

Care And Caution Vital For User Of Power Tools

By J. RALPH DALZELL

Careful thought should be given to small electrical power tools and the proper use and care of them. Highly efficient and a joy to use, they greatly reduce work and, at the same time, add to its quality. But, keep in mind that the speed which makes them many times more efficient than hand tools also makes accidents from their incorrect use more serious. If you understand their



advantages and dangers, and keep them in good condition, all hazards can be largely eliminated.

1/4" Drill. Hold this tool firmly and make sure the work is secured by clamps or vises. Do not drill holes more than 1/4" in diameter in metal. Make sure twist drills are sharp and without flaws. Never use a cracked grinding wheel. When changing attachments, always pull the electric cord out of socket. **1/2" Drill.** see picture 1. Used for heavy drilling



in metal, stone or concrete, the 1/2" drill requires extra precaution. Wear goggles and protect the face. When drilling in wood, a back up block prevents splintering and injury from breakthrough.

A two-position removable handle avoids finger damage. A built-in switch to provide instant reverse action is recommended. Keep air holes clear and the tool clean. Stop the drill if overheating develops.

The principal danger is from electric shock or burns. To avoid them make sure the posts or clips at the ends of all power tool wires are always grounded to a water pipe or other metal imbedded in the earth. This is especially important in damp weather or when one is perspiring.

Portable Sander. See picture 2. Make sure the abrasive paper is firm and not worn or torn. Good maintenance is largely a matter of keeping surface dust out of the mechanism. Never brush or blow



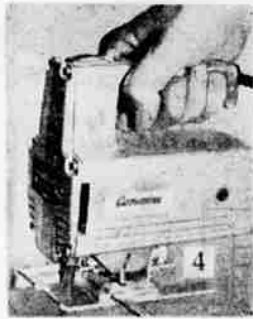
away dust while motor is running. Operate the tool with one hand, using no more pressure than the weight of hand. Keep the sander away from damp or oily places.

Never start any electric motor in an unventilated area where gasoline, naphtha or other combustible liquids or gas are present. Wear snug-fitting short-sleeved clothing without long neckties or other loose parts. Avoid carelessness! Use each tool only as suggested by the manufacturer. Guards and safety devices afford only 15 per cent protection. The

rest depends upon handling tools carefully. Oil tools as recommended by the manufacturer.

Vertical Drill Press. See picture 3. The prime safety rule in using a drill press is adequate clamping of work. If the work is not held down, it may slip and become a flailing weapon. Special bolt clamps will hold the drill press securely while vises and other clamps assure immobility of work. Wear goggles. Scrap wood under the job lets the drill go through without nicking the table beneath.

Portable Jig or Saber Saw. See picture 4. For best performance select the correct blade for the type of material being cut. Do not hurry the cutting blade. Push ahead slowly and relax pressure if the teeth appear to rub without biting out chips. Use both hands



to guide the saw. Clamp the material firmly.

Portable Electric Saw. See picture 5. The prime safety rule is to make sure that blades are sharp. Wipe blades with oil before storing. Clean blades with turpentine if they collect pitch or gum from wood. Do not put the saw down until the blade stops. Keep housing adjusting devices, slides and vents free of sawdust. For maximum safety and performance operate the saw on 110 to 120 volt circuit. Make sure no



other motor is running on same circuit at same time, unless adequately fused. For extension cords less than fifty feet long, use 16 gauge wire. For longer cords use 14 or 12 gauge wire. Use both hands on the saw. Push gently, and never crowd the saw.

Each tool is designed for a specific job. It is important that a tool do only work it can handle safely. Always use the right saw blades, bit drills, etc., and make sure they are sharp. Inspect tools to see that they operate properly and include recommended guards and safety devices. Don't tamper with tools. If they need repair take them to a dealer or authorized repair station.

QUESTIONS AND ANSWERS

Q — What lumber is recommended for porch floors?

A — For porch floors, no material can equal vertical grain Douglas fir, since it does not become slippery when wet, and when properly painted will not warp or buckle.

Q — Our foundation surfaces, on the basement side, have been plastered with the usual type of wall and ceiling plaster. Can we use any of the waterproofing compounds on the plaster?

A — No. Unfortunately, such compounds do not often function very well when applied to that type of plaster. You should either remove the old plaster and apply compound directly to foundation or do the waterproofing on the exterior surface of the foundation.

Warming Up Of Pacific Ocean Puzzles Science

SAN FRANCISCO (UPI) — Not long ago an Indian in Juneau, Alaska, landed a fish he had never seen before. It was a white sea bass, rarely found north of San Diego, California.

At about the same time a warm water albacore tuna and barracuda were spotted off the Washington State coast.

And the one-famed "cannery row" of Monterey, California, began stirring this summer with the reappearance of sardines after several years' absence.

All of which points to a dramatic change in the mighty Pacific — it's heating up. At least, it's getting warmer in coastal waters stretching from Peru to the Gulf of Alaska.

The trend began in the south in 1955 and gradually spread northward until, by late summer of 1957, the water ranged up to eight degrees warmer than the 30-year average. The average increase in temperature was four degrees.

Effects of the phenomenon have not been limited to the northward migration of warm water fish. Some scientists believe the warming of the ocean has resulted in in-

creased rainfall and higher temperatures on land.

Dr. Robert C. Miller, director of the California Academy of Sciences here, also pointed out that on the western edge of the Pacific the tropical rainy season lasted almost six weeks longer than usual; Hawaii had its first recorded hurricane and at Point Barrow, Alaska, the ice went out on July 1 last year, the earliest date in history.

What's the reason for the warming-up?

Miller believes the temperature of the water depends a good deal on the strength of the prevailing northwesterly winds.

"When these winds are strong they speed up the California current and the upwelling of cold water from the ocean bottom," he said. "If the winds slow down there is less upwelling and the water is warmer along the coast. Winds have been lighter than usual in the past few years."

Another possible reason for warmer water is the increased accumulation of smog and other carbon dioxide products of combustion in the atmosphere.

"This forms a blanket in the atmosphere that absorbs solar radiation in a greenhouse effect," Miller said. "The heat gets in but can't get out. Any increase in solar radiation over the ocean tends to heat up the water."

Regardless of the cause, the California fisheries industry has been profoundly affected by the change in the Pacific's temperature.

Last year was far and away the best year for Southern California sport fishermen who made record catches of warm water barracuda, yellowtail, bonito, yellowfin tuna, skipjack and dolphinfish. Many were taken much farther north.

The warm water also was credited with a tremendous increase in anchovies off the central California coast. Marine biologist Donald P. Abbott of the Hopkins Marine Station, Pacific Grove, reported that some 4,000 schools of the herring-like fish were spotted in a recent aerial survey.

As for the effect on land temperatures, Miller explains it this way:

"The warm water heats the air above it. Warm ocean and warm air increase the rate of evaporation. Warm air holds more moisture than cold air. As it moves toward shore and inland across the continent it thus increases the amount of warming rain that is dropped."

Miller noted that the winter of 1957-58 was not only the wettest of the century for California, but a warm one too.

First Canner Of Food Was A Foxy Briton

BY DICK DEW

WATERTOWN, Mass. (UPI) — A bearded immigrant from Britain who once walked from New Orleans to Baltimore seeking his fortune wound up out-foxing the foxie of Yankee traders.

William Lyman Underwood, founder of the nation's oldest canning company, which still bears his name, got into the food business more by accident than anything else. But the firm begun 137 years ago on Boston's old Russia Wharf still stands as a tribute to the ingenuity of "William the First."

Underwood, born in London in 1787, came to the United States bent on making his fortune. He landed at New Orleans in 1817 and, failing to find a suitable outlet for his talents, walked a few years later to Baltimore.

"William the First" apparently started building his fortune in Baltimore because he didn't have to walk to Boston. He established himself as a ship chandler on Boston's busy waterfront in 1821.

Suppliers for one of the world's largest sailing fleets were having a lot of trouble at that time because ship owners had only spices and a rather strange assortment of items to trade for food which would keep fresh during long months at sea.

So Underwood tackled the problem of packaging and preserving food to keep the sailing ship crews free of scurvy and beri-beri. He found that heavily spicing some foods with the very same goods he was forced to take in trade preserved the provision in glass containers.

He put up all manner of food-stuffs and, together with Samuel Cote of the Massachusetts Institute of Technology, later developed the scientific basis for preparing and preserving foods in tin containers.

The word "can" is believed to have originated by bookkeepers of the Underwood Company. Tired of writing the word "canister" over and over in the records, they used the abbreviation which came to be accepted as the American version of the European word "tin."

Today, the Underwood firm is still owned by direct descendants of "William the First," whose marriage to Miss Betsy Hale produced nine children. George C. Seybolt, 43, not a member of the family, is the president to day—only the sixth chief executive officer in 137 years.

THE COVER
Sledding on the streets is always a high point in the winter season for the young people in the Klamath Falls area. Here Diane Abts, 1955 Del Moro, Robert Guptil, 1932 Portland, and Wayne Gaynard, 1945 Del Moro, are shown taking in the fun on Manzanita Street.
Photo by Kettler

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