same material. Twenty-six inches of 36-inch material will be necessary for one stool.

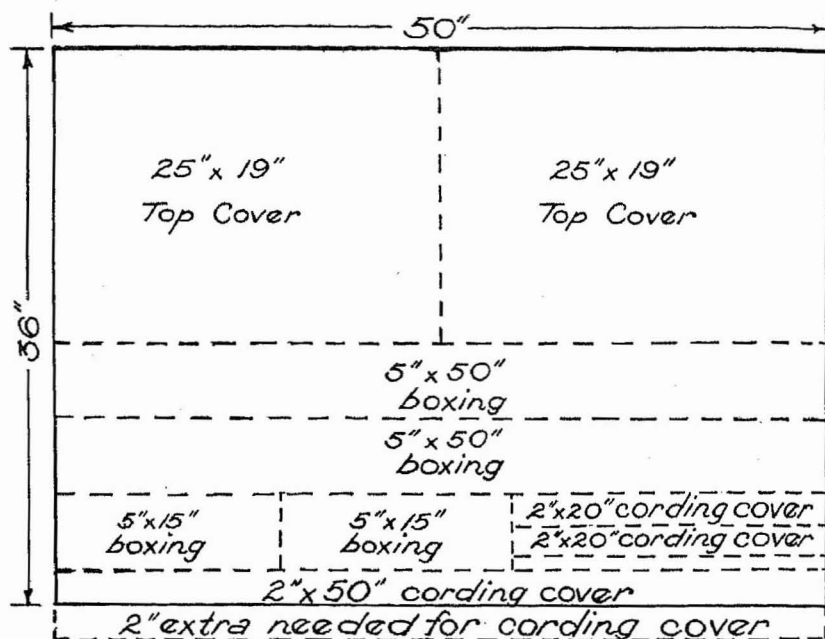


Fig. 3

Upholstery Finishing Materials. If the lower portion of the wood frame is exposed, gimp or braid will be needed for finishing the lower edge of the upholstery. If the upholstery material completely covers the frame, five and one-half feet of cording will be needed for welting in the seam. The cording may be covered with a straight two-inch strip of harmonizing material of the same wearing quality as the outside cover or of the same material as that used for the outside cover.

Lining for Bottom. Black cambric or other plain, dark cotton material is used for the bottom of the footstool. One-half yard of the lining is sufficient.

Steps in Upholstering

Placing the Webbing. Three strips of webbing run crosswise and two lengthwise on the bottom of the footstool frame. The spaces between the outer edges of webbing strips and the inside edges of the frame should be wider than those between webbing strips.

Using the uncut roll of webbing, the center crosswise strip is placed first. One inch of material is allowed to extend beyond the center of the frame edge (or rail), the webbing is tacked with four 8-ounce tacks to the center of the rail (Fig. 4-A), and the end of the webbing is then turned back over the first row of tacks and secured with five more tacks (Fig. 4-B). The fold of the webbing should not extend to the outer edge of the frame, as an irregular line on the bottom of the footstool would result.

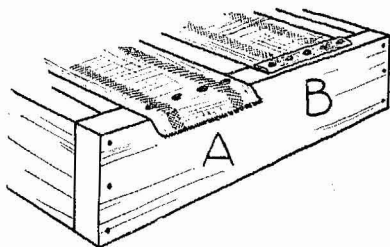


Fig. 4

If a systematic plan for placing the tacks is followed, the inconvenience of hammering a tack in the second row against the head of a tack in the first row can be prevented. First row: either side of each colored stripe; second row: end of strip, center of first stripe, center of strip, center of second stripe, and end of strip. The tacks in both rows should be staggered slightly to prevent splitting the frame.

The webbing stretcher is used to pull the webbing tightly across the bottom of the frame. The smooth end of the stretcher is placed against the side of the frame slightly below the rail. The opposite end of the stretcher extends out from the frame in line with the rail. The webbing is pushed over the nails of the stretcher and the outer end of the stretcher is pushed down until the webbing is taut (Fig. 5). If the webbing is long enough for the space but too short to be stretched in this manner, a scrap of webbing or a band made of several thicknesses of burlap may be sewed securely with mattress twine to the end of the webbing and removed after the webbing is tacked.

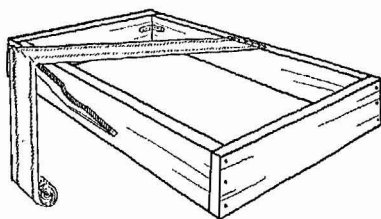


Fig. 5

When the webbing has been tightly stretched, four tacks are used to fasten it to the center of the opposite rail. The webbing is cut off one inch from the tacks. This inch of material is folded over the tacks, and five more tacks securely fasten the fold to the rail.

The two remaining crosswise strips are placed one on either side of the center string, the outer edge of each being $1\frac{1}{2}$ to 2 inches from the inside edge of the frame.

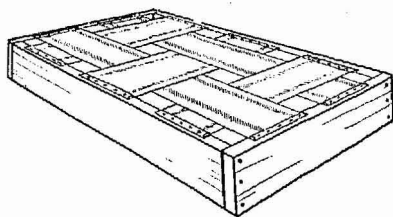


Fig. 6

The two lengthwise strips are laced with basket weave through the crosswise strips before the loose end of the webbing is attached in each case (Fig. 6). Spacing between lengthwise strips should correspond with that between crosswise strips.

Considering that springs are placed in the center of the intersections of webbing strips, the spacing of the strips should provide not less than one and one-half inch distance between the edge of a spring and the inside edge of the frame.

Setting and Fastening the Springs. One spring is set in the center of each intersection of webbing (Fig. 7). If the ends of

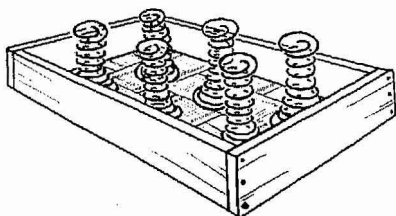


Fig. 7

the wire are loose, that end of the spring with the wire curving downward is considered the top of the spring. The springs are so placed that the ends of the wire or the twisted fastening of the ends come close to, but not at, points where the springs will be tied.

Springs are placed on webbing intersections one at a time and are sewed to the webbing with a large-eyed straight needle and a long double strand of flax mattress twine. Three stitches are used for each spring and are so placed that the sewing can proceed from one spring to the next (Fig. 8). In the beginning the first

stitch, the needle is brought up through the webbing close to one side of the wire. The thread is pulled through, leaving a short, loose end on the bottom. The needle is extended down through the webbing very close to the opposite side of the same wire. The thread is again drawn through, making a tight stitch over the wire. The loose end of thread is then tied with a surgeon's knot to the long end on the under side of the webbing. Each succeeding stitch is made similarly close to the wire, the thread being drawn tightly to hold the spring securely in place. Long stitches are made on the bottom side from one point of fastening to the next. When all springs have been sewed in place the end of twine from the last stitch is tied with a surgeon's knot to the original end of twine. If an additional length of twine is required in the sewing, the new strand is joined to the old with the surgeon's knot.

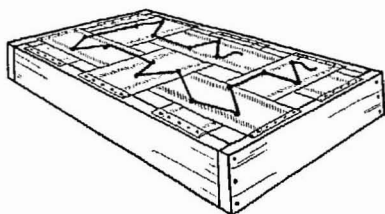


Fig. 8

Tying the Springs. Spring twine is used for tying the springs, each spring being crossed by four cords. Measuring over the top centers of the springs in one row across the frame, the amount of twine corresponding to between $1\frac{1}{2}$ and 2 times the distance is determined and cut off. This length may be remembered more easily by the sing-song, "Once and a half and a lit-tle bit more." Measuring in this manner, three lengths are cut for the crosswise tying and two lengths for lengthwise tying.

The next procedure is to drive two 12-ounce tacks partially into the center of the top rail in line with the middle of each row of springs and far enough apart to accommodate two thicknesses of spring twine (Fig. 9). These groups of tacks will be used in fastening both crosswise and lengthwise cords. Similar groups of tacks are placed for the two ends of each diagonal cords, the positions of the tacks being de-

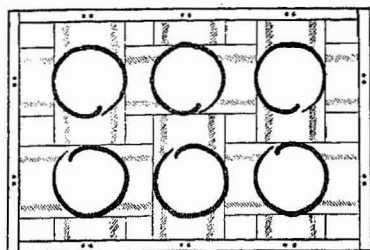


Fig. 9

terminated by the points on the rail crossed by a piece of twine laid over the centers of the springs for each diagonal.

Beginning with the middle row of springs running across the frame, the end of one of the lengths of twine measured for that row is looped around the two tacks nearer the worker. In fastening the twine to the rail, a bight formed in the twine about 1 inch from the end is laid between the two tacks (Fig. 10-A); the bight is then folded back over the two tacks to form a loop around each tack (Fig. 10-B); the twine is drawn tightly around the tacks; and the tacks are driven in.

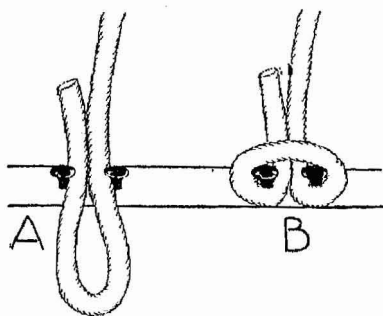


Fig. 10

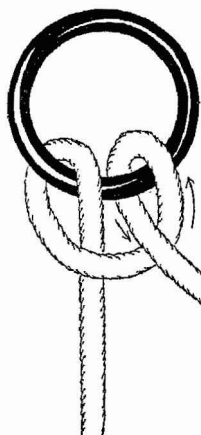


Fig. 11 / 2

Proceeding in the direction away from the worker, the spring is pushed down firmly with the left hand so that the edge of the top coil nearer the rail is approximately 1 inch lower than the opposite edge, and the clove hitch is then made to hold the spring in place. Following are the steps in making the clove hitch, or knot:

- (1) The spring is held in position with the palm of the left hand;
- (2) With the right hand the free end of the twine is passed over the edge of the spring nearer the rail, back under the wire and drawn out to the left (Fig. 11);

(3) The twine is drawn sufficiently tight to get the spring in proper position and it is then held firmly in place with the left thumb pressed down on the twine over the wire and the left index finger held under the wire.

(4) The long end of the twine is again passed over the wire to the right of the thumb, a loop of this twine is left behind the wire, the long end of the twine is passed back under the wire and **through the loop** (Fig. 12), and the twine is pulled tightly away from the worker, the thumb and index finger being released only when the knot is complete (Fig. 13).

This knot cannot slip and will not pull out if the twine wears through at any point.

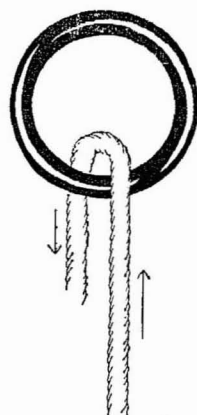


Fig. 12

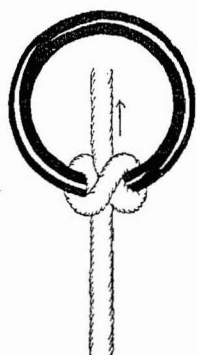


Fig. 13

The twine is stretched across the top of the spring and a similar knot made on the opposite side of the coil.

The second spring in the row is pushed into a position corresponding to the one given the first spring. There should be the same spacing between the springs at the top as at the bottom. This spring is tied in the same manner as the first spring. The row of two springs is pushed down into proper shape with the help of

an assistant, and the end of the twine is secured by means of the two tacks previously placed in the rail.

In making the double bight over the tacks after the completion of one row of tying, the frame is turned so that the end of the cord is toward the worker. The cord is brought between the two tacks and is passed around the tack on the left. The left-hand tack is driven in. Holding the twine in the left hand a few inches from the first loop, an outward twist made by the right hand places a similar loop over the second nail. The second nail is then driven in. The end of the cord is left "as is" within the frame, in order that the knots may be taken out and retied if the contour of the tied springs is not satisfactory.

Before the first tack is driven down over its loop of twine, it is advisable to check carefully the symmetrical shape of the curve made by the row of springs just tied and to make adjustments if necessary. The contour of this middle row of springs will serve as a guide for that of all the other rows in the footstool. Measure cord for diagonal tyings after springs are tied crosswise and lengthwise.

Proceeding in similar manner the springs are tied in the two additional crosswise rows, two lengthwise rows, and four diagonals in one direction. The four diagonals in the other direction are knotted over all cords as well as over the wires, including the crossed cords in the center of each spring. A general rule to remember is that the twine is knotted at every wire and twine which

is not to be crossed again. A length of twine 2 times the distance across the springs is required for this last diagonal tying. When the tying is complete, the seat should present a slightly rounded appearance with every spring standing erect (Fig. 14).

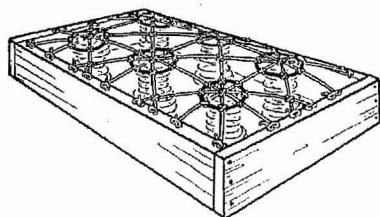


Fig. 14

Covering the Springs. The burlap provided for the spring covering is laid over the springs, drawn tightly enough to insure smoothness, and tacked down (with 8-ounce tacks) just inside the edge of the rail on all sides. The burlap may be held more securely in place by being sewed to the top coils of the springs with a curved upholstery needle and flax mattress twine.

Arranging the Padding. The sharp edge of the footstool is padded by arranging a small, even layer of horsehair, moss or tow on top of the tacks holding the burlap cover and turning back the edge of burlap on each side to make an even, tight roll, secured by tacks driven into the rail close to the inside of the roll. At the corners the burlap should be mitered and the padding adjusted to make this portion of the roll the same size as that on the sides of the frame (Fig. 15).

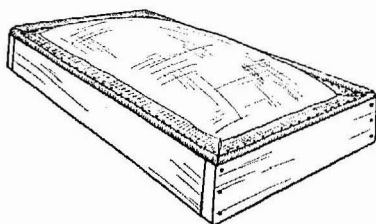


Fig. 15

The top padding is placed next. The coarse padding material, used for the roll, is fluffed by pulling apart all lumps and is laid in an even layer over the burlap cover, just covering the outer rolls (Fig. 16-A). Enough of this padding should be used to keep the springs from being felt through the padding. To prevent the padding from slipping or settling, it may be sewed down firmly to the burlap with a curved upholstery needle and mattress twine.

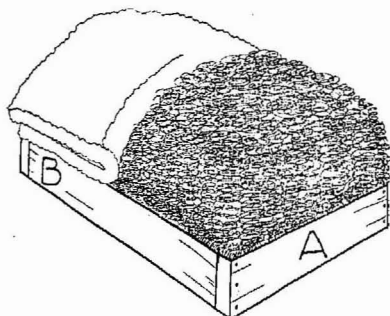


Fig. 16

A layer of upholster's cotton or sheet wadding is placed over the padding to insure smoothness and to prevent ends of the coarse padding from working through the outside cover (Fig. 16-B).

Covering the Padding. The padding is covered with a piece of firm muslin. It is important to draw this covering quite tight-

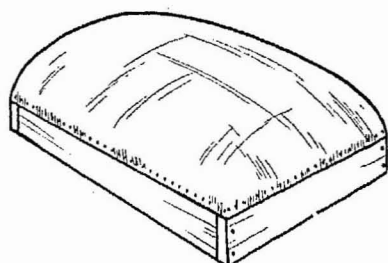


Fig. 17

ly in order that the finished upholstery will be smooth and tailored in appearance (Fig. 17). The muslin is tacked (with 3-ounce tacks) first in the middle of each side and then in either direction toward the corners, care being taken to have the threads of the muslin run straight with the lines of the stool. Tacks for securing this

cover should be placed high enough on the frame to be entirely covered by the outer covering material. As it may be necessary to readjust the muslin covering, it is advisable to drive the tacks in only part way until the material is satisfactorily fitted. All fulness is pulled out at the corners to give a smooth, rounded contour. The secrets of good fitting are (1) to pull the muslin with the thread of the material in opposite directions at the same time, the strongest pull being toward the line of tacking, and (2) to use a large number of small tacks placed fairly close together.

After the muslin cover has been smoothly fitted and all the tacks have been driven in, the muslin should be trimmed evenly below the tacks.

Putting On The Outside Cover. There are two customary methods of finishing the outside of the upholstered footstool.

(1) If the frame is made of hardwood and the worker desires to let the lower part of the frame remain exposed, the wood should be finished before the upholstering is begun (see page 20). In that case, the outside cover should be put on in a similar manner to that used for the muslin cover, except that the row of tacks

securing the outside cover is just below the tacks for the muslin cover. A strip of gimp or braid, harmonizing in color with the upholstering material, is then tacked over the raw edge of the upholstery material with gimp tacks, placed in fencerow fashion, or with large-headed finishing tacks, evenly and rather closely spaced (Fig. 18).

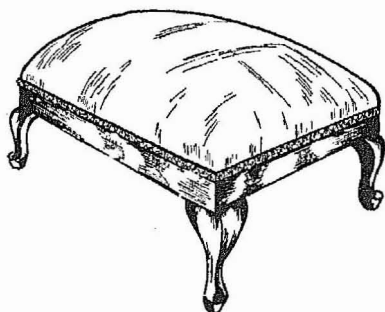


Fig. 18

(2) If the frame is to be completely covered with the upholstery material (Fig. 19), the first step is to place the top cover in the same manner as that described in the preceding paragraph, with the omission of the gimp or braid. A piece of cable cord long enough to extend around the frame is covered with a 2-inch wide bias strip of the same material as the outside cover or of harmonizing material having the same wearing quality as the outside cover. The cording is placed above the row of tacks securing the top cover and high enough to lie just above the edge of the rail. It is then sewed in place with a curved upholstery needle and strong thread (Fig. 20). A band of the upholstery material, cut 2 inches wider than the width of the frame, is turned with the right side toward the stool and with one raw edge in line with the edges of the cable cord covering. After securing this band with a very few tacks, a 1-inch

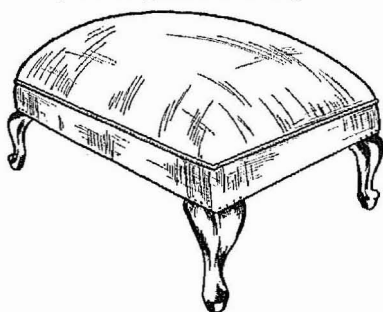


Fig. 19

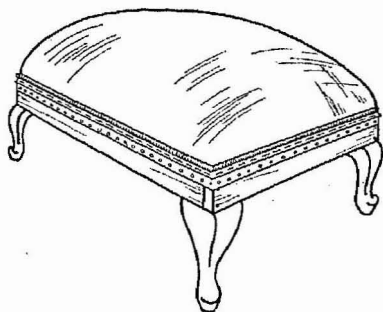


Fig. 20

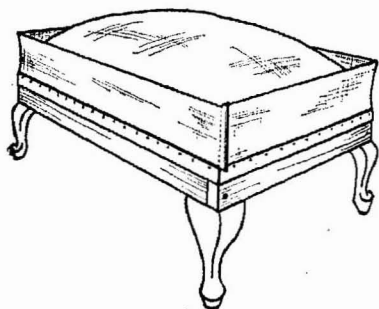


Fig. 21

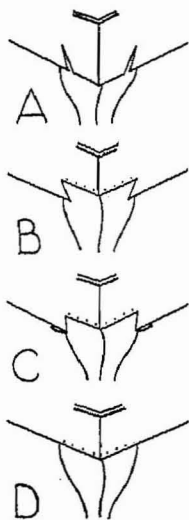


Fig. 22

wide strip of light weight cardboard is placed over the edge of the band, pushed tightly against the lower side of the cording, and tacked at intervals of 1 inch slightly below the upper edge of the cardboard strip. Seams in the band of upholstery material should come at the corners and are best made with a backhand stitch while the material is still

wrong side out (Fig. 21). A fairly thin band of cotton padding, wide enough to extend from the top of the cardboard strip to the bottom of the frame, is laid over the frame; and the band of upholstery material is turned down over this cotton padding. The lower edge of the upholstery band should be slit diagonally out toward the junction of the outer corners of the footstool legs and the lower edge of the frame (Fig. 22-A). The material is folded under at this point, so that the fold fits around the upper edge of the leg without showing any of the wooden frame; and gimp or large-headed finishing tacks are driven in around the corners near the fold of upholstery material at intervals of $\frac{1}{2}$ inch (Fig. 22-B.) The flaps of material left on the ends of each straight side of

the upholstery band are turned under (Fig. 22-C). The bottom edge is drawn under the frame (Fig. 22-D) and is held in place by tacks at least 1 inch from the outer edge of the frame.

Band of Needlepoint or Velour. Needlepoint and hooked covers present peculiar problems when the wooden frame is to be entirely covered with the material. Perhaps the most satisfactory method of applying a needlepoint cover is to bring the material in one piece from the top down over the sides, and to miter all four corners. It is advisable to complete the needlepoint at the corners after the canvas has been mitered, in order that the seam

It not be heavy and that the canvas threads may all be covered where the corner is mitered. Because a hooked cover is too heavy to make neat mitered corners, the top may be fitted as recommended for upholstery material and a band, hooked in the same color as the background of the top, may be applied without a cord trim. In this case, the band should be turned down over the narrow strip of light weight cardboard to give a straight fold where the band joins the top cover.

Attaching the Lining. When all the work of upholstering has been completed, the footstool should be turned upside-down and lined with a piece of black cambric or other similar material, cut the size of the frame, turned under $\frac{1}{2}$ inch on all edges, and tacked in place (Fig. 23). The lining gives the footstool a finished appearance and also prevents particles of padding from falling out onto the floor.

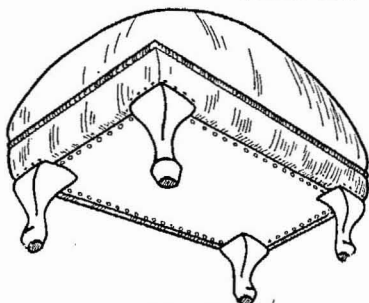


Fig. 23

Upholstering a Footstool Without Springs

It is possible to obtain a footstool frame like one for the footstool upholstered with springs, except that the top of the frame is covered with a solid wood foundation for padding. This type of construction gives a satisfactory product from the standpoint of appearance but one which offers far less comfort than does the spring construction.

The first step in upholstering a solid construction footstool is to tack a piece of burlap over the wooden top. Coarse padding is then arranged on the burlap and sewed in place. Over the coarse padding is laid a sheet of cotton padding. The muslin cover and the outside cover, both applied in the same manner as with a spring construction footstool, complete the process.

The chair with a padded section on a solid wood bottom is a common example of this type of upholstery.

Finishing Footstool Legs and Frame

It is more convenient to finish an exposed footstool frame before any one of the steps of upholstering is undertaken; legs are more easily handled in finishing if the work is done before the legs are attached to the frame.

The best finish for beautifully grained hardwood is the rubbed oil finish, which is inexpensive, easily applied, permanent, and complimentary to the wood. For any wood of less durable quality and less attractive graining, stain adds beauty and shellac or varnish gives a protective covering. Instructions for finishing both types of wood may be found in the Montana Extension Circular entitled, "Refinishing Furniture." Penetrating seal gives a durable and beautiful finish to either hard or soft wood.

Reconditioning Upholstered Furniture

The principles of footstool upholstery can be applied with few changes to nearly all the problems of reconditioning upholstered furniture.

Complete Reupholstery. In some cases it is necessary to remove all upholstery materials from a chair or couch, refinish the frame of the article, and reupholster the piece with new materials. All tacks should be removed carefully to prevent marring the frame. An excellent practice, also, is to observe how each step in the original upholstery had been made and thus make easier the reupholstering of the article. Ordinarily it is necessary to use smaller tacks and more of them in reupholstering a piece of furniture, as the old nail holes and the age of the wood have weakened the frame.

Renewing Webbing. If the webbing has sagged or loosened and the remainder of the upholstery is in good condition, either new webbing may be put on the bottom of the article or the old webbing restretched without disturbing the upper portion of the upholstery. For replacement of webbing, the piece of furniture is turned upside-down. The tacks holding the webbing and the mattress twine used for sewing the springs to the webbing are removed. New webbing is stretched on the bottom of the piece in the customary manner, except that smaller tacks are placed

closer together than with a new wood frame. Lastly, the springs are sewed to the webbing from the under side by means of a curved needle.

Replacing Metal Supports. Metal strips sometimes take the place of webbing to support rows of springs. Such a construction is less comfortable than the webbing foundation and is more difficult to replace in the event a support breaks or bends. Either the break in the metal band must be welded or a new metal strip must be ordered through an upholsterer, or a furniture dealer, and the springs mounted on the new strip. In either case the spring assembly must be removed from the frame and a complete reupholstery job given the seat of the chair when the break has been remedied.

Retying Springs. When the spring twine used to tie springs has broken, the spring nearest the break pushes up against the padding, producing both an uncomfortable and an unsightly upholstery. This fault is erroneously called a "broken spring." To correct the difficulty, the covers and padding above the springs should be removed; the length of twine, where the break occurred, untied; new twine used to tie the row of springs affected; and the upholstery materials, previously removed, put back in place.

Repairing Enclosed Spring Units. When springs in couch or chair cushions have "broken," it is possible to rip the cushion apart and make new sacks to hold the springs in place.

New spring units, ready for padding, may be procured at small cost from dealers in upholstery supplies.

Instructions for Replacing Worn Outside Upholstery Covering. If no change is to be made in the reupholstery of an article except the replacement of the outside covering, the old cover may be carefully removed and used as a pattern for the new cover, with the additional allowance of $\frac{1}{2}$ to 1 inch on all edges, to enable the worker to pull the material tightly and to have sufficient material for tacking and seaming.

If any changes are made in the tying or the padding of springs, the shape and size of the article may be slightly altered. In this case, it is advisable to lay the upholstery material on the article itself and cut each piece to fit its particular section.

Special Reupholstering Problems

Although the usual methods of reupholstery are met in the making of a small footstool with springs, there are occasions when knowledge of more advanced upholstery methods is necessary. Such a case may arise in the construction of a studio couch or in the transforming of an old-style chair to one of modern lines and greater comfort. Two excellent references for information on the application of special upholstery methods are:

Stephenson, John W., "Modern Furniture Upholstering"
Published by Clifford & Lawton, New York

Wright, Florence E., "Old Furniture Restored"
Published by The Farm Journal and Farmer's Wife
Washington, Square, Philadelphia, Pa.