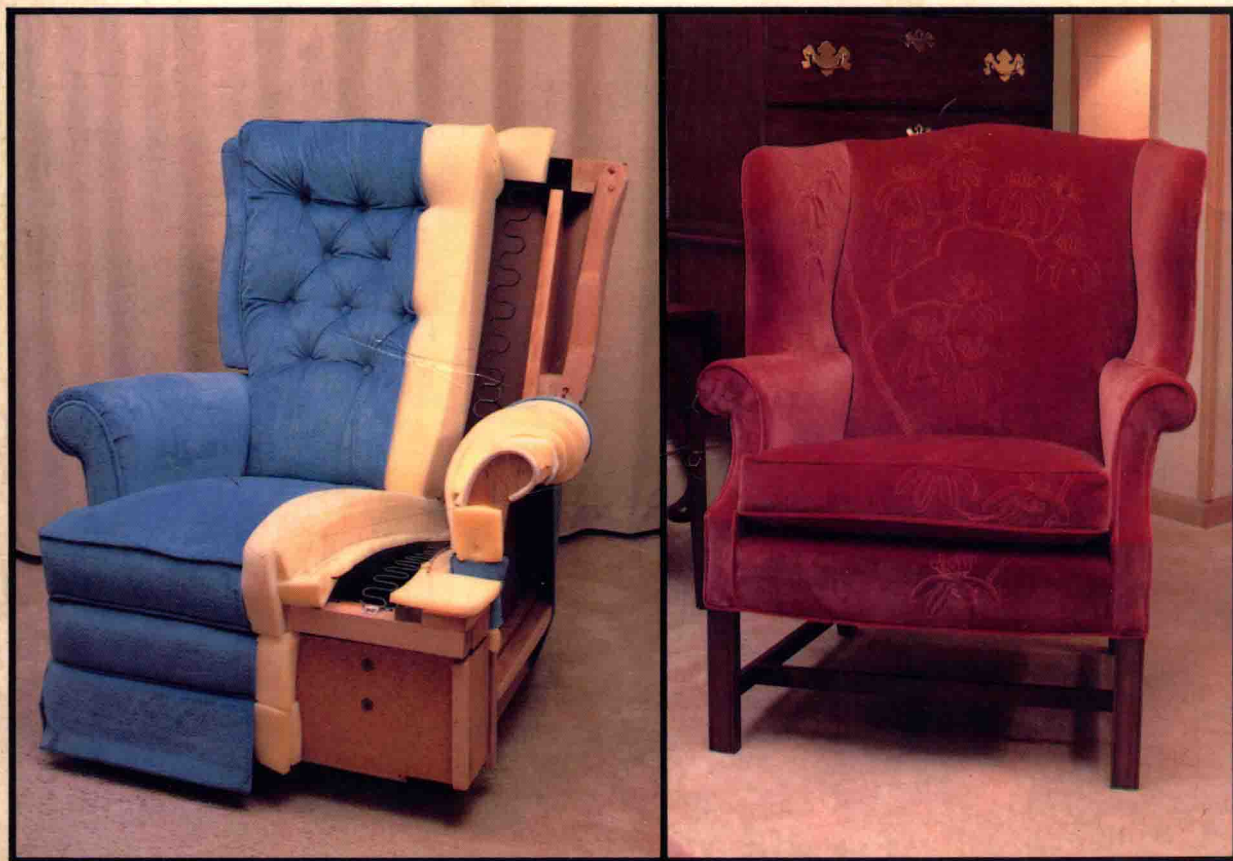


# UPHOLSTERY TECHNIQUES ILLUSTRATED



W. LLOYD GHEEN

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# Introduction

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*Upholstery Techniques Illustrated* has been written to make the reupholstering process more self-explanatory for the newcomer to the trade, for the apprentice, for the student, and for the do-it-yourselfer. Basic procedures have been photographed in a step-by-step sequence, with directional indicators included where tricks-of-the-trade might not be obvious. Discussion of tools and materials and procedures that are either phasing out or that have ceased to be a part of modern practices have been omitted. Technical information on the newer materials and tools has been expanded

to help you make informed decisions rather than rely exclusively on my bias.

Upholstery is so diverse that one reading of a book or doing one piece of furniture will never allow you to develop expertise. Each different piece brings new challenges and problems to be solved. It is an ever-changing trade, an exciting trade. New and different tools, materials, and procedures are constant realities. For that reason this book cannot be the “last word,” but is intended to be an improved word. I welcome constructive criticism and suggestions for additions and improvements.

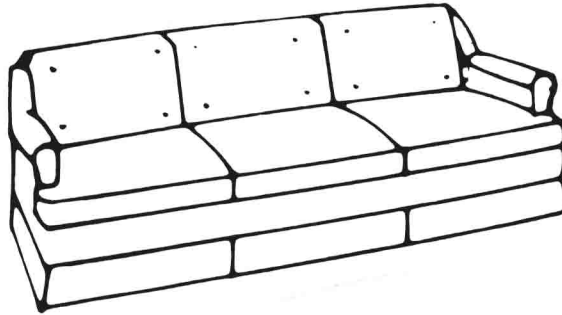
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# Chapter 1



## Overview

Within this book two “generic” terms will appear, upholstery and reupholstering. *Upholstery*, when strictly used, refers to the application of all new materials to a new frame, which may include any or all of the following: *foundation*, *base*, *padding*, *stuffing*, and *cover*. Used in a more loose sense, as is most often done in the business, it means “reupholstery.” *Reupholstery* is the application of new cover material to a used piece of *upholstered* furniture. This may or may not include new foundation, base, padding, or stuffing materials. Whenever upholstery is used in this and subsequent chapters, it will really mean reupholstery (which is the scope of this book) unless specifically noted otherwise.

Upholstering new furniture or reupholstering old furniture remains a bit more of an art than it does a technology. Although there are technical aspects which will lead to a finished unit that is pleasing as well as correctly done, very few (if any) upholsterers will do the job exactly the same way. For example, variations in the way the same stuffing and padding materials are applied give not only

different “feels” to the furniture, but also result in differences in the appearance of the finished product. Some like the tight, rather squared look, while another may prefer the more subtle, soft, “puffy” look. Both effects can be achieved using identically the same materials. Small changes in how and to what extent the cover is fitted and pulled down can transform a piece from the tight to the softer look, and visa versa.

Based on my experience, there is no such thing as the one and only way of upholstery. To say, however, that there are no procedures which are better than others would have about the same validity as saying that because a stork often stands on one leg rather than both, he, therefore, has no need of the other. Now, to the observer of a picture in *National Geographic*, the consequence of whether the stork needs one or two legs may seem rather inconsequential, but to a living stork it would be a matter of quite serious merit.

Many beginning upholsterers (and a number of those having considerable experience as well) have encountered some degree of frustration at trying



**Table 1-1. Symbols for Cover Fabric Identification.**

Component Symbols		Location Symbols	
A	= Arm	Bot	= Bottom
B	= Back	C	= Center
Bx	= Boxing	F	= Front
C	= Cushion	I	= Inside
D	= Deck	L	= Left
K	= Cambric	O	= Outside
P	= Panel	R	= Right
S	= Seat	T	= Top
SK	= SKirt		
W	= Welt		

Complete the following mentally or on scratch paper.

IA	= Inside Arm	OA	= (?)
IB	= (?)	OB	= (?)
CBC	= Center Back Cushion		
RSC	= (?)		
LCSC	= (?)		
RBC	= (?)		

Note: Location symbols precede part or component symbols.

to understand exactly how to do a particular part of the job when they have been told one way of doing it, and then another person steps up and corrects their procedure saying, "That's not the way to do that. Here, let me show you how." The question naturally arises then, which is the right way? The answer?

Hold onto your hats because this is profound! Common sense and good judgment are often the most valuable guides. Strange thing about those two characters though, common sense does not seem to be so common and good judgment is often debatable. Just remember, whatever the boss says, that is the best way. What seems to work the best and be the easiest to perform by each person is probably the most sound guide to follow, coupled with a background of the "basics," of course. This text is designed to provide those basics and some of the tricks-of-the-trade at the same time.

For the novice, upholstering possesses many challenges and problems not previously confronted. "Where does this go? How should this be done? What now?" All these, and more, are very common

queries. So, accept a bit of counsel at this point and don't get all hung up in finite details. Upholstering is a problem-solving activity! Do some thinking, try to envision what would happen if that task were to be done as you imagine it could. If thought over and it seems logical and that nothing would be seriously wrong if done your way, try it! But, don't fail to think.

Upholstery is fun! If for no other reason, I say so! There have been some who have tried it, however, who have said, "I'll never, ever do this again! Now I can see why they charge so much to reupholster a chair." But there have also been those who have started their own businesses, have hired into existing shops, or who have continued doing every piece of upholstered furniture they could find in their own homes. One vivid and true example of the joy possible through upholstery can be seen from this illustration: A slight of frame, energetic, sweet (always pleasant), elderly lady beyond her sixties not only did her own work, lifting and moving her chair around, making and correcting mistakes; she also made a rather lengthy trip to buy

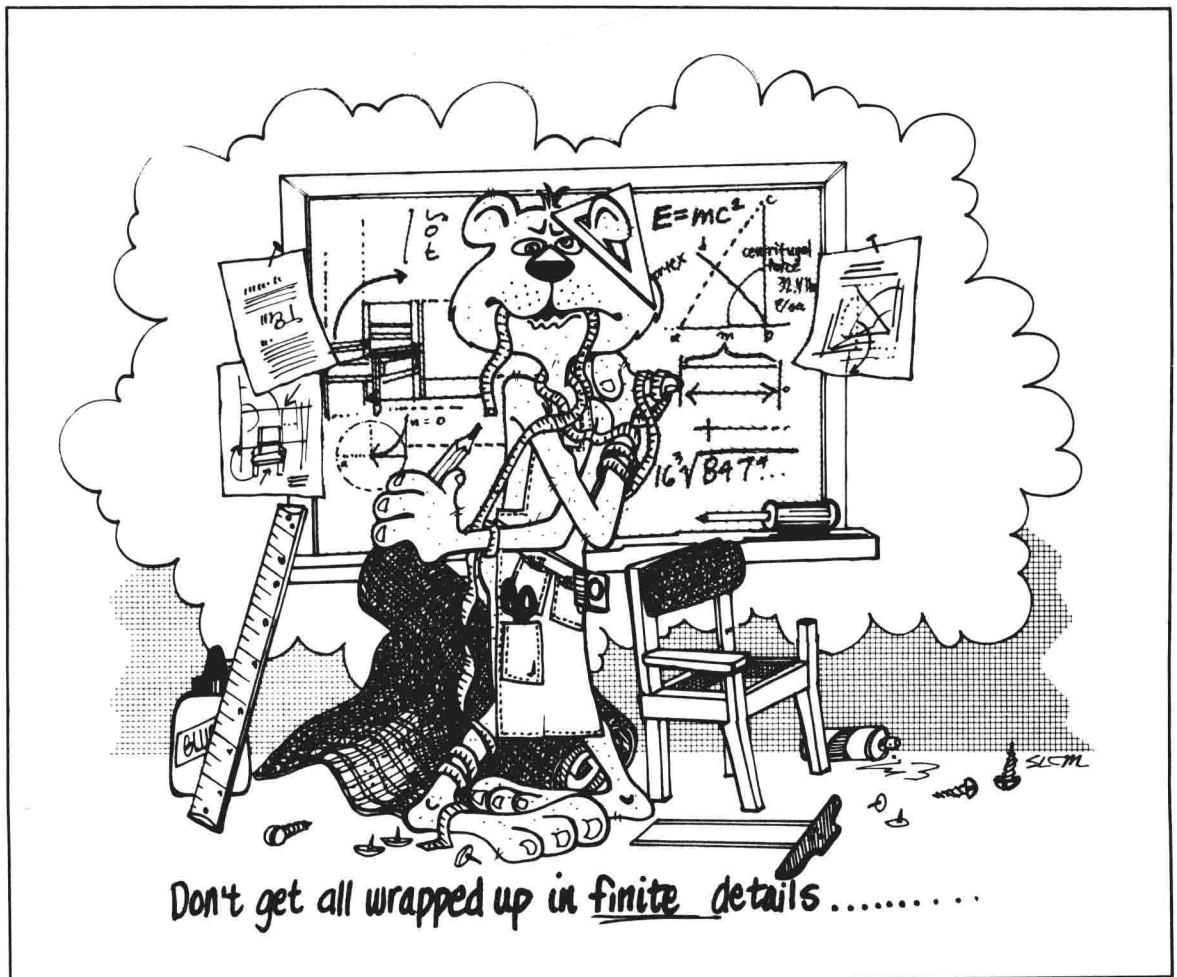
an antique loveseat, stripped it down, refinished the wood, and reupholstered it with diamond tufting and deep, piped channels in a striking deep red, heavily napped velvet (not an easy undertaking for the novice), and all because she enjoyed it so much.

Taking a class in upholstery, or just doing a piece of furniture on your own is guaranteed to accomplish four things:

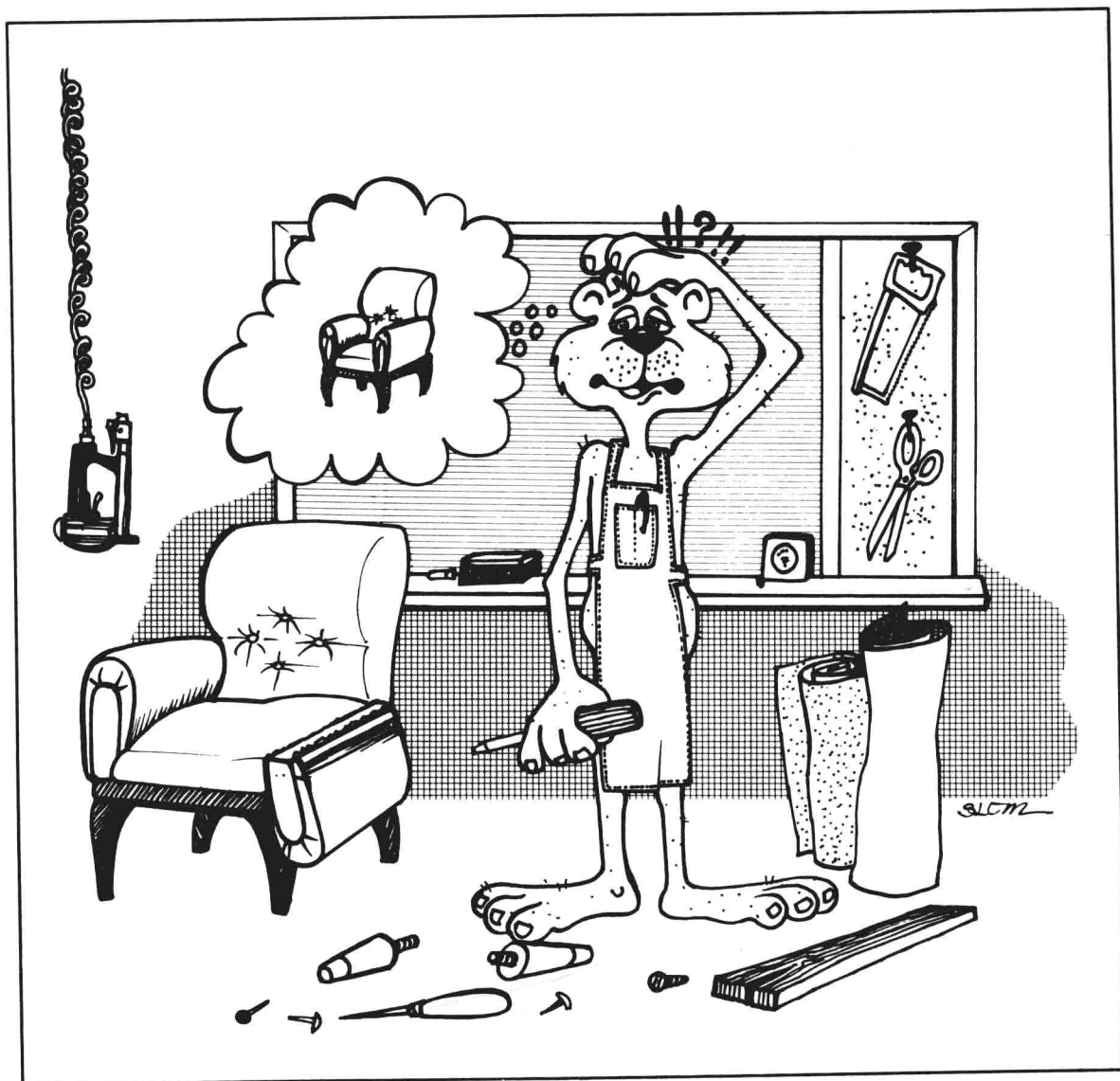
- (1) Tax your patience.
- (2) Increase your tolerance to frustration (if the job is completed properly).
- (3) Reveal some muscles that have long since been forgotten (overlooked?).
- (4) Develop a confidence (that may have been

concealed or lacking before) that you can tackle another piece and do it well, if you should so desire.

*Note:* It is not acclaimed to make you a competent upholsterer with one experience. Every piece of furniture seems to have its own personality which requires a slightly different approach and which possesses a few unique problems that were not previously experienced, or even conceived, for that matter. To illustrate: one experienced upholsterer (27 years in commercial upholstery) whom I esteem as a top-quality journeyman, commented that he still learns with each new piece of furniture that comes into his shop. This man, to give an idea of his expertise, has done work with fabric costing



Don't get all wrapped up in finite details.



Oh boy! Think it through *before* doing it!

over \$200 per yard (It had gold thread in it!); has done production and custom work; redesigned as well as designed furniture from the frame up; has worked draperies, sporting and personal equipment of all conceivable kinds that can be sewn or repaired on a commercial, straight stitch sewing machine (and some items that couldn't be done by most operators!); and has designed, with patents pending, athletic and gymnastic gloves and wrist supports

that are in use at several universities and high schools already—and all this with no commercial advertising having been employed yet!

So, what does this all mean? Simply that the first, or second, or third time taking an upholstery class, or doing furniture on your own through using this text, or any other yet developed for that matter, will not give you (“experienter” might be a more appropriate term, if we could find it in the

**Table 1-2. The General Order of Stripping and Covering.**

STRIPPING		COVERING	
{	K	{	D
	SK		S
	P		IA
	OB		IB
	OA		OA
	IB	{	OB
	IA		P
	S		K
	D		SK
	Interchangeable		Some styles may be reversed!
	Some styles may be reversed!		Interchangeable

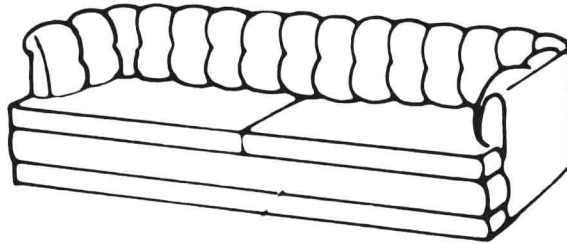
(Note that Covering is the reverse order of Stripping.)

dictionary, as reading alone cannot develop manual skill) all the skills and all the answers to the problems that will be encountered on the different types of furniture. Upholstering (reupholstering) is a problem-solving activity, not a science.

The first time a person strips a unit to the bare frame, either to make frame repairs or to replace badly worn or soiled materials, just looking at that skeleton of what used to be a piece of furniture is almost enough to instill panic and then despair. Take courage! All is not lost! If the stripping process is pursued as outlined in this book, a restora-

tion of pleasing countenance can take place. Proceed, now, into the fascinating, challenging and rewarding world of upholstery. Remember, even when your finger is dripping blood because you got caught on a staple stub you forgot to get out during the stripping process, it can be fun! Even if your patience is taxed, muscles grumble at you because they haven't been used in quite this way for a long time, hair thins (from pulling), and blood is shed on those "gotchas"—even after all this—it can be fun. *Buena aventura!*

## Chapter 2



# Upholstery Tools

The tools shown and discussed in this chapter are organized into three basic categories: essentials for the “do-it-yourself,” the minimum for the small or part-time shop, and tools for the professional shop. An attempt has been made to list the tools to each category in a priority order, with the most essential first. This ordering, being basic, might be altered by individual circumstances. One might find that every tool is essential. Another, that some tools are not even mentioned should be. Yet another might determine that some of those tools mentioned are not at all necessary. The categories are intended as a guide only, and not as the last word!

Although tools are often used for many purposes, other than for what they were designed, the proper use of the appropriate tools will be illustrated in this and subsequent chapters. Use tools for the purposes for which they made. Take the time to find and use the right tool and the work will be a pleasure with a high chance for success. Taking short-cuts just because something else is handier at the moment was the stimulation for the Modern Upholsterer’s Proverb: “He who takes

short-cut with tools, finds longest and most rough way.”

### FOR THE DO-IT-YOURSELFER

**Upholsterer’s Shears.** No one, after they have tried to cut some of the upholstery fabrics, would consider doing it (more than once) with a pair of common household scissors, Fig. 2-1, bottom. The heavy-duty upholsterer’s shears (Fig. 2-1, top) really, are quite necessary. If a lot of cutting is to be done at one time, shears will be found much more “friendly”—they don’t create blisters nearly so fast nor muscle cramps nearly so acute as do the common scissors.

**Screwdriver.** Disassembly, and subsequent reassembly, of some of the furniture pieces would be virtually impossible without the right screwdriver. There are several specialty screwdriver types that have come into use, but for most furniture assembly, the *straight-slot* and *Phillips* remain the most popular ones. A medium size would probably be the most practical for the



Use the right tool for the right job.

one-time upholsterer. However, the only way to preserve the driver blades and the screw heads is to use the right size driver for each screw size. What is the right size? If the driver fits snugly, it is the right size! If it doesn't quite enter the slot or cross, it is too large. If it only goes half way across the screw slot or wobbles without turning the screw, it is too small. Simple, eh?

**Staple Remover or Ripping Tools.** Only a glutton for punishment (or perhaps the inexperienced) would think of stripping a piece of furniture without the use of a *staple remover*, for stapled materials; or a *ripping tool* or *claw tool* for materials fastened with tacks (Fig. 2-2). Although the mallet is not yet mentioned, if a claw tool or ripping tool is to be used, some hammering device is certainly

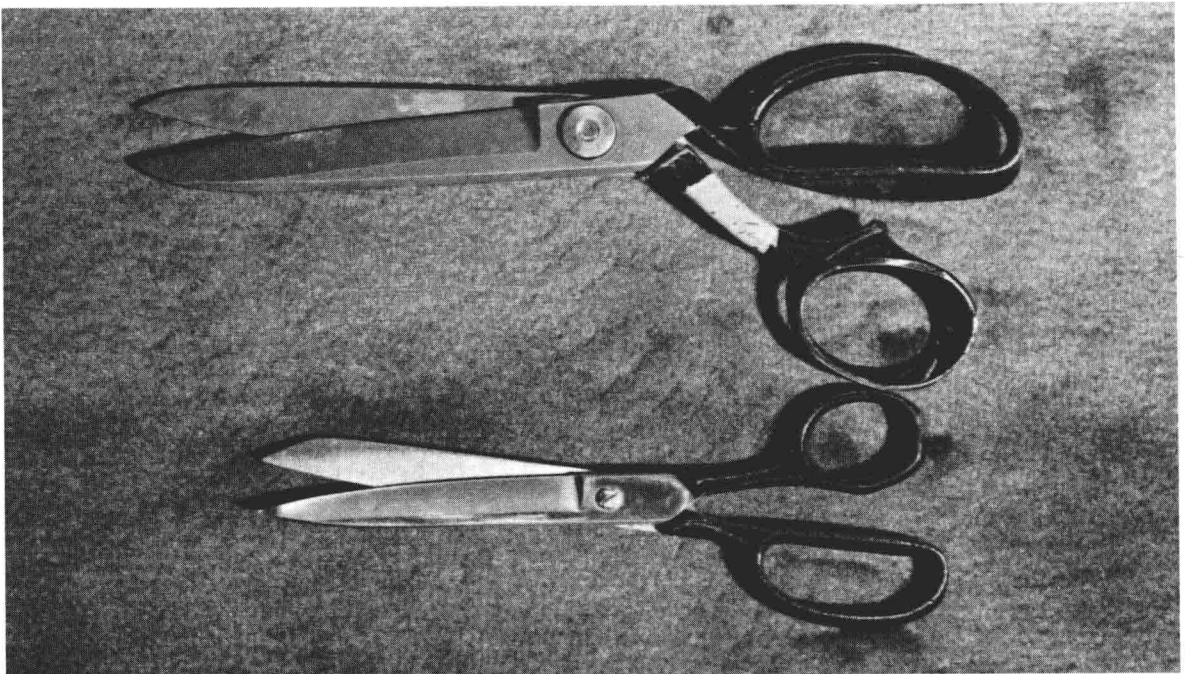


Fig. 2-1. Upholsterer's shears (top); heavy-duty household shears (bottom).

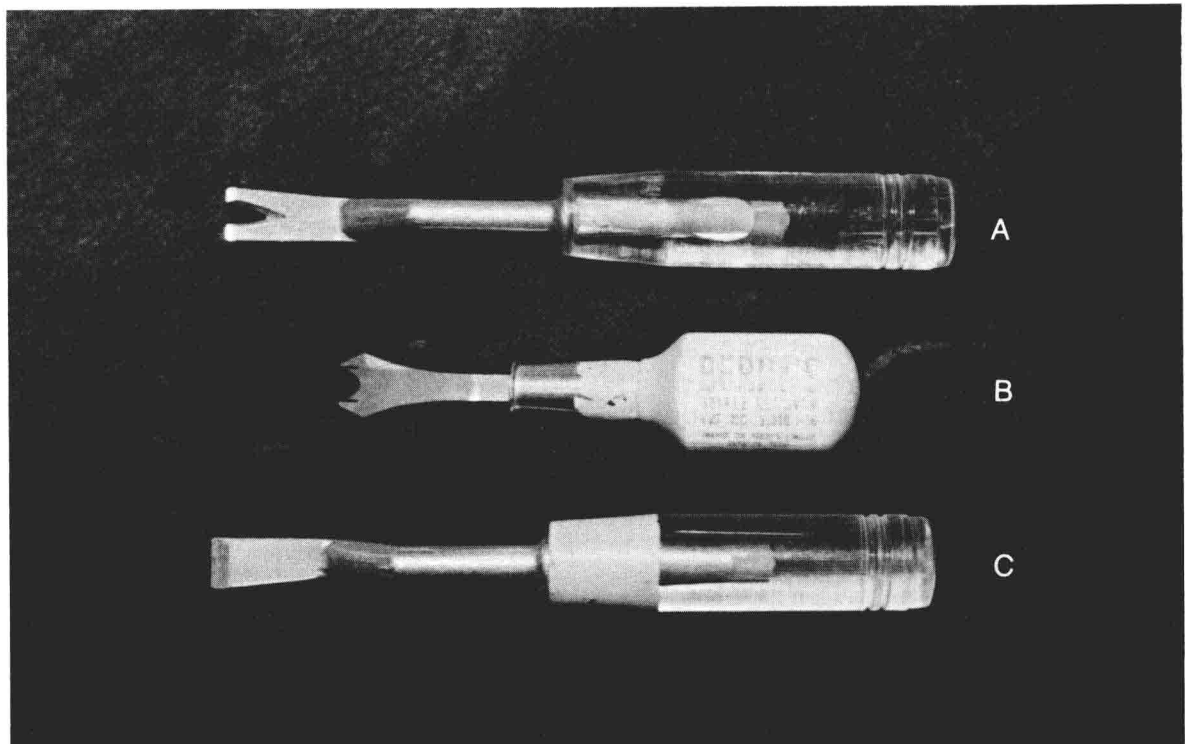


Fig. 2-2. Stripping tools: (A) claw tool. (B) staple remover (patented by Berry) (C) ripping tool.





Fig. 2-3. Flexible measuring tapes: top-steel rule, bottom-cloth tape.

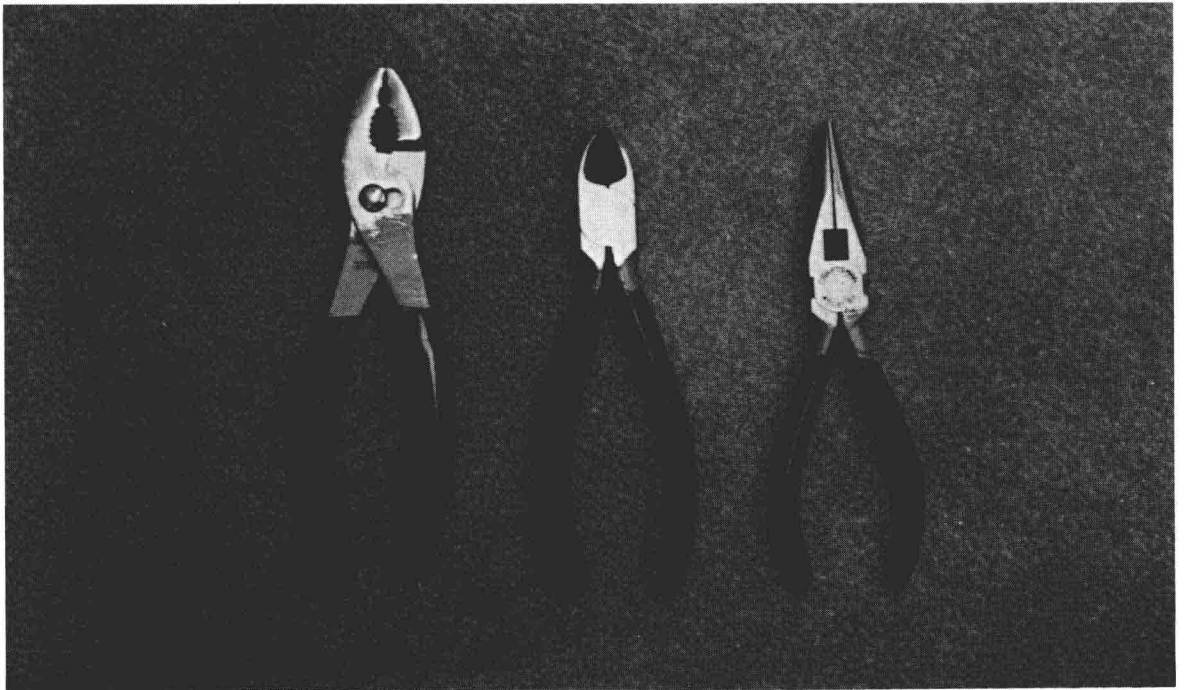


Fig. 2-4. Popular pliers: (A) slip-joint, (B) diagonal cutters ("dikes"), (C) needlenose.



necessary. *Note:* Only a karate expert would consider using the bare hand or forehead to drive these tools! The *straight slot screwdriver* could be used to remove both staples and tacks, but that is a torturous way to go.

**Measuring Tape.** Some flexible measuring device is necessary. It would be possible to use a piece of string and transfer measurements, but why go back to stone age procedures when we have measuring tapes available? Figure 2-3 shows two popular types of flexible tapes: (top) the *steel tape*, and (bottom) the *cloth tape*. Flexibility is essential as many measurements must be taken around curved surfaces and corners. Have you ever tried to bend a yard stick around a corner? Both of those pictured work well. However, there is one word of caution: don't try to communicate to another a measurement using the cloth tape pictured unless it is remembered that the actual measurement begins at the point of the arrow marked "start" and not at the darkened end of the tape. The added length is provided so the operator can have something to hold on to when measuring to corners, edges, and the like.

**Pliers.** A great aid in removing staple remnants, those sharp little critters that draw blood and inflict instant pain when least expected and never desired, is any one of various types of *pliers*. Handy pliers to have are the *slip-joint*, *diagonal cutters* (dikes), and *needle-nose*, shown in Fig. 2-4A, B, and C respectively. Each of these pliers has a specialty use in addition to being able to perform basically the same functions of pulling, cutting, and bending. *Slip-joint* pliers are especially useful for general grasping and bending, such as edge wires and other light spring wires. The *dikes*? They are the stripper's helper! One of the handiest tools to have as they can grasp very close to the frame surface, cut staples easily when they can't (or won't) be pulled out, and are flat enough to be used quite successfully as a "gotcha" (staple stub or broken or cut tack remnant) finder. The *needle-nose* find their specialty in being able to make small diameter bends in light wires and to get into some places too tight for fingers and other types of pliers to reach.

**Tack Hammers.** Although most of modern

upholstering is done with staples and staple guns, all of the *tacking* can also be accomplished with *upholstery tacks*. The *tack hammer* is an indispensable, yet inexpensive, tool for that job. Without it, bruised and sore fingers are the guaranteed and a painful norm. Of course a good pair of tweezers could be used to hold tacks while driving them with a claw hammer, if one wanted to "putter away the time" doing the job. Four styles of *tack hammer* are shown in Fig. 2-5. All *tack hammers* have one end which is magnetized to hold a tack for starting with the opposite end being nonmagnetic for subsequent

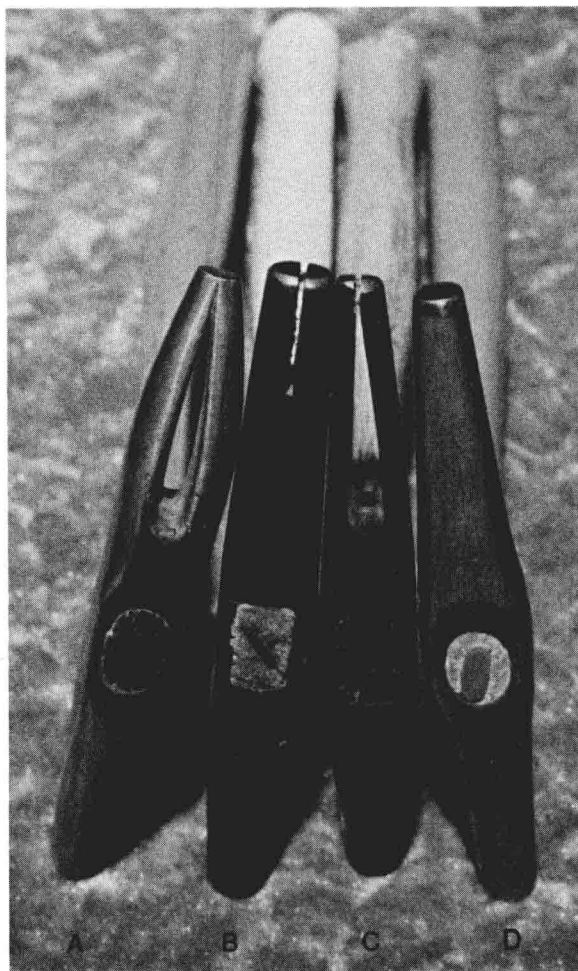


Fig. 2-5. Tack hammers: (A) split-end magnet (greatest curvature of both heads), (B) split-end magnet (least curvature of both heads), (C) split-end magnet (straight-end for magnet, curved head), (D) solid-end magnet (moderate curvature, both heads).