Basic Nineteenth Century Tools

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This paper will deal with tools. Specifically, it will deal with tools that were used during the 19th century. No attempt can be made in a paper of this length (or one much longer) to present any true survey of the tools used during this period. The process used in this paper will be one of selectivity. The tools that will be discussed will be those which have relevance to our site—this will make the job only slightly easier, but I think something of worth can be accomplished. It is important to realize that many of the tools used today by modern farmers and craftsmen—tools such as hoes, rakes, planes, drills, and shovels—are examples. Their shapes and appearances might have changed somewhat, but they are basically the same tools. One might even say that in some ways these tools are superior to the ones presently produced. The following is an interesting example: "While I was putting this book together, my neighbor bought a good new saw and left it out overnight in the dew. Its shiny newness had given way to the orange of rust, and he telephoned my to ask for help in removing it. I took it to clean and loaned him one of my early saws to use in the meantime. The old saw was one I found in the stone wall of an ancient barn. It is still sharp and clean of rust."

It is apparent from our site that there is one simple deal. No attempt can be made in a paper of this length (or one much longer) to present any true survey of the tools used during this period. The process used in this paper will be one of selectivity. The tools that will be discussed will be those which have relevance to our site—this will make the job only slightly easier, but I think something of worth can be accomplished. It is important to realize that many of the tools used today by modern farmers and craftsmen—tools such as hoes, rakes, planes, drills, and shovels—are examples. Their shapes and appearances might have changed somewhat, but they are basically the same tools. One might even say that in some ways these tools are superior to the ones presently produced. The following is an interesting example: "While I was putting this book together, my neighbor bought a good new saw and left it out overnight in the dew. Its shiny newness had given way to the orange of rust, and he telephoned my to ask for help in removing it. I took it to clean and loaned him one of my early saws to use in the meantime. The old saw was one I found in the stone wall of an ancient barn. It is still sharp and clean of rust."

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yet valuable, tool that I should not neglect to mention. That tool is the nail. There are basically two types of nails—machine-cut nails and wrought nails. Machine-cut nails taper only on two sides, whereas wrought nails taper on four sides. The "rose nail" was characterized by four hammer blows to the head which form a distinctive shape. "Planches" exhibit T-shaped heads. These nails were used to hold down flooring. The nail which made use of a head which had sharp downward-facing sides was the "clasp nail"—named for obvious reasons. The wide, flat headed "scupper" was used to nail down leather. The L-headed "Brad" was used when one was working with planks of wood. It seems that farmers often made their own nails with the aid of tools termed "headers" and iron anvils.

How could one discuss tools without discussing that important tool—the saw? There were two main divisions of saw: The "open" saw and the "frame" saw. The open saw of earlier years is much like that of today's saws except that the earlier open saw is distinguished by its knife like handle which allowed the use of both hands. The more popular saw, though, was the frame saw. Frame
saws had the advantage of needing a lesser amount of metal since the blade could be made narrower.\textsuperscript{4}

I think it worthwhile to take a closer look at the frame saw, due to its popularity during this era. Even though the frame seems today to be a bit unwieldy, it was more of a sensitive, exact tool than the saws used today. The frame saw has the advantage of being able to cut around corners. Today's had saw has a large blade which does not allow the craftsman to see the exact area he is cutting—the frame had not these problems.\textsuperscript{5}

When one watches an old movie or cartoon, one will invariably see one of those giant saws which have at least two men using it. These were the saws used to construct planks. In order to make the planks these giants were used with pits or trestles which allowed their full extension. These saws were often around seven feet in length and were constructed in both the frame and open styles. They were utilized until the late 1800's—by that time they were factory made.\textsuperscript{6}

When one examines the chisel, one is examining a tool which is often quite varied in design. The most basic configuration is that of the farming chisel. It was utilized for a large number of purposes, but its most
important use was in the forming of mortise in wood. The larger, heavier chisels were the framing chisels. They were used to cut mortises. Both types were constructed in a manner which would allow them to be used with a mallet. They both exhibited wooden handles. 

The adz was a woodworking tool used to help prepare timbers for construction purposes. It was characterized by a curved blade joined perpendicularly to the handle. This type of construction allowed the tool to remove wood in the amount wished by the craftsman. Thin or thick pieces of wood could be removed. The handle varied a great deal in length, depending on the job. Adzes used by carpenters might have had handles with 30 inch length, whereas those used in the construction of chain seats or bowls might have been quite small.

Nineteenth century adzes are distinguishable by their peculiar eye socket for handle jointing. The eye was shaped in such a way that the handle had to be inserted from the front face of the head. The socket was tapered in such a way that the handle could not possibly fly off the end of the tool. Often, when wood was being prepared for use in the con-
struction of a house, the broad-axe was used to square and work the beam. But in the case of some structures such as a barn or storage building, where rapid construction was often the desired type, the adz could be used for quick squaring. Frequently, plain rafters were finished only on the top by an adz, while the rest of the rafter was left in a natural state, sometimes with the bark still attached. This occurred most often in country houses and barn construction.\textsuperscript{10}

One tool which must surely be mentioned is the axe. This was important in years past and is still important now to the farmer, or the person who heats his house with wood. The axe is the basic tool for survival. With it, man could make crude furniture, build a house, and cut firewood. The axes which were first brought over by settlers were those which were constructed in their native land--they were not the true lately developed American axes. The American axe is distinguished by its pall. The pall is the projection of the axe head which is behind the cutting blade.\textsuperscript{11}

Well into the nineteenth century axes were shaped
by a process which involved the folding of a piece of iron from a pattern. The folded blade then had inserted into its future blade area a steel wedge. After being hammered together and hammer-welded over a metal handle, the axe was complete except for the introduction of the wooden handle.\textsuperscript{12}

The post-hole borer, or digger (as it is commonly known) is, and was, a tool that allows a man to plant a wooden beam or pole into the ground for construction. This tool is still used today by the small farmer. My grandfather has a couple that he uses regularly. For example, from my own experience I know the post-hole borer to be a rather efficient tool when used in soil that is relatively free of rocks.

Basically the post-hole borer is a tool which is composed of double wooden handles that operate with a pincher-like action.\textsuperscript{13} At the end of the tool are attached opposing scoops which are used in the actual removal of the earth. A twisting action on the part of the individual using the tool increases its efficiency. Once the earth in the hole has been loosened by the twisting action coupled with the use of the pincher action of the scoop, earth can then be removed.
The hoe is also a tool that was used in years past. Like the many other tools it is still used today. The hoe is a hand-held tool that is used most often for light soil breaking, and weed eliminating (termed "chopping"). It is composed of a handle and metal blade. The handle is usually between four and five feet in length. The blade is perpendicularly attached to the handle and is between four and six inches in width. It is extremely useful in tasks that demand close work with plants in order to destroy weeds without destroying the plant. Hoes are among the most useful of tools.

Often, when one was working with wood, awls, punches, and augers were utilized to bore smaller holes. The main difference between augers and awls (and other tools related to these groups) is that augers are similar to today's drill bits and "cut" through wood; awls are used to spread the wood fibres apart. These tools were attached to a wooden handle which allowed the craftsman to manipulate the tool in such a way that the boring action that was desired was obtained.¹⁴

To make larger holes the craftsman could utilize the taper borer. These tools are termed reamers. The largest of these tools was the wheel-wright's reamer;
it could weigh twenty-five pounds, and reach a length of up to three feet. Once the hole had been bored with the aid of some smaller auger or awl, the taper-reamer could be introduced. For example, in the construction of a wheel for a coach or cart, the wheel-wright would insert the reamer into the hub of the wheel and employ a twisting action to enlarge the previously drilled hole for the introduction of the axle. The hole produced by the reamer is tapered, due to the shape of the tool, but this was often desired (as in the case of the wheel). 15

The dhawknife was a tool which was composed of an iron blade which measured from six to twenty inches in length. From the blade projected tongs which were set at right angles. Handles of wood were attached to the tongs. When used, the clade of the chawing knife was held flatly against the wood being worked. A cut of greater depth was produced when the angle at which the tool was being held increased. 16

The dhaw knife (or snitzel knife) was a rather popular tool due to the number of uses it could be put to. Among these uses were tapering the sides of shingles, rough-sizing the edges of floor boards, rough-trimming
paneling before planing them, to fashion axe, rake, and other tool handles, and to make stool legs, ox yokes, pump handles, and wheel spokes.\textsuperscript{17}

With all the uses that the above tool could be put to, it takes no intellectually-oriented person to determine that the draw knife was often a much valued tool.

The little brother of the draw knife was the tool known as the spokeshave. "The difference between the draw knife and its little brother the spokeshave is like the difference between the old open razor and the safety razor.\textsuperscript{18} The main advantage in the design of the spokeshave lies in the fact that the spokeshave is a tool that allows the craftsman to regulate the depth of the cut. To achieve this regulation, one had to tap the tongs of the blade. In order to deepen the cut, the blade was tapped in such a way that its projection beyond the wooden handle was greater. In order to decrease the depth of the cut, the blade was tapped back toward the handle. Before the Civil War the spokeshave utilized a wooden handle, afterward all-metal spokeshaves appeared.\textsuperscript{19}

The largest of these shavers was the \textit{chamber} knife.
Although it has often been mistakenly identified as a kind of froe, it is definitely a shaver.20

The plane was a tool that allowed great variability and flexibility. When compared to the adz, the plane is much the superior implement. It allowed craftsmen to plane exact edges that enabled the precise joining of wood. The plane could be adjusted in such a way that the angle and depth of the cut could be controlled. The plane is basically a wooden stock which holds a metal blade that acts as a chisel. The blade could be raised and lowered to adjust the depth of the cut. In short, the plane was (and is) an exact tool which allowed irregularities to be removed from wood surfaces, in order to create more appealing objects. 21

So, here we have some basic tools of earlier years. Indeed, many of these tools are still being used today. But a number of these tools have declined as far as their use in our era. Machinery now does the job. Tools such as adzes and drawknives are hardly used--the average person probably wouldn't recognize them. Man values his tools; the care with which many of these earlier tools were made indicates this. Today, we live in an era of plastic handles and cheap construction. Those craftsmen
Illustrations from the sources used in the writing of this paper have been provided to aid in the understanding of the tool types discussed. The Lexington Gazette was also utilized.
Bibliography

