

## Chapter 2

# Basic Hand Tools

*The chief cause of problems is solutions.*

—Richard Sennett

### Introduction

Having just the right tool for the job makes all the difference in getting the job done quickly and correctly. No place is this more important than in the machine shop. This chapter looks at fourteen different categories of basic machine shop hand tools and how they are used. For every category of tool there are dozens of variations in size, shape, and design, so it is easy to see why most machinists have *hundreds* of tools in their rollaway chests. There are another dozen types of hand tools, such as reamers, taps, and dies, which are equally important, and will be covered in later chapters. Although socket, open-end, and box-end wrenches are basics and often used in the machine shop, their use is familiar to most and will not be covered here.

We will also examine two hand-held power tools, the reciprocating saw and the portable band saw. They are important to cut metal stock into smaller sizes prior to machining.

From quality tools to budget imports there is a bigger selection of tools available today than ever before. Actually seeing and handling the quality and budget alternatives before making a choice between them is always a good idea. Sometimes there is a big difference between them and sometimes not, so be aware of this before making a purchase. Many budget tools look good, but that is the *only* good thing about them. Paying list price for a quality tool is often the better value. Industrial tool catalogs, aside from being fun wish books, are a good way to learn about the myriad of tools now available which may someday help you solve a problem.

### Bench Vise & Jaw Covers

**What are the uses of a bench vise?**

Bench vises: