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Cinderella Furniture

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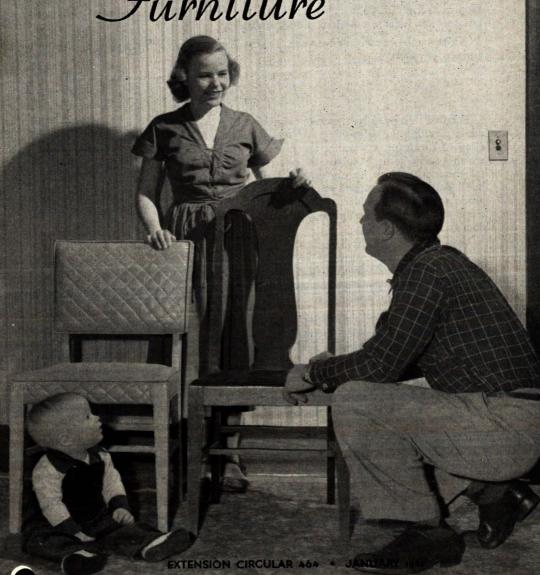
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Cinderella Furniture



AGRICULTURAL EXTENSION SERVICE

SOUTH DAKOTA STATE COLLEGE . BROOKINGS

Cinderella Furniture

With an elaborate gilt coach that had once been a pumpkin, and glass slippers that didn't disclose their former identity, a common colorless girl became a famous storybook beauty. With a wave of the magic legendary wand, the good fairy transformed the unattractive into the desirable, the ugly into the beautiful and the rundown into the useful.

Today a woman is her own fairy. The magic wand that makes the old as good as new is imagination, ingenuity and know-how. Like the two chairs on the cover that Mrs. Homemaker proudly shows her family, the unattractive chair has completely changed appearance and become a modern, proud possession.

The magic wand is for everyone. Try the ideas and information given in this bulletin and see for yourself.

Repairing

The first thing you will want to consider when planning the refinishing and remodeling of furniture is whether the piece is worth it and whether you have the patience for the work. There are no short cuts in hand finishing furniture if you want high grade work. With modern materials and reasonable care even the unhandy man can do a good finishing job.

Any repairs required will need to be done before the refinishing process is begun. There is no need to refinish an article if it is going to be rickety when completed. Furniture of poor design and poor construction should be painted or slip covered.

Surface Blemishes. Small scratches often can be corrected by using a furniture cream which is made by mixing oil (crude or boiled linseed) and fine rottenstone to the consistency of thin cream. Apply generously and rub briskly into the surface with a circular movement. Finish the process with straight even strokes. Wipe off excess cream with soft cloth.

Dents. If the dents are shallow the compressed wood fibers may be raised by wetting with a few drops of water. If this does not give the desired results, steam may be used. Cover the spot with three or four thicknesses of damp blotting paper, heavy absorbent paper or cloth. Apply a heated

iron over this being careful to cover only the dented portion. As soon as the paper begins to dry, replace with a freshly dampened piece and repeat the application of heat. Repeat this procedure until dent is raised. The finish is likely to be marred in the process. Generally this can be corrected by rubbing down with furniture cream.

Deep Scratches. Deep scratches may be filled with stick shellac, which is available in many colors. If you cannot get the color you want, purchase two or three colors and blend them as you apply. Heat the shellac with a match and let the drops fall onto the scratch or knot. When the shellac is cold, sand off the excess with fine paper.

If the scratch or dent is deep enough so that the wood shows through it will have to be restained. See the section on staining.

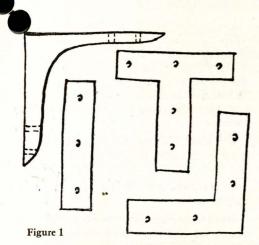
Bracing. Whether the bracing should be done before or after the parts are glued is sometimes a question. Many times a bracing of damaged joints is all that is necessary. Each problem should be carefully studied before a decision is made.

There are many kinds of inexpensive devices on the market. A few are illustrated.

Fig. 1.

Gluing. In many cases the only repair necessary will be re-gluing. Surfaces for gluing should fit together as perfectly as possible, be free of all grease, oil, or old glue, be clean and dry.

^{*}Home Management Specialist.



Old glue may be removed with hot water, scraping and sanding. To clean out socket holes, strips of sandpaper rolled around a pencil or dowel are usually effective. Vinegar, which is not a solvent, will assist in the removal of old glue. It will aid the adhesion of new glue to any residue of the remaining old glue film. Dry thoroughly. An old toothbrush is an aid in applying the vinegar.

When a thorough sanding of both surfaces leaves a joint too loose-fitting for a good gluing job, two strips of friction tape

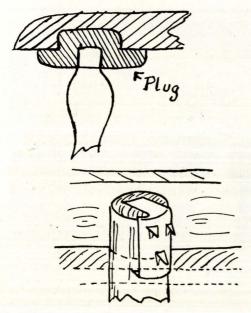
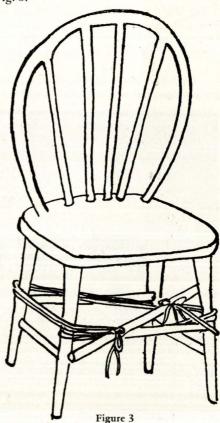


Figure 2

or thin cloth placed crosswise over the end of the tenon or stub will often insure a snug joint. Sometimes it will be necessary to spread the end to be inserted with an inserted wedge or use a commercial clamp. The worn hole or groove may need to be built up previously with plastic wood and allowed to dry thoroughly. Sometimes it is wisest to supply a new part. Fig. 2.

Apply a thin coat of casein glue on both surfaces and allow to dry almost completely; follow with a second thin coat on both pieces and allow to set until "tacky." Place surfaces together and clamp. Protect the finish with pads of cloth. Do not clamp too tightly as it squeezes too much glue from the joint. Wipe off excess. Let dry for several days. Remove clamps and sand.

Instead of clamps, rope can be wound around the whole piece, then tightened by twisting with a stick, like a tourniquet. Fig. 3.



Refinishing

Now that you have your furniture in good repair you are ready to consider the refinishing process.

Regardless of the type of finish selected the following should be observed.

Protect your hands. You can do this by wearing gloves or by using a protective cream. Rub it on the hands getting it well under and around the nails. Linseed oil may be used also. If you are working with a bleach, wear rubber gloves. When finished wash your hands with soap and water.

Be careful not to get grease on the surface you are going to finish. Even the natural oil of your hand will stain a freshly sanded surface.

Clean the surface thoroughly. Sanding is important and should be carefully done.

Stir the finish thoroughly. Dig into the bottom of the can to loosen any solids adhering there. Then stir until contents have a smooth consistency throughout. Varnish

should be strained through cheese cloth. Warm the varnish by setting it in a pan of hot water, then it will go through the cloth faster.

Use clean brushes. All pads for rubbing must be clean. Particles of dust can scratch the surface. Brims of old felt hats can be used as pads, also scraps of good wool carpeting.

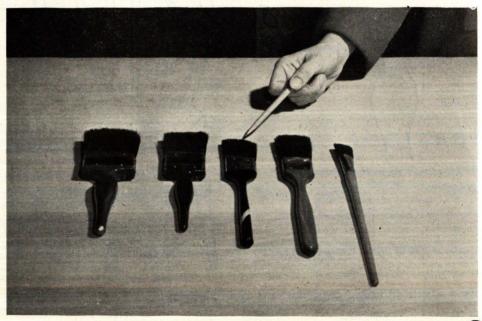
Read label directions carefully. They are your guide to a first class finishing job.

Work in a dust free, well ventilated room. Moist newspapers placed on the floor will help keep the dust down. Avoid humid hot days. Seventy degrees is an ideal temperature for finishing furniture.

Spread newspapers or canvas around and under the unit to catch any drippings or spillage.

Remove all hardware and knobs.

Fig. 4. Each these brushes is used for a different purpose. Identified, they are, left to right: flat straight straight edge, chisel edge, sash, two inch trim and oval sash brush.



Brushes

When you buy good brushes you are making a good investment. Bargain brushes cause failures. A good brush will hold more paint, carry it without dripping, paint without spattering, put on a smooth coat and cut a clean edge. It can be cleaned again and again.

The best brushes are made of hog bristles or nylon. Nylon will soften in shellac and alcohol. Do not use a brush cleaner on

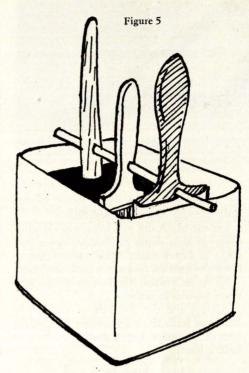
nylon brushes.

Get a brush for each kind of work, such as: sash brush for narrow edges, two inch brush for trim, one and one-half to two inch brush for furniture finishing, oval brush for fine work, chisel edge for varnish and enamel, flat straight edge for walls or floors. These types are shown in Fig. 4.

To check the quality of animal bristle brush, spread the bristles and look for split ends. The more the better for they aid in holding the paint and spreading it in an even film. Bristles should be springy and elastic when pressed against the back of the hand. Most new brushes have a few bristles which were never fastened in. Remove these by rolling the handle rapidly between the palms of your hands. Suspend a new brush in linseed oil for at least 12 hours. When you are ready to use the brush remove as much of the oil as you can. If this is not done it will be difficult to remove the pigment from the bristles. A varnish brush should be rinsed in thinner to remove dust.

If your paint job will last several days and you will use the same brush each day, the brush will not have to be cleaned until the painting is completed. Wrap the brush tightly in aluminum foil. It will remain pliable for several days ready to use upon unwrapping. The foil can be used repeatedly. Clean the brush well when the paint job is completed.

To store brushes for several days, work out excess paint or varnish on a board or newspaper. Suspend brushes used in varnish or enamel in a mixture of equal parts of varnish and turpentine. If ordinary thinner is used, the brushes sometimes get full of specks. Brushes used in shellac should be cleaned in denatured alcohol. It is not seri-



ous if a shellac brush becomes slightly stiff, for it will soften when dipped in fresh shellac.

Brushes should be suspended in the keeping liquid with the bristle well away from the bottom of the container. To suspend a brush, drill a one-eighth inch hole through the handle at a point where a stiff wire passing through it and resting on the upper edge of the container will suspend it at the right height. Several brushes can be hung on the same wire. The keeping liquid should be deep enough so that it comes above the lower edge of the ferrule of the brush. Fig. 5.

To clean the brush thoroughly at the end of the job, use turpentine for oil paint, enamel or varnish; denatured alcohol for shellac; and lacquer thinner for lacquer. Soak the brush in the thinner working it against the container. Repeat several times using fresh thinner which may take as much as two quarts. The thinner may be saved in a sealed container and can be used again for the pigment will settle to the bottom. Follow this cleaning by washing with

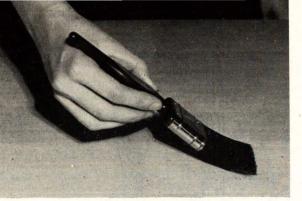


Figure 6

hand soap and warm water. Rinse. Repeat until no color comes off the brush.

Let the brush dry in a square of cleaning tissue to help shape it. Remove tissue and wrap in heavy paper being careful not to bend the bristles. Store in a cool, dry place.

Never let a brush stand on its bristles, and never leave it in water.

Always use the flat side of the brush. Painting with the edge makes bristles divide into clumps. Fig. 6 shows you how to hold a brush.

Safety

Keep in mind that many of the materials used in finishing furniture are inflammable. Work in a well ventilated room away from an open fire. Any paper or cloths used should be kept in closed containers or burned at the end of the day.

Remove Paint or Varnish

Discolored and worn paint or varnish should be removed. Use a good quality commercial paint and varnish remover. The best removers are those which have an acetic acid base. Avoid those containing a strong alkali as they sometimes darken wood.

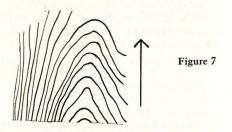
Follow the directions on the can. Apply remover with an old paint brush and allow to stand until finish is softened. It will form small "blisters." Remove with a putty knife being careful not to scratch the wood. Always scrape with the grain of the wood. If all the varnish has not been removed, apply a second coat of remover and proceed as before.

It is better to put on the paint and varnish remover, allow it to stand for a short time, and wipe off, repeating the process several times if necessary. A thick coat of remover allowed to stand on the furniture for a long period can be harmful, especially to veneer surfaces. Burlap dampened with wood alcohol will help remove varnish from hard to get at places such as spindles and grooves.

Scrape with broken glass or sand until ALL of the old finish is removed. All of the old finish must be removed in order to have a proper foundation for the new finish.

Sanding

Sanding is one of the most important parts of finishing wood.



This is a section of wood showing grain. Arrow indicates direction to sand.

ALWAYS SAND WITH THE GRAIN OF THE WOOD. If at any time you sand across the grain of the wood, small scratches will appear and they will be very difficult to remove. Grain is illustrated in Fig. 7. Sand evenly. It is at this stage that the real finishing begins. Test for smoothness often. Put an old silk or nylon hose on your right hand and rub on the piece being sanded; if it snags, the piece needs further sanding. The finish you use will not cover up scratches or dents. In fact, the finish magnifies blemishes of any kind. Sanding can be done by hand. The paper can be wrapped around a small block of wood. This will allow for a better grip. Commercial hand sanders with one sharp end and one rounding end are quite satisfactory. Electric hand sanders save energy. The ones which work with a back and forth motion are the best. Those which work with a rotary motion are not satisfactory as they are apt to leave circular scratches which are difficult to remove.

When finishing the wood of furniture, start with an 0-2 sandpaper, then use 0-4 and 0-6 on successive sandings. Finish with a fine steel wool. Use gloves when handling the steel wool.

After sanding, dampen a sponge and squeeze as dry as possible. Wipe the furniture with this sponge. It will raise the grain of the wood and help remove dust. This may be done also with a cloth dampened with turpentine. Then use 0-6 sandpaper and then, steel wool. After finishing with the steel wool wipe the piece of furniture with a soft damp cloth to remove particles of steel wool which might cling to the pores of the wood. This will be especially true of porous woods such as oak and hickory.

When you are sanding on veneers, be careful not to create too much heat by sanding too hard or long. The heat may cause a loosening of the glue which holds the woods together and it would be impossible to repair. Do not sand the edges. It cuts the veneer too fast.

All sharp edges of furniture are rounded slightly. Round them by buffing with a piece of hard wood. They retain finish and appear sharper than the edges which are left sharp.

Your hands can stain freshly sanded wood and these stains are hard to remove. Take out all blemishes at this stage. Some will have to be taken out by scraping with broken glass and others may have to be bleached. Also remove glue from around the joints as wood stains will not penetrate the glue.

Filling Wood

Generally the wood of old furniture does not have to be refilled. Woods such as birch and maple do not need to be filled. Cherry could have a light coat of filler. Open grained wood such as oak, walnut, mahogany or chestnut should be filled.

If you are working with new wood it will need filling. A good quality commercial paste filler will do the job. Rub the filler into the wood with a coarse cloth such as burlap. Work across the grain. Rub in good as the filler should be in the pores of the wood but not on the surface. Clean off ex-

cess filler with a damp sponge. Be sure to get excess filler out of all crevices. Allow to dry at least 24 hours.

Stain

There are two types of stain, an oil stain and a water stain. The oil stain is best to use as it is easier to apply, does not penetrate deeply into the wood, and the color can be controlled more easily.

If you wish to stain your piece of furniture, add pigment of the color desired to oil of stain and apply to an inconspicuous place. It is better to mix a small amount and try it out until you get the color desired. Keep in mind that the stain will appear to be darker when it is wet than when it is dry. It is better not to stain soft woods, such as pine. However, pine will take maple stain quite well. The application of a certain color stain will not make one wood look like another. Mahogany finish does not mean mahogany wood. Maple and birch are two woods which will accept mahogany stain quite well. Walnut will accept mahogany and walnut stain quite well.

Apply stain evenly with a cloth or wool carpeting, overlap strokes slightly. Do the sides and legs first, then the top. Allow to stand for a short time. If a light color is desired, wipe off immediately; however if a darker color is desired, allow the stain to stand several minutes before wiping off the excess. Use a soft cloth and rub with the grain of the wood. Allow to dry at least 12 hours; sand very lightly with fine paper.

Most "stain varnish" is to be avoided.

Seal Coat

First, be sure that all blemishes have been removed. After the first seal coat is put on they show quite plainly and are very difficult to remove.

Use white shellac. Cut four pound commercial shellac 25 percent with denatured alcohol. (Example, one tablespoon four pound commercial shellac plus four tablespoons alcohol.) Mix thoroughly and let stand at least 30 minutes. Dip brush about one-half of its length into shellac, gently press excess from brush being careful not to get air into brush. Flow shellac on to furniture and do not brush over that place



Fig. 8. This chest of drawers shows the steps of refinishing. The top drawer has been sanded and finished with a seal coat, two coats varnish and one wax. The second drawer has been sanded and the bottom drawer still has the old finish. Note the contrast between the top and bottom drawers. In the top drawer the grain is clearer and the finish more satiny.

again. Dry 12 hours then steel wool most of the shellac off being careful not to cut through to the wood. Dust with cloth or sponge.

There are commercial products which are excellent. They are applied with a cloth, dry almost dust free and are heat, water and alcohol resistant.

Finishes

Varnish. Use a rubbing varnish as it will give a high polish without being shiny.

Apply varnish with a brush starting in the center and working toward the outer edges. Varnishing must be done in a room as dust free as possible and must remain so for the full drying period of 24 hours.

Using a fine sandpaper, lightly sand the surface. Wipe with a "tack cloth." A "tack cloth" is a cloth dampened with a mixture of five parts turpentine and one part varnish.

Apply a second coat of varnish. After it is thoroughly dry (24 hours) rub down with a crocus cloth and light oil. Allow to stand three to four weeks as the furniture must have a hard dry finish. As the final rubbing, use a fine rubbing car compound. Be careful as you can cut through the finish. This will give your furniture a lovely satin finish.

Wax. Apply one coat of **paste** wax and polish with a clean soft cloth. Use a circular motion and work vigorously.

Paste wax may be used on all wood finishes. Water emulsion waxes (liquid wax) may be used on all surfaces except those which have been shellacked. It may turn the shellacked surface white.

Wax may be used as a finish and can be applied after the seal coat. It gives a finish which is desirable, and easy to create and maintain. Spread evenly and polish when dry. Apply two coats. Rewax at least once a year. Remove all old wax before rewaxing. To remove wax put small amount of turpentine on a cloth. Wring it out and let stand in open air 15 minutes. Wipe over the surface quickly and then wipe dry with another cloth. Rub vigorously. Commercial wax removers are effective also.

Oil Finish. Oil polishing gives a beautiful finish to hard woods. Brush on a mixture of two parts boiled linseed oil and one part turpentine. Let it soak in for 10-20 minutes; then polish about 20 minutes with a soft, lintless cloth. Repeat at weekly intervals for at least 10 weeks. The oil is put on after the seal coat.

Blonde Finish (sometimes called "limed" or "pickled"). Sand the wood as explained under the heading of "sanding." Fill the wood if necessary. Usually the unfinished furniture you purchase has been filled and some sanding has been done.

Apply a "blonde" stain of any light color you desire. This may be purchased or you can make your own. To make your own,

dilute flat white paint with turpentine about five to one. If you want a color add a few drops of oil color to the solution. Brush on and wipe off surplus while still wet but just before it gets "tacky." Rub across grain at first and then rub with the grain. Allow to dry at least 12 hours. Sand lightly, then varnish as previously explained. See Fig. 9.

"Glaze" Finish. The "glaze" is usually applied after the seal coat. Make a "glaze" by taking one and one-half teaspoons of Burnt Umber (in oil) and diluting it in three tablespoons of turpentine, adding one teaspoon of clear varnish. Mix thoroughly. These amounts are only for proportion. You may have to mix more. Apply with a brush, let stand for a few minutes until tacky and wipe most of it off lightly with a coarse cloth (cheese cloth) always with the grain. Let stand several days until thoroughly dry.

Wheat Finish. Wheat finish is about the color of tawny straw. Sand, apply two coats shellac, sanding lightly after each coat. Clean off sanding dust. Apply "glaze," then apply 2 coats varnish sanding lightly

between.

Antique Finish. Enamel the article the desired color. Let stand several days. Apply "glaze" then proceed as for other finishes.

Enamel Finish. Enamel finish may be any color desired. They aren't necessarily shiny. They come in semi-gloss or flat so

you can get any effect you want.

Sand. Apply coat of flat paint to under portions, then to legs and sides, then to top. When the first coat is hard and dry (24 hours), sand lightly. Wipe off. Apply a second coat of one-half flat paint and one-half enamel of the color desired. Dry 24 hours. Sand lightly and wipe off. Then apply a coat of enamel of the selected color.

Do not hurry when painting. Work in a

dust free, well ventilated room.

If you are painting new wood, shellac all knots. This closes the pores so the pitch and turpentine will not ooze out and spoil the paint. Use stick shellac as explained under Deep Scratches, Page 2. Also fill all holes, cracks, and open joints. When filling cracks with commercial fillers, keep in mind that they have a tendency to shrink when dry. It is advisable to make a second filling before



Figure 9

continuing the finishing process.

Hidden parts (inside drawers) are not painted but given a coat of shellac thus controlling swelling and shrinking.

Dip the brush into paint to cover about half the bristles, remove excess against wire across top of can or against sides of can. Brush out thoroughly avoiding a heavy, gummy coat. Brush out runs or sags before they harden. Start painting at top except chairs which you invert so you can do rungs and legs first.

Bleaching Wood. Most bleaches are caustic so it is best to protect your hands with rubber gloves.

Remove old finish and sand.

A commercial bleach is more satisfactory than household bleach and it has been tested. The kind which comes in two solutions is best. Be very careful to keep the caps of the two bottles straight. If they are mixed and the solutions are used incorrectly, you

will cause injury to the wood.

Follow directions on the labels carefully. When the wood is the desired color, proceed as you would for a natural varnish finish.

Lacquer. Lacquer is tricky and hard to handle. It is best sprayed on the article, but even then it takes practice to get it on even. You have to work quickly when handling lacquer.

Kinds of Wood

Hardwoods

Ash—looks like oak but not as attractive, becomes brittle with age, easier to work than oak.

Birch—hard, tough, close grained, durable, takes stain well.

Black walnut—heavy, strong, hard smooth grained, easily worked, rich brown color.

Mahogany—varies in hardness and workability, glues well, strong, easy to work.

Maple—very hard, strong and flexible, has crooked close grain and takes beautiful polish. Splits and warps easily.

Oak—very hard, strong, heavy, durable, and beautiful grain.

Soft Woods

Cedar—durable, easy to work, takes good finish.

Cypress—easy to work, will not warp, durable against weather, rich reddish brown.

Gum—brown color, even texture, takes good finish, warps and twists so best for small articles.

Poplar-light, soft, stiff, not durable.

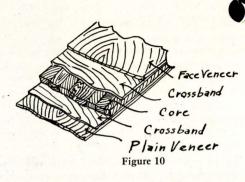
White pine—light, soft, straight grained, durable, good for all general carpentry. Fir—light, soft, straight grained.

Close grained woods are:

Maple, gum, birch

Open grained woods are:

Oak, mahogany, walnut and chestnut.



Veneer or Solid

Veneer is made of sheets of wood about one-twenty eighth inch thick glued to a center core of hardwood under extreme pressure and heat. The grain of each veneer sheet is placed to run at right angles to the grain of the sheet next to it. Crossing the grain adds strength and helps prevent warping. Fig. 10.

Less expensive veneers are three thicknesses, consisting of a core and a veneer on each side.

The veneers are usually some kind of beautifully grained wood. The grain may be placed different ways thus getting interesting effects.

The veneers of five or more ply are durable, do not crack or warp and are generally economical.

Chairs and small pieces are usually solid wood. When designs are simple, solid furniture can be made in medium price range. If solid piece is deeply marred it can be sanded down to any depth necessary to remove the scars. Since veneer is in such thin layers it can't take such treatment.

Maple, cherry, pine and oak are usually made solid as they are not highly figured.





Figure 11

Remodeling

Before starting to work on a piece of furniture it is well to consider: Is it good wood, well constructed? Does it have good lines? Is it well proportioned? Can the poorly constructed features be remodeled to advantage? Can home repairs and refinishing make it usable?

Satisfactory results require time, energy, and a great deal of imagination. When remodeling furniture a good imagination is one of the most important requirements.

Furniture now in use which can be improved with remodeling are: High head board beds, dresser with mirror hung in



Fig. 12. Notice that the two top drawers in the old buffet has been changed to one wide drawer. The legs have been cut off and a solid section added at the bottom.







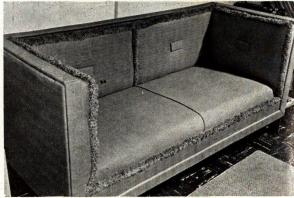


Figure 13

heavy ornamental frame, dining room chairs and table, buffet, Morris chair, chest of drawers, mission love seat, and many others.

The bed can be cut down to eliminate the heavy headboard or perhaps you would prefer using the foot board for the head and saw the head board off even with the rails.

The heavy frame holding the mirror on an old dresser can be removed. Cheap brass handles can be replaced by plain wooden knobs. The mirror can be hung by wire on a strong picture hook. The dresser now becomes a dignified piece of furniture, simple in design and pleasing to the eye.

Figure 11 illustrates how simple changes can completely change the appearance of an

old dining table. The four projecting legs were removed and a new square base added. The deep overhang was taken off to give it a modern look. It was also given a light finish. New chairs were added. However, it would be possible to remodel these chairs as shown on the cover.

The legs of the old buffet were removed and a simple new base added. The small drawers at the top were made into one. New knobs and respacing of the knobs helped change the appearance as well as giving a feeling of better proportion. Fig. 12.

An old mission love seat can be modernized by padding and upholstering. The legs were cut down. This was the only change except for padding. Fig. 13.

ACKNOWLEDGEMENT

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George I. Gilbertson, Director of Extension.