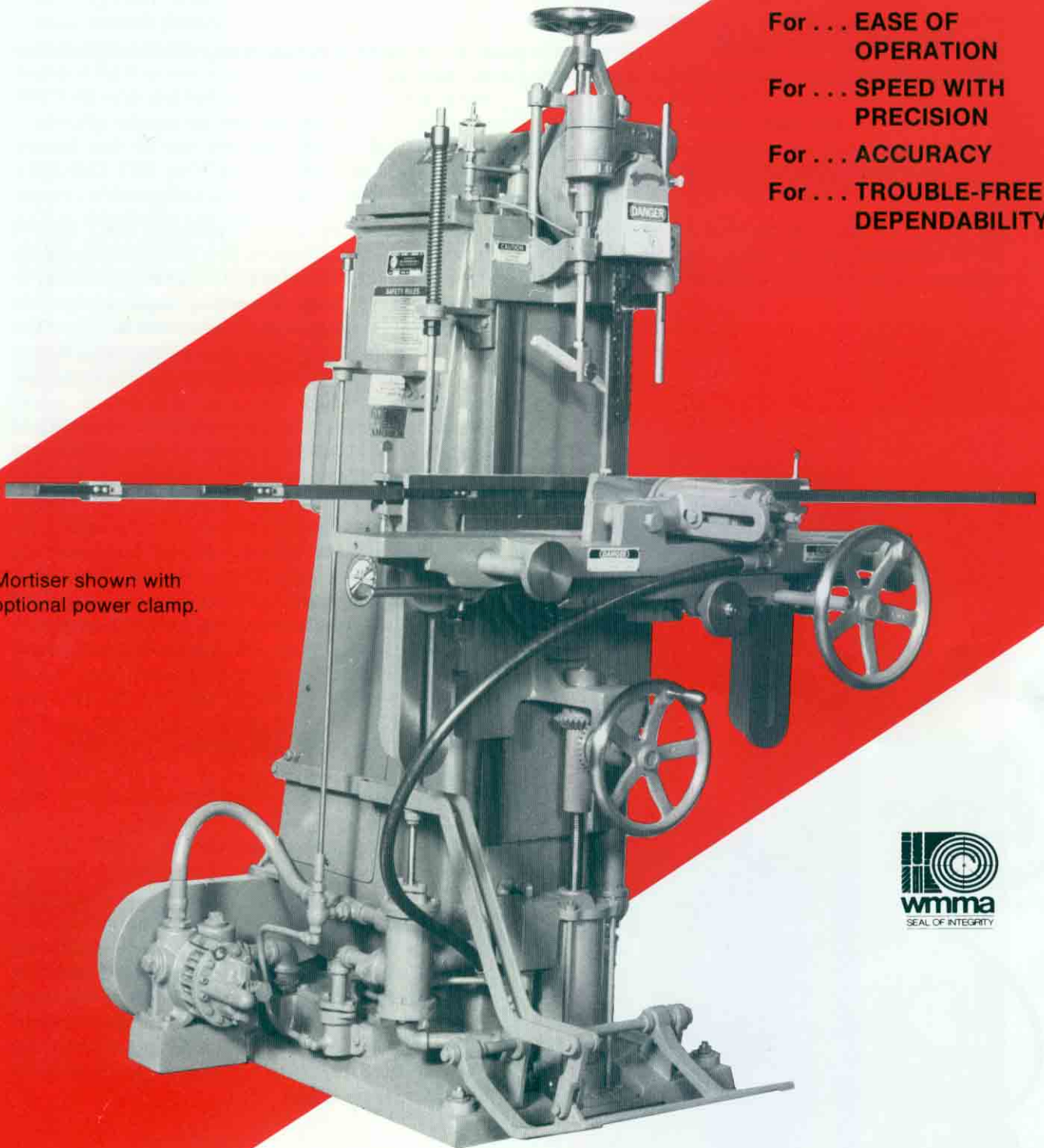


Northfield

CHAIN-SAW MORTISER

- For . . . EASE OF OPERATION
- For . . . SPEED WITH PRECISION
- For . . . ACCURACY
- For . . . TROUBLE-FREE DEPENDABILITY

Mortiser shown with optional power clamp.



A Precision Built Machine of proven design utilizing ideas and components to provide the user with a machine to meet the most demanding and varied needs of today's production and vocational woodworking.

THE FRAME

The NORTHFIELD Chain Saw Mortiser is designed to secure the utmost production with minimum expense, and with this in mind your attention is called to the following description of the machine.

The frame or column is a heavy, one piece casting, very rigid, with the weight properly equalized. The front ways or table bearings are planed true and hand scraped for accuracy.

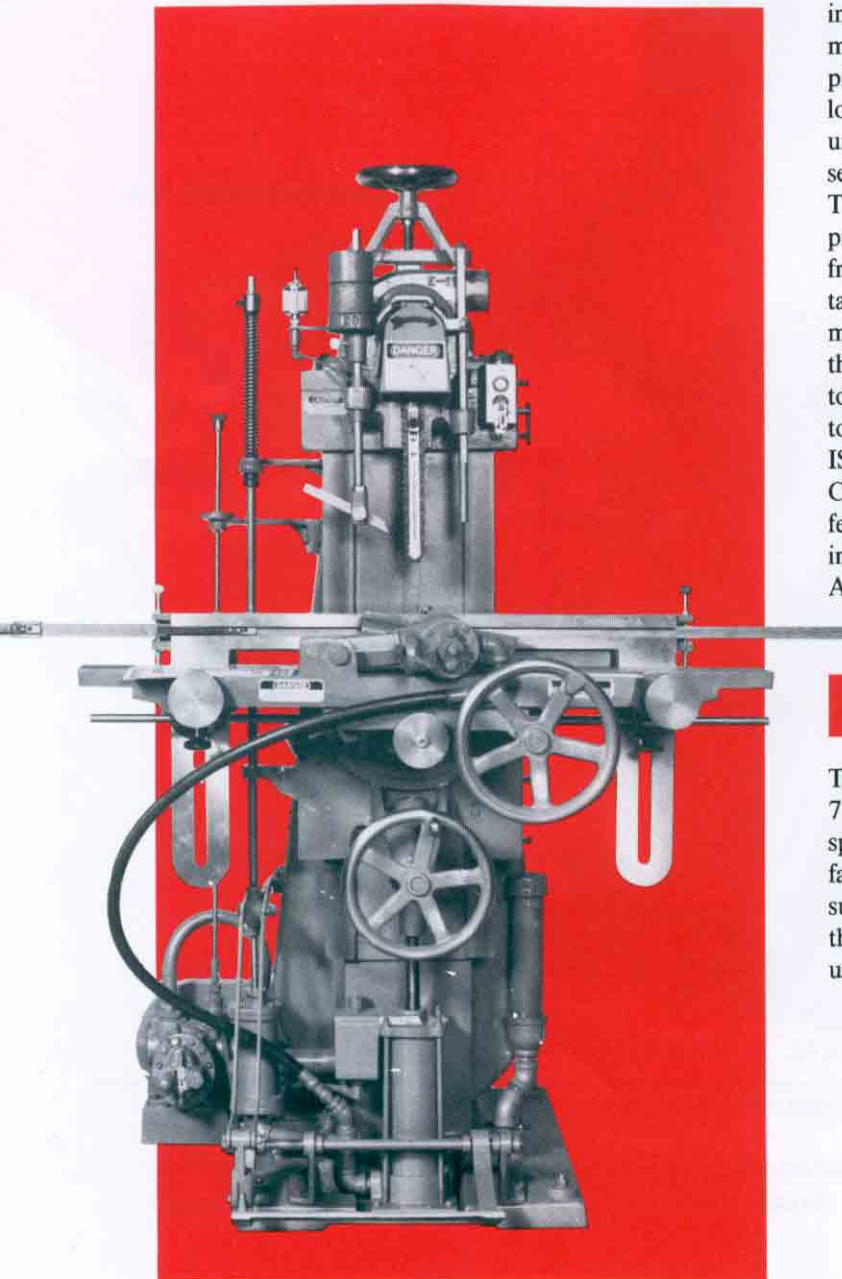
THE GUIDE BAR

The chain saw guide bar is mounted on the slide casting which straddles the face of the column and is adjustable vertically to regulate tension of the chain saw.

THE TABLE

The table is furnished in the Universal or Compound type. It has an adjustable back rest and is equipped with a facing adjustment which allows the table to be adjusted in and out

from the face of the column to the center of a 5" piece of material. This is accomplished by a hand wheel mounted in front of the table. The table is so constructed that it may be tilted to a 45° angle for making angle mortises. An adjustable stock gauge is also furnished with the table so that in cutting numerous pieces of stock a repetition of the cuts may be made without making a layout of the cuts on each piece of material. The Universal table may be moved longitudinally so that a series of mortises may be cut without unclamping the work. Stops are also provided which may be set to regulate this movement of the table in either direction. The longitudinal movement of the table is by rack and pinion which is operated by a hand wheel situated at the front of the table and within easy grasp of the operator. The table is adjusted vertically for the different sizes of work by means of a hand wheel and bevel gears which operate a threaded nut on the piston rod. This piston rod is connected to the table knee under the table in a position corresponding to the center of weight of the table. **THEREFORE THERE IS NO TWISTED MOTION OR STRAIN ON THE COLUMN WAYS AND KNEE BEARINGS** when the feed of the machine is operating up and down. This also insures **LESS WEAR** on these parts and **LONGER LIFE AND ACCURACY** for the machine.



THE SPINDLE

The entire cutting unit is built as a compact power unit. The 7½ H.P. motor is built directly on the spindle shaft. The spindle shaft which carries the motor also carries the suction fan and housing. This spindle is made from special steel sufficiently large so as not to bend under the strain of driving the cutter chain. Large double row self-aligning bearings are used to carry the spindle.

THE FEED

The feed is hydraulic which has many advantages over a so-called mechanical feed. These advantages might all be classed under the caption of **EASIER OPERATION** at any speed desired with a quick return (for the operation according to the material and size of cut) can be had instantly by a valve which is located within easy reach of the operator from his position in front of the machine. It is also easier for the operator in the fact that he can stand with both feet upon the floor as it only requires the **MOVEMENT OF HIS TOE** to set the feed in motion. Thus an operator can continually operate the machine without becoming exhausted and he can use this **SAVED ENERGY IN FEEDING THE WORK TO THE MACHINE** as the capacity of the machine in the number of **MORTISES PER HOUR DEPENDS ON THE SPEED OF THE OPERATOR IN MAKING THE CHANGES** of his material. Another advantage of the hydraulic type of feed is in the fact

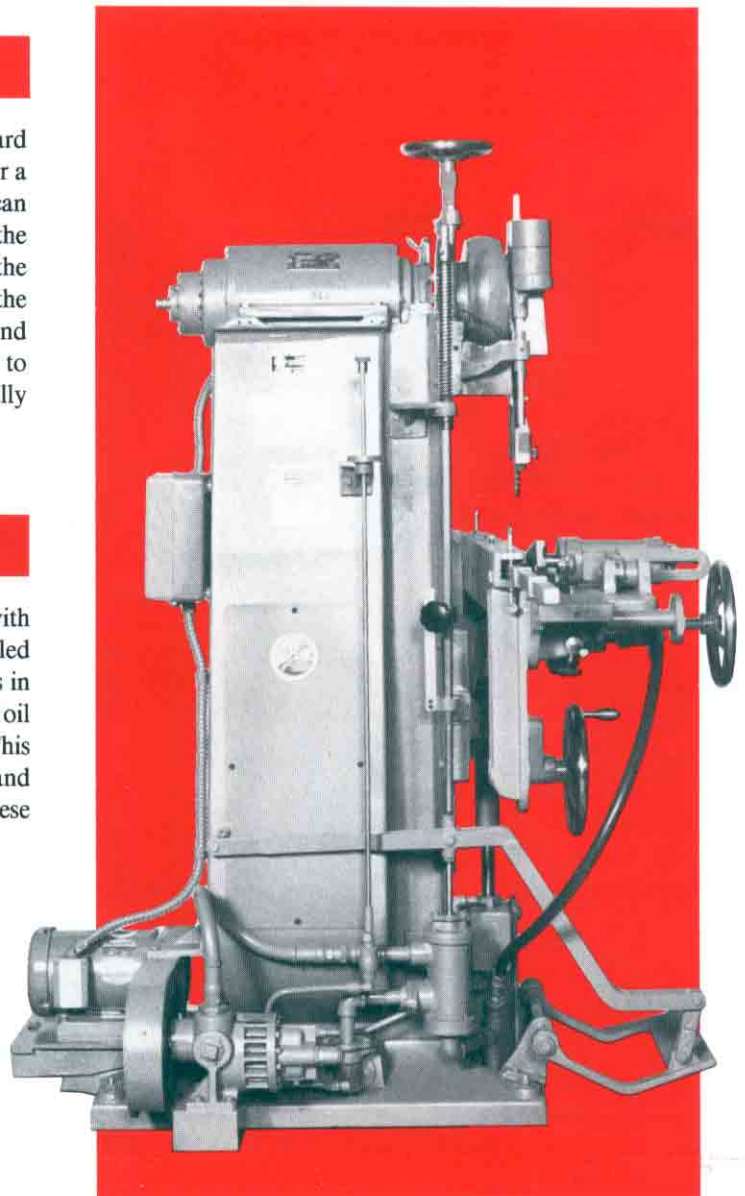
that if for some reason the cutter chain should stop or break the hydraulic pressure is automatically sent through a relief valve and **NO DAMAGE IS DONE TO THE CHAIN, BAR, OR MACHINE.** The hydraulic pressure for the feed of this machine is obtained by using oil which is stored in a tank cast in the base of the machine and pumped from there to the hydraulic cylinder which is mounted on the base and under the table. The pump is of the rotary type and also mounted on the base of the machine. The central valve for starting or stopping the feed is of a piston type and therefore not subject to wear or leaks, and is operated by a foot lever. There is a rod also connected to the operating valve on which are placed adjustable stops which may be set for any desired depth of mortise. The operating valve remains closed at all times until opened by pressure on the foot lever and as soon as this pressure is released the valve closes and the table returns to the original starting point.

STOCK CLAMP

The style of stock clamp which is furnished as standard equipment with the machine is operated by hand, but for a large amount and variety of work an automatic clamp can be used to a great advantage. This clamp is operated from the same hydraulic pressure that operates the feed of the machine, and when the operator starts the feed of the machine, the clamp automatically closes on the stock and holds the stock until the cut is made and the table returns to the starting position at which time the clamp automatically opens releasing the stock.

THE CHAIN SAW OILER

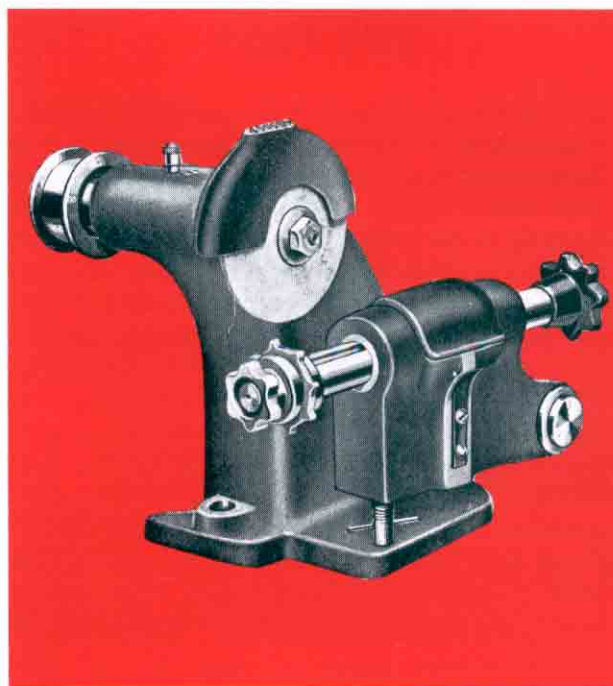
The machine is equipped with an oiler which connects with the chain saw guide bar. This oiler keeps the chain saw oiled and also oils the guide bar bearing while the machine is in operation. The oiler can be regulated as to the amount of oil being fed to the chain saw and guide bar bearing. This feature eliminates the uncertain oiling of the chain saw and guide bar bearing by hand, and assures lubrication to these parts, thus greatly extending their life.



Northfield

CHAIN SAW SHARPENER

To get the most efficiency from the chain cutter all of the cutting teeth in the chain should be ground the same — that is the cutting teeth should have the same length and pitch; this can only be accomplished with accuracy on the chain saw sharpener which we can furnish with the NORTHFIELD Mortiser. This spindle is adjustable horizontally so that the correct pitch to the cutting teeth of the chain may be had. The cutter chain when being sharpened is mounted on a sprocket on the machine, this in turn is mounted upon a movable shaft which is adjustable vertically so that the correct depth to the cutting tooth may be had. The chain is sharpened one tooth at a time and the shaft upon which the sprocket and chain is mounted is revolved to the next tooth space which is indicated by a ratchet stop.



SPECIFICATIONS

Spindle horsepower	7½ DMD TEFC	Table Tilt	45° Right, 45° Left
Feed Horsepower	1 hp TEFC	Longitudinal Table Travel Right to Left without unclamping workpiece	11"
Spindle size	¾"	In Out Table Adjustment	2½"
Spindle RPM	3600 rpm	Domestic Shipping Wt.	2300 lbs.
Center distance between sprocket shaft and chain bar bolt	Min 5½" Max 7½"	Net Weight	2150 lbs.
Chain gear capacity 3/16"x¾" to 1¼"x2½"		Export Shipping Wt.	2550 lbs.
Length of Power Feed Stroke	0-7"	Cubic Measure Export Box	161 cu. ft.
Vertical Table Adjustment	13"	Voltages	208, 230/460, 575 3 ph 60 hz

ACCESSORIES

Automatic hydraulic clamp
24 or 110 volt at pushbutton
NEMA 12 Electrics
Hour Meters
Extra stops for stock gauge

Mortise Gear
Chain Saw Sharpener (Grinder)
Sprockets for Grinder
Grinding Wheels for Grinder

Northfield

FOUNDRY & MACHINE CO.

P.O. BOX 140, NORTHFIELD, MINNESOTA 55057, U.S.A. PHONE: AREA CODE 507 645-5641
FAX: 507-645-4005

