

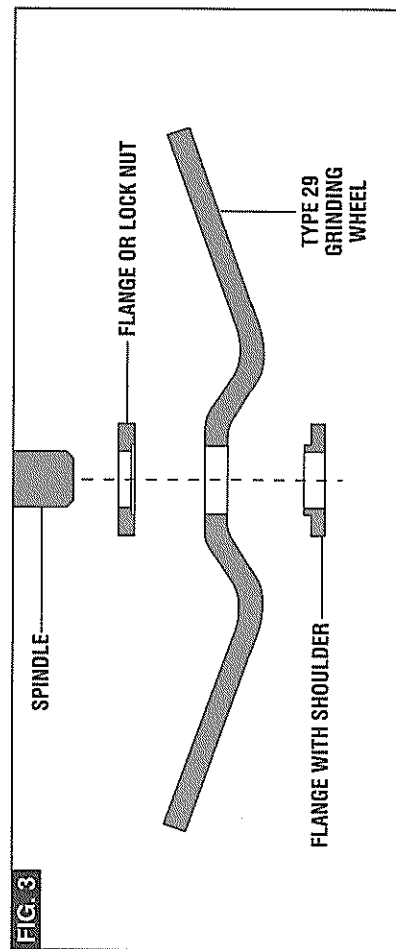
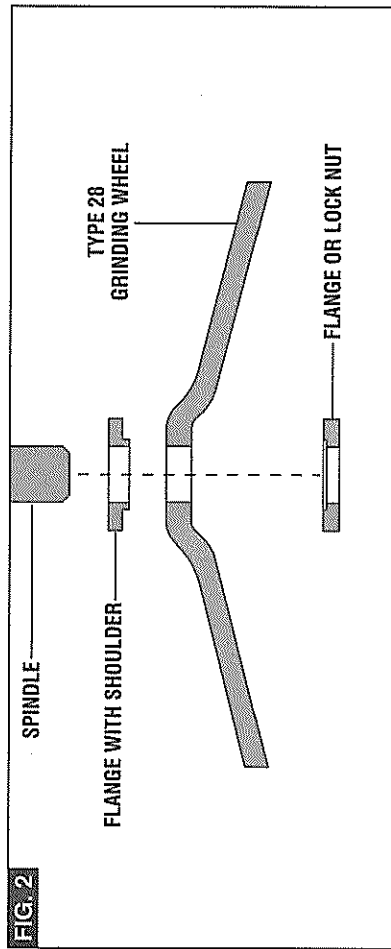
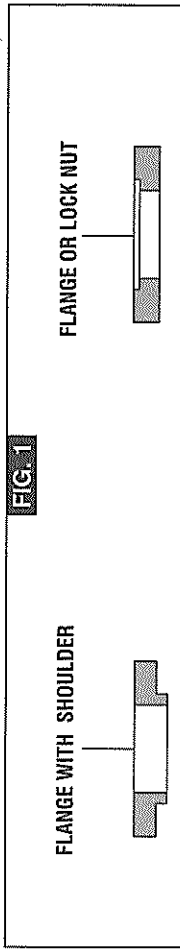
MOUNTING TYPE 28 OR TYPE 29 GRINDING WHEELS

WARNING To reduce the risk of injury, do not use the flange set provided with your tool for mounting type 28 or type 29 grinding wheels. The flanges provided with your tool are not designed for mounting these wheels.

Only use small flange set (available as accessory) when mounting type 28 or type 29 wheels (Fig. 1).

Refer to figures 2 or 3 for proper wheel assembly when using the small flange set.

SMALL FLANGE SET PART NO. 1 607 000 380



Sander Assembly

BACKING PAD

WARNING Before attaching a backing pad be sure its maximum safe operating speed is not exceeded by the nameplate speed of the tool.

WARNING Wheel guard may not be used for most sanding operations. Always reinstall wheel guard when converting back to grinding operations.

TO INSTALL BACKING PAD AND SANDING DISC

Disconnect tool from power source. Set the tool on its top side (spindle up). Place the rubber backing pad onto the spindle shaft. Center the sanding disc on top of the backing pad. Insert the lock nut through the disc and thread onto the spindle as far as you can with your fingers. Press in the spindle lock, then tighten the backing pad securely with lock nut wrench.

TO REMOVE BACKING PAD AND SANDING DISC

Disconnect tool from power source. Using the lock nut wrench unscrew the nut from the spindle, while holding spindle lock in.

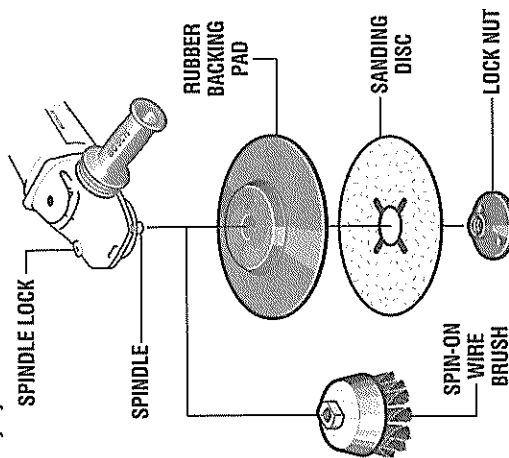
WIRE BRUSH ASSEMBLY

Before assembling wire brush to this tool, disconnect from the power source. Wire brushes are equipped with their own threaded hub, simply thread on to spindle. Be sure to seat against shoulder before turning tool "ON".

SIDE HANDLE

The side handle used to guide and balance the tool can be threaded into the front housing on either side, and on top of the tool, depending on personal preference and comfort. Use the side handle for safe control and ease of operation.

WARNING Always use auxiliary handle for maximum control over torque reaction or kick-back. Operation of the grinder without the side handle could cause loss of control of the grinder, resulting in possible serious personal injury.



Operating Instructions

"TRI-CONTROL" PADDLE SWITCH (Models 1873-8, 1873-8F & 1893-6)

The "Tri-Control" Paddle Switch enables the operator to control the switch functions of "Lock-Off", "ON/OFF" and "Lock-On".

TO UNLOCK SWITCH AND TURN TOOL "ON": Push paddle lever FORWARD (toward the spindle) then squeeze the paddle lever.

TO SWITCH TOOL "OFF": Release pressure on paddle lever. The switch is spring loaded and will return to "OFF" position automatically.



The "Lock-On" feature, incorporated into the paddle switch, is a convenience for long operations.

TO LOCK SWITCH "ON": After paddle switch has been activated push paddle lever completely FORWARD and release paddle lever.

TO SWITCH TOOL "OFF": Squeeze and then release paddle lever. The switch is spring loaded and will return to "OFF" position automatically.

WARNING Hold the tool with both hands while starting the tool, since torque from the motor can cause the tool to twist.

PADDLE SWITCH WITH "LOCK-OFF" FEATURE

(Models 1873-8D only)

The Paddle switch enables the operator to control the switch functions of "Lock-Off", and "ON/OFF".

⚠ WARNING

Hold the tool with both hands while starting the tool, since torque from the motor can cause the tool to twist.

TO UNLOCK SWITCH AND TURN TOOL "ON": Push paddle lever FORWARD (toward the spindle) then squeeze the paddle lever.

TO SWITCH TOOL "OFF": Release pressure on paddle lever. The switch is spring loaded and will return to "OFF" position automatically.

Start the tool before applying to work and let the tool come to full speed before contacting the workpiece. Lift the tool from the work before releasing the switch. **DO NOT** turn the switch "ON" and "OFF" while the tool is under load; this will greatly decrease the switch life.

Grinding Operations

SELECTING GRINDING WHEELS

⚠ WARNING Before using a grinding wheel, be certain that its maximum safe operating speed is not exceeded by the nameplate speed of the grinder. Do not exceed the recommended wheel diameter.

DISC GRINDING WHEELS

Grinding wheels should be carefully selected in order to use the grinder most efficiently. Wheels vary in type of abrasive, bond, hardness, grit size and structure. The correct type of wheel to use is determined by the job. Use disc grinding wheels for fast grinding of structural steel, heavy weld beads, steel casting, stainless steel and other ferrous metals.

GRINDING TIPS

Efficient grinding is achieved by controlling the pressure and keeping the angle between wheel and workpiece at 10° to 15°. If the wheel is flat, the tool is difficult to control. If the angle is too steep, the pressure is concentrated on a small area causing burning to the work surface.

⚠ WARNING

Excessive or sudden pressure on the wheel will slow grinding action and put dangerous stresses on the wheel.

When grinding with a new wheel be certain to grind while pulling tool backwards until wheel becomes rounded on its edge. New wheels have sharp corners which tend to "bite" or cut into workpiece when pushing forward.

Sanding Operations

SELECTING SANDING DISC

Sanding discs are made of extremely hard and sharp aluminum oxide grits, phenol-resin bonded to a sturdy fiber backing for fast heavy-duty service and long life. The discs vary as to size and spacing of the abrasive grits. **OPEN COAT** (type H) — used for soft

materials and on paint or varnish. **CLOSED COAT** (type K) — used for metal, hardwood, stone, marble and other materials.

Sanding discs range in grit from 16 (very coarse) to 180 (very fine). To obtain best results, select sanding discs carefully. Many jobs require the use of several grit sizes and at

times both "open coat and closed coat" discs are required to get the job done faster. See chart for application examples.

Operation: Refinishing painted wood or metal surfaces.	
REMARKS	GRIT
To remove paint and to smooth surface irregularities.	Coarse 16-24-30
To smooth the rough sanding.	Medium 36-50-80
To remove scratches left by previous discs.	Fine 100-120
To smooth surfaces for painting, polishing or waxing.	Very Fine 150-180

SANDING TIPS

For best results, tilt the Disc Sander at a 10° to 15° angle while sanding so that only about 1" of the surface around the edge of the disc contacts the work.

If the disc (accessory) is held flat or the back edge of the disc comes in contact with the work, a violent thrust to the side may result.

If sander is tilted too much, sanding action will be too great and a rough cut surface or gouging and snagging will result.

Guide the Disc Sander with crosswise strokes. Be careful not to hold the sander in one spot too long. Do not use a circular motion, as this makes swirl marks. Test before use on scrap stock.

Do not force or apply pressure when sanding. Use only the weight of the tool for pressure. Excess pressure actually slows the tool down. If faster stock removal is desired, change to a coarser grit disc.

Remove gummy paint from metal with an "open coat" disc. Sand until sparks start to appear, then stop and change to a "closed coat" disc to remove any remaining paint.

SANDING WOOD

When sanding wood the direction of the disc motion at the contact point should parallel the grain as much as possible. The rapid cut of discs and the swirl type scratch pattern they occasionally create generally prohibit their use for producing the final finish.

Scratches and circular marks are usually the result of using too coarse a grit. When changing to a finer grit, move across the sanding lines that were made by a previous coarser disc.

SANDING METAL

When sanding automobiles or appliances, wipe the metal clean with a non-flammable solvent or commercial cleaner to remove all wax and grease. By doing this first, the sanding discs will sand better and last longer.

For heavy duty work, use a coarse grit disc first. Follow-up with a medium grit to remove scratches. To produce smooth finish, use fine grit disc.

Wire Brush Operations

Wire brushes are intended to "clean" structural steel, castings, sheet metal, stone and concrete. They are used to remove rust, scale and paint.

⚠ WARNING

Avoid bouncing and snagging the wire brush, especially when working corners, sharp edges etc. This can cause loss of control and kickback.

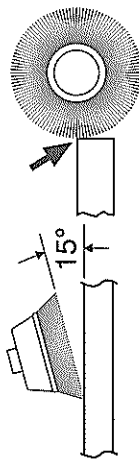
BRUSHING PRESSURE

1. Remember, the tips of a wire brush do the work. Operate the brush with the lightest pressure so only the tips of the wire come in contact with the work.

2. If heavier pressures are used, the wires will be overstressed, resulting in a wiping action; and if this is continued, the life of the brush will be shortened due to wire fatigue.

3. Apply the brush to the work in such a way

CORRECT: Wire tips doing the work.



INCORRECT: Excessive pressure can cause wire breakage.

