

INSTRUCTIONS FOR CARE AND OPERATION OF WYSONG AND MILES NO. 410 COMBINATION SHEET METAL MACHINE

The machine has been adjusted and fully tested. Before using the machine, however, check the adjustments as they may have been disturbed in transit.

The machine should be firmly fastened to a solid and level floor. Shim between the floor and the base, if necessary, to level the machine.

Clean off all dirt that may have accumulated in transit. Clean off the compound that is on all finished surfaces as it is not a lubricant. Be sure that all oil holes are open and clean.

Check the direction of roll rotation. The rolls should operate so that the material moves from left to right as you face the ends of the roll shafts. The clutch will not function properly in the reverse direction.

LUBRICATION: The machine is provided with oil holes for proper lubrication which are obvious or stamped "OIL". Use light oil. The rear motor bearing is easily reached. To reach the front motor bearing, remove the plate from the rear of the machine. This plate also gives access to the gearing. All gear bearings are grease sealed and require no lubrication.

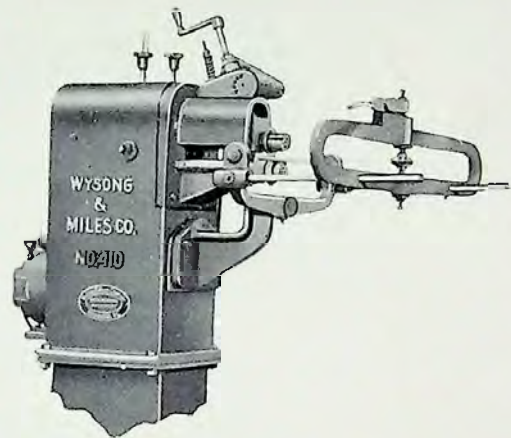
ADJUSTMENTS: The adjustments of this machine are easily made but very important. The lateral adjustment of the upper roll shaft is made by means of two hand wheels at the top of the machine; loosen one and tighten the other until the correct adjustment is made. Slitting cutters should be adjusted for a clearance of .002" for metal 16 to 24 gauge. For metal 26 gauge or lighter, the cutters should be adjusted with a clearance of .0015" to .0010". Be sure both hand wheel screws are tight before starting to operate. The spring on the top fastened by lock nuts elevates the upper roll. When using slitting cutters, the cutters should lap from .015" for 16 gauge to .005" for 30 gauge. The pivots on each side of the housing, held up by a lock nut, provide for the rocking motion of the upper shaft. These pivots should not need adjustment.

FOOT LEVERS OR TREADLES: The foot treadle controls the clutch, engaging and disengaging the driving mechanism. The second foot treadle when depressed lowers the upper roll into contact with the work.

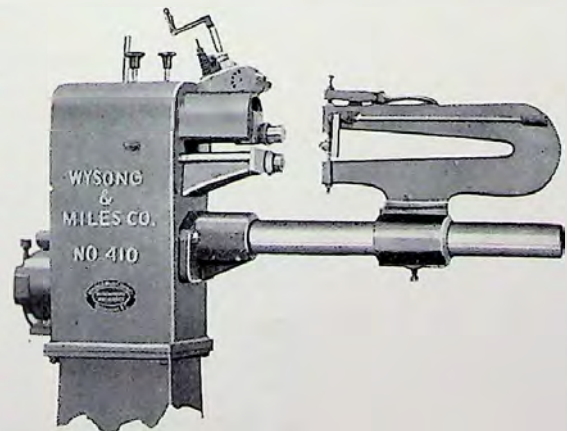
CLUTCH: The clutch is controlled either by hand, by foot treadle or may be locked in the engaged position by means of two thumb screws on the shifter bracket.

OPERATION: Adjust the upper rolls by means of the crankscrew for the correct distance from the lower roll. If operating by the foot lever, greater distance may be given than if operating with the upper shaft maintained in the locked position. When operating with the upper shaft maintained in the locked position, be sure there is sufficient clearance between the rolls to accommodate the work. Insufficient clearance will spring the shaft.

Combination Sheet Metal Machine No. 410



Detail view showing No. 410
With Flanging Attachment



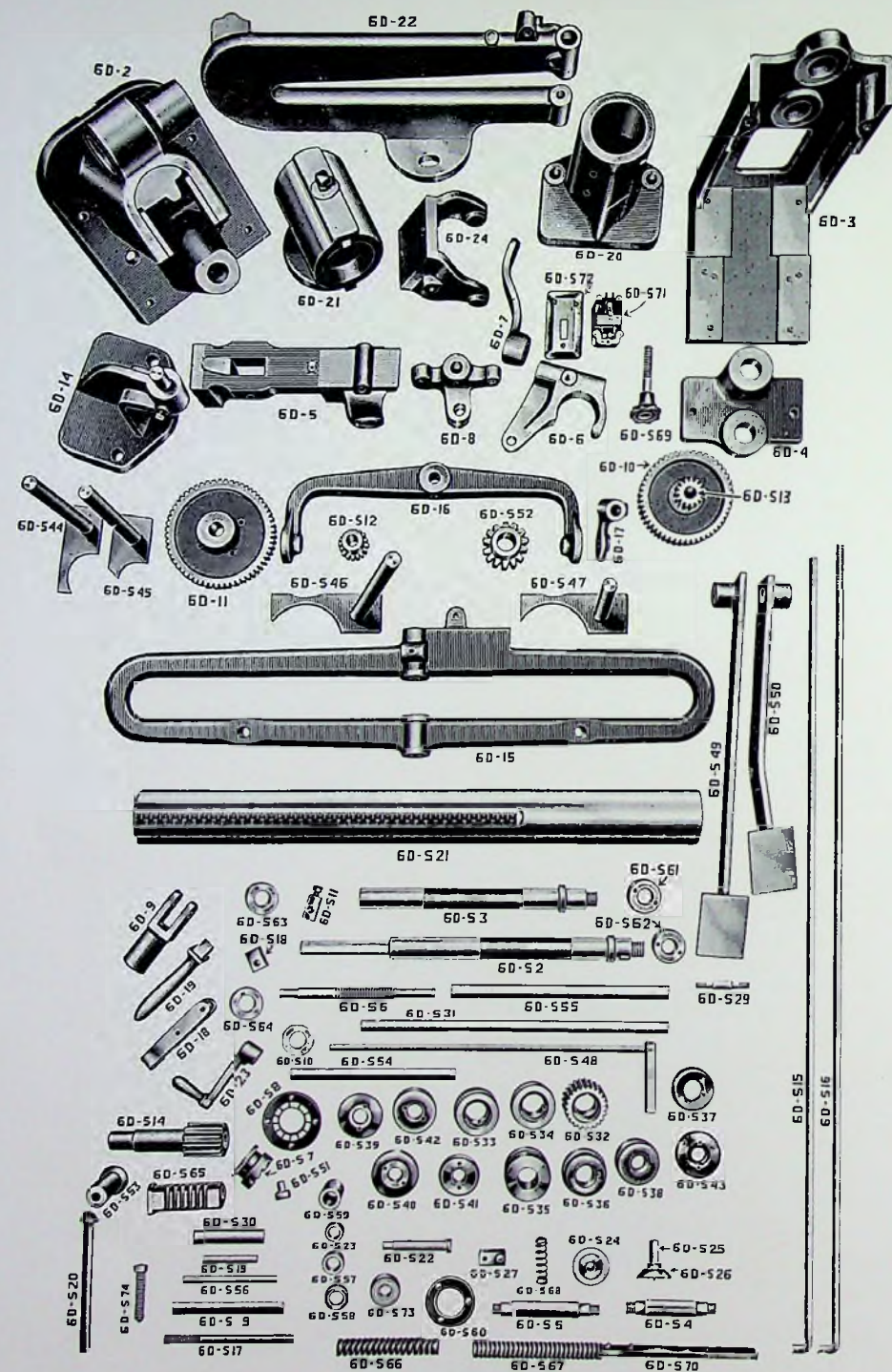
Detail view showing No. 410
With Circle Cutting Attachment

A MULTI-PURPOSE MACHINE—A NECESSITY IN ANY SHEET METAL SHOP

COMBINATION SHEET METAL MACHINE

No. 410

DIAGRAM OF PARTS



LIST OF PARTS

- | | | | |
|--------|-------------------------------|--------|-------------------------------------|
| 6D-S2 | Lower Spindle | 6D-S50 | Foot Treadle |
| 6D-S3 | Top Spindle | 6D-S51 | Clutch Shoe |
| 6D-S4 | Stud | 6D-S52 | Gear |
| 6D-S5 | Stud | 6D-S53 | Thimble |
| 6D-S6 | Adjusting Screw | 6D-S54 | Clutch Hand Rod |
| 6D-S7 | Clutch | 6D-S55 | Clutch Yoke Stud |
| 6D-S8 | Clutch Plate | 6D-S56 | Pin for 6D-24 |
| 6D-S9 | Stud | 6D-S57 | Spacing Collar |
| 6D-S10 | Collar for 6D-S2 | 6D-S58 | Spacing Collar |
| 6D-S11 | Stud for 6D-8 | 6D-S59 | Spacing Collar |
| 6D-S12 | Gear for Motor | 6D-S60 | Cover for Bearing |
| 6D-S13 | Gear | 6D-S61 | Upper Spindle Nut |
| 6D-S14 | Gear Stud | 6D-S62 | Lower Spindle Nut |
| 6D-S15 | Clutch Rod | 6D-S63 | Spacing Collar |
| 6D-S16 | Connecting Rod | 6D-S64 | Spacing Collar |
| 6D-S17 | Spring Stud | 6D-S65 | Sleeve Rack |
| 6D-S18 | Lug for Spring Stud | 6D-S66 | Spring for Raising Upper Spindle |
| 6D-S19 | Pin for 6D-5 | 6D-S67 | Clutch Spring |
| 6D-S20 | Spring Stud for Clutch Spring | 6D-S68 | Spring for Clamping Disc |
| 6D-S21 | Support Arm | 6D-S69 | Top Spindle Adjusting Screw |
| 6D-S22 | Stud for Clamping Disc | 6D-S70 | Wrench |
| 6D-S23 | Collar for Stud | 6D-S71 | Switch |
| 6D-S24 | Upper Clamping Disc | 6D-S72 | Switch Cover |
| 6D-S25 | Centering Pin | 6D-S73 | Ball Bearing |
| 6D-S26 | Lower Clamping Disc | 6D-S74 | Cone Point Set Screw |
| 6D-S27 | Link | 6D-2 | Bearing Housing |
| 6D-S29 | Locking Stud | 6D-3 | Bracket for Motor and Bearings |
| 6D-S30 | Stud for 6D-14 | 6D-4 | Cap for Bearings |
| 6D-S31 | Support Rod for 6D-15 | 6D-5 | Top Spindle Housing |
| 6D-S32 | Crimping Roll | 6D-6 | Clutch Yoke |
| 6D-S33 | Ogee Lower Beading Roll | 6D-7 | Lever |
| 6D-S34 | Ogee Upper Beading Roll | 6D-8 | Clutch Rocker Arm |
| 6D-S35 | Single Bead Lower Roll | 6D-9 | Turnbuckle |
| 6D-S36 | Single Bead Upper Roll | 6D-10 | Gear |
| 6D-S37 | Slitting Cutter | 6D-11 | Gear |
| 6D-S38 | Lower Burring Roll | 6D-14 | Bracket for Flanging Attachment |
| 6D-S39 | Upper Burring Roll | 6D-15 | Frame for Flanging Attachment |
| 6D-S40 | Lower Elbow Edging Roll | 6D-16 | Yoke for Flanging Attachment |
| 6D-S41 | Upper Elbow Edging Roll | 6D-17 | Clamping Lug |
| 6D-S42 | Lower Turning Roll | 6D-18 | Clamping Link |
| 6D-S43 | Upper Turning Roll | 6D-19 | Clamp Handle |
| 6D-S44 | Gage | 6D-20 | Base for Support Arm |
| 6D-S45 | Gage | 6D-21 | Clamp Base |
| 6D-S46 | Gage | 6D-22 | Frame for Circle Cutting Attachment |
| 6D-S47 | Gage | 6D-23 | Crank Handle |
| 6D-S48 | Gage | 6D-24 | Bracket for Top Spindle Housing |
| 6D-S49 | Foot Treadle | | |

A **WYSONG and MILES** PRODUCT

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COMBINATION METAL MACHINE No. 410

SPECIFICATIONS

A rugged, well proportioned and versatile machine for burring, turning, wiring, beading, crimping, elbow edging, slitting and other operations.

The interchangeable rolls are power driven, thus enabling the operator to use both hands for manipulation of the work. A clutch, operated either by hand or foot, controls rotation of the rolls. Clutch can be locked when continuous motion is desired.

Motor, clutch and gears are enclosed in frame of machine, which assures protection from dirt and scale, etc.

The machine is a self-contained unit, notable for ease of operation and adjustment. The frame is a nicely finished and accurately machined semi-steel casting—base heavy gage steel—no excess weight but sufficient to provide necessary rigidity.

The drive is by motor through machine cut gears. Bronze bearings for roll shafts. Clutch is of the cup type. It is quick acting and very positive. It can be operated by either hand or foot.

The motor starting switch is mounted on frame of machine within easy reach of operator and it has overload protection.

Convenience and ease of adjustments. The upper shaft can be raised and lowered by means of either foot treadle or crank screw and the crank screw serves as stop for shaft and roll when foot treadle is used. Lateral adjustment of upper shaft is controlled by screws located on top of frame.

Proper relationship of upper shaft to bearings is maintained by movement of rocking box.

Circle attachment consists of a horn and a circle arm.

Flanging attachment. A swinging yoke carried by the horn holds the circles. Desired angle is obtained by tilting the yoke.

Motor— $\frac{1}{4}$ H.P., 110 volt, 60 cycle, single phase or 220/440 volt, 3 phase.

Capacity, mild steel with standard burring, turning, wiring and beading rolls 18 gage

Capacity, mild steel with standard crimping rolls 20 gage

Capacity, mild steel with standard slitting cutters 16 gage

With circle attachments will cut 16 gage circles dia. $4\frac{1}{2}$ " to 22".

With flanging attachment will flange 18 gage circles dia. 4" to 30".

Diameter of shafts in front bearings $1\frac{1}{8}$ "

Distance between shaft centers 2.3"

Distance center of rolls to gage $6\frac{7}{8}$ "

Distance center of rolls to frame $7\frac{1}{4}$ "

Length of shaft ends for rolls $1\frac{3}{4}$ "

Diameter of horn at frame $3\frac{7}{8}$ "

Diameter of horn at end $2\frac{1}{8}$ "

Peripheral speed of rolls with 60-cycle motor 20 Ft. p.m.

Floor space, F to B x R to L x H 26"x18"x56"

Shipping weight, (domestic) 650 lbs.

Wysong and Miles 100% jig and fixture construction is your guarantee of uniformly superior machines.

WYSONG and MILES Co

GREENSBORO, NORTH CAROLINA

DESIGNERS AND BUILDERS OF MACHINERY SINCE 1900

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