

Now

WADE

ONE MAN REG. U.S. PAT. OFF. DRAG SAW

INSTRUCTION BOOK

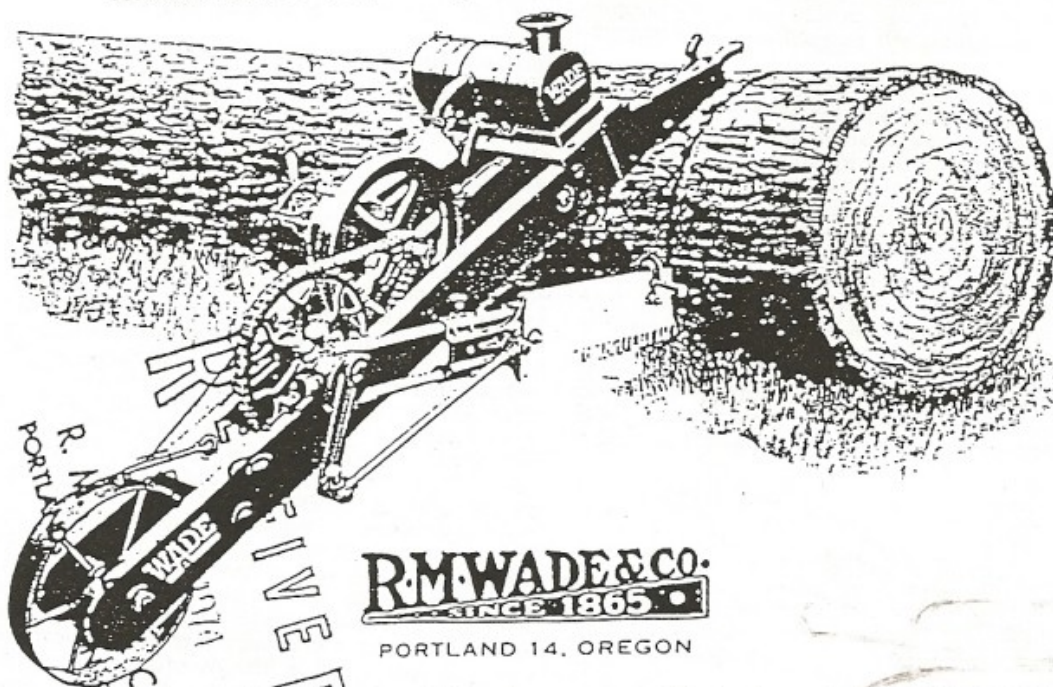
AND

Repair Parts Price List

FOR ALL MODELS

EFFECTIVE DECEMBER 10, 1946

This Price List Supercedes All Other Lists



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U. S. A.

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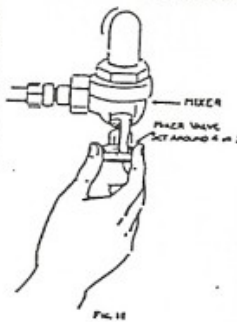
R.M. WADE & CO.
SINCE 1865

PORTLAND 14, OREGON

How To Care For and Operate the PORTABLE GASOLINE DRAG SAW

GENERAL INFORMATION

The motor is what is known as a two cycle, water-cooled engine. An explosion takes place on every revolution of the crank shaft. Gasoline is the fuel used. This is fed to the motor through a mixer, where the gasoline is mixed with air, making gasoline gas, which, in turn, is drawn into the motor.



This mixer is on the left side of the motor and the richness of the gasoline is regulated by means of a little valve on the mixer. The proper amount of gasoline depends necessarily somewhat on climatic conditions, and can only be determined by the operator, on the ground. However, you will very soon master this and come to know the

proper location of the valve for obtaining best results.

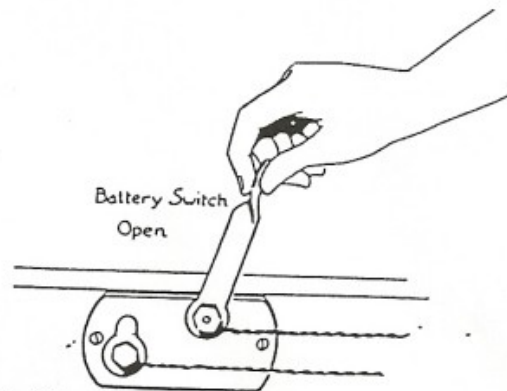
This gas is exploded by means of a spark furnished by a set of dry batteries which are located under the gasoline and water tanks. The current from the batteries direct, not being sufficient to cause a hot spark is first run through a coil which steps up the electric power sufficiently to ignite the gas in the motor. The coil is located adjoining the batteries.

In the case of the magneto model machine there are no batteries or spark coil and the entire spark is furnished by the magneto.

In order that the spark will occur at the proper time a timer is located on the main engine shaft. In the case of the battery machines this makes and breaks the electric current at the right time. This timer also regulates the speed of the engine and is operated by means of a little lever which is located directly above the crank shaft on the left side. In the case of the magneto model machine the timing lever is on the right side of the magneto.

The battery machine is fitted with battery switch. This switch will be found on the right side of the center sill of the frame. This switch should be closed when ready to start the motor and immediately stops the machine on being opened. If this switch is left closed while the machine is stopped there is danger of short-circuiting and ruining the batteries. Of course in the case of the magneto model machine there is no switch as the magneto cannot be shorted. Best results are obtained by driving the saw approximately 125 strokes per minute. Care should be taken not to overload or over-speed the motor. Never run it fast when it is not sawing or under load.

A new motor is always hard to start so have patience until you thoroughly understand your machine. It may require several pulls on the fly wheel to start the motor the



first time or after it has been idle for some time. When the motor is warm, as it will be during working hours, a single pull will start it.

SETTING UP THE MACHINE

Set the machine on a log. Make sure that the handle on the guide rods will clear the log as the saw blade sinks into it. Then drive the dogs deep into the log having the dogs tight against the side of the frame as well as into the log. See that all bolts and nuts on machine are tight, also try the connections on the battery and coil to make sure that the connections are firm. Bolt the saw blades firmly to the holder on the guide rods.

LUBRICATION

Remember that oil and grease are cheaper than repair parts. Nine times out of ten delays through breakage and excessive wear in the moving parts are due to poor lubrication and neglect in keeping all working parts clean. See that all grease cups on the machine are full of hard transmission grease.

The glass oil cup which is included with the saw may or may not be used. In case you use the oiler it should be kept full of high grade motor oil and the feed, which is operated by the little lever on the top of the cup should be so adjusted that ten drops per minute feed into the crank case. Make this adjustment while the engine is running by turning the



nut on top of the oil cup. It is not necessary to use this oiler if sufficient oil is mixed with the gasoline which will be considered in the next article "Preparing the Fuel."

OIL CLUTCH SPROCKET DAILY

There is a small oil hole on the outside of the clutch sprocket, this requires lubrication at least once a day. See tag on drag saw for location.

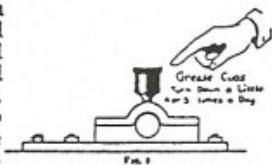
Go over the saw blade with an oiled rag or piece of waste a few times every day; it prevents rust and reduces the friction when sawing. Care should be taken never to grease the saw blade while it is in motion. Put plenty of oil into all holes on the guides, as well as into the guide Pitman rod through which the Pitman ends are lubricated; oil and grease the chain every day.

PREPARING THE FUEL

Use the oiler which is furnished with the saw and mix one pint of high grade oil to each five gallons of gasoline. Fill the small tank with the prepared gasoline and adjust the glass oil cup or lubricator as instructed in the paragraph on lubrication.

PREPARING FOR THE START

Now that you have set up the saw on the log, lubricated the machine and prepared the fuel and filled the tank, you are ready to prepare for the starting of the machine.



First, fill the large tank with clean water. Second, be sure that all parts are thoroughly oiled and greased; turn down all of the grease cups a turn or two. Third, if you are using the glass oiler or lubricator, lift the lever on top of the oil cup to start the oil into the motor. Fourth, open the mixer valve to around four or five.



Fifth, set the timer on the battery type so that the machine will spark when partly back against the compression.

Be sure that the saw guide rests in the holder on the frame and be sure that the clutch is disengaged as you cannot start the machine with the saw moving on the log.

STARTING

Always stand on the left side of the machine, not on the saw side. When starting take hold of the flywheel with the right hand, grasp it around the forward end of the counterweight, or heavy part of the flywheel rim and rock the flywheel back and forth a few times, at the same time hold the palm of the left hand over the air intake on the mixer. This causes a rich mixture of gas to be drawn into the motor and makes starting easy. Never do this when the motor is hot, or it will choke and stop.

Now close the battery switch or on the magneto saw open up the magneto by pushing the lever to where it will cause the mag-

neto to spark, then give the flywheel a quick pull back away from the log and release it. Repeat this operation until the motor starts.

SAWING

When the motor has started, advance the timer lever a notch or two and cross to the right of the machine or the saw side, lower the blade onto the log and increase the speed of the machine, open the clutch and the saw will be in operation. When the cut is nearly finished slow up the motor by re-tarding or moving the timer lever back. When the cut is finished, release the clutch, raise the saw and place it in the holder.

REGARDING THE SAW BLADES

All saw blades sent out with machines are unset and unfiled, due to the fact that every wood Sawyer has his own idea regarding how his saw should be filed. When your saw is cutting properly it will discharge long flakes rather than dust.

File the saw to a good cutting edge. The raker teeth should be slightly shorter than the cutting teeth, about a thirty-second of an inch for average sawing; for soft wood they can be slightly shorter.

Be sure and get the proper set in your saw, or it will bind. Binding is also caused by pitch in the timber; this can be overcome by pouring a little kerosene oil into the cut, which will cut the pitch.

Remember that the sawing speed of your machine depends on the condition of your saw blade. The machine will give you the backward and forward movement as well as the necessary oscillation, but if the saw blade is not right you will not obtain best results.

AN AUTOMOBILE TYPE CLUTCH

All WADE Drag Saws come equipped with a clutch. With this clutch, you can run your motor without the saw blade moving. This does away with tie-ups while disengaging saw blade from a tight place in the log. It also makes the motor more useful as it can be used as an independent power plant to run a feed grinder, pump or any engine work you wish to do after your winter's wood supply is cut.

The Multiple clutch consists of four steel discs. There is no wear on the discs except when the motor is idling. No friction bands or lining to wear out and give trouble. The discs require no attention whatsoever, not even oiling as the surplus oil from the cams is sufficient lubrication.

A RELIABLE, PRACTICAL and EFFICIENT CLUTCH

The WADE clutch release shown in the picture is a patented feature.

The adjustment of the Wade Clutch is very simple. If the clutch is slipping and does not hold properly, tighten the nut on the end of the crankshaft until the proper clutch tension is obtained. However, if this tightens the levers so that they do not work freely, loosen the two screws holding the clutch collar and move the collar in towards the flywheel to the next set of holes in the sprocket drum—you will note that there are three sets of holes in the sprocket drum to care for this

adjustment. After moving the collar into the next position, loosen the crankshaft nut until the clutch levers work freely without binding and the proper tension on the clutch is obtained. If moving the collar to the second set of holes will not give the proper results, move to the third set and repeat the above operation. If your clutch slips after the third set of holes, the discs are too badly worn for further adjustment and will need replacing.

CARE OF MAGNETO

Oil the Magneto every working day with the same grade of oil you use in the engine—special oil is not required. Keep the Magneto free from excessive grease and dirt. This grease and dirt will not affect the working of the Magneto but will shorten its life.

If ignition trouble is suspected, disconnect the spark wire from the spark plug and hold end of wire $\frac{1}{8}$ inch from some spot of bare metal on the engine while cranking. If a good spark is produced, the trouble is not in the Magneto but probably due to faulty spark plug. If good spark is not produced, DO NOT TAMPER WITH MAGNETO, but carefully pack and return it to us for inspection and repairs. This will save you both time and money in the end.

MAGNETO TIMING

When the machine leaves the factory, the magneto cam (which is fixed to the crankshaft by a set screw and operates the magneto) is properly set and timed for ordinary running. You will note that there are punch marks indicating the relative position of the cams and the crankshaft. If this cam should ever be removed or become loosened, great care must be taken to get it back to its original position, otherwise the engine will be out of time and will not operate smoothly. In order to increase the speed of the motor turn the cam slightly to the left, and to decrease the speed, slightly to the right. As parts become worn, it may be necessary to re-time the magneto. Put the piston in extreme top position which can readily be found by removing spark plug—place magneto lever in the first notch—then adjust the two nuts on the trip rod nearest the crankshaft until the magneto trips in this position.

TROUBLE

If the motor starts in the wrong direction, it is caused by having the timer lever set too far back. While the engine running backwards will operate the saw and would not harm the motor; the action of the oscillating crank is not as satisfactory and the saw will not properly operate.

Trouble, nine times out of ten, on gas engines, is in the electrical equipment. If the motor stops or will not start, first make sure that you have gasoline, then remove the spark plug laying it on top of the engine so it will have contact, then turn the engine over to where it should spark and if it does you can see the spark jump. If you do not have any spark you will then know that the trouble is

in your electrical equipment. In the case of the battery equipped saw the reason may be as follows: first the battery may be used up; second you may have a loose or disconnected wire; third, the spark plug may not be adjusted right. It should be adjusted so that a space equal to the thickness of a ten cent piece is between the point and the up-right. If the coil is out of adjustment, the adjustment can be made by turning the thumb screw on the vibrator to decrease the tension and decrease the spark out-put, turn the screw to the left. To increase the spark turn the thumb screw to the right.

On the magneto model machines if there is no spark, test out your spark plug to be sure that it is adjusted right then test out the wiring to be sure that it is all tight, test out the cam to be sure that your magneto is operating, then if your magneto does not spark send it in to us or some authorized Wico agent who understands this machine as there is no reason why they should not give service for a long time and if anything does happen to them it is better to have them serviced by an expert as only an expert can adjust a magneto.

When the motor is hot, it will use less gasoline than when cold. Regulate it at the mixer valve by turning the valve to the right. If the saw is out of use for sometime, the gasoline in the mixer valve will evaporate and the oil will settle. Work the spring in the bottom of the mixer valve to get the heavy oil out before starting. Care should be taken to see that the shut-off in the gas line is closed whenever the saw is not in use for any length of time as this prevents the gas leaking out.

VERY IMPORTANT

Care should be taken not to get too rich a mixture of gasoline by opening the mixer valve too far, especially if your motor is hot, as this will choke it. This can usually be detected by the report of the explosion having a muffled sound; if the mixture is right the explosion will be smart and sharp. If the explosion blows back into the mixer, you will know that the mixture is too lean, and the valve should be opened a little more.

The motor can be primed with pure gasoline, or by holding the hand over the air intake on the mixer while you rock the fly-wheel back and forth. This should only be done to make starting easy when the motor is cold. If you do this when the motor is hot, you will cause it to choke.

If you get too much gasoline into your motor, it will be necessary to take the spark plug out and turn the motor over several times to work out the rich mixture. Make a study of the proper mixture and exact method of starting that gives best satisfaction and stick to it.

When your chain stretches and gets loose, loosen the bolts on the bearing and slide the bearing back until the desired tension is secured. Be sure that both bearings are in line, then tighten the bolts.

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NEW FEATURES

NEW PERFORMANCE

Chrome Nickel Cylinder Block

A new feature—exclusive with Wade—Reduces cost of operation

One - piece ALLOY
STEEL dog — will not
break. Steel wear plate

Handles in frame—no
more worry about
smashing hands — ex-
clusive Wade feature

Latest type Wico mag-
neto. Positive ignition
in any weather. Also
supplied with battery

Automobile type disc
clutch. Patented release
—no bands to wear

Quick change saw hold-
er—only one nut to
loosen — Patented
Wade feature

Transportation wheel
A patented Wade
feature

Four bearing cross
head center drive

WHEEL AT END OF FRAME

WADE holds a patent on a drag saw frame with a single wheel, consequently this is an exclusive feature. When the saw is placed on the log the wheel is locked by a hook that goes through an eye in the rim of the wheel. The WADE saw can be moved from log to log in same manner as a wheelbarrow.

IMPROVED ENGINE

4½ Horsepower — Standard
Weight Saw.

3½ Horsepower — Light Weight
Saw.

Certified Chromium Nickel
Block. Automobile Type Con-
struction.

Honed Cylinder, Ground Piston
Pin, Ground Piston, Ground Pis-
ton Rings, Drop-forged Crank
Shaft.

Three Port, both intake and ex-
haust. New Thrust Collar Elim-
inates Side Fly of Crank Sh.

MANUFACTURED AND GUARANTEED BY

R. M. WADE & CO.

106 S. E. HAWTHORNE BLVD.

PORTLAND, ORE., U.S.A.



4 BIG REASONS WHY You Should Buy The Best!

WADE

ONE MAN DRAG SAW

1. SUSTAINED POWER

a period of years. Powerful but economical, the Wade Drag Saw has a three port intake and outlet engine. Pistons are equipped with three piston rings, two compression rings, and one oil ring. Piston Pin is held in place by snap rings so that piston pin will not score the cylinder. A new type construction eliminates the side play on the crankshaft—thus materially lengthening the life of the bearings.

A change in the sprocket ratio on the light-weight model results in the maximum amount of engine power being delivered to the saw blade. Horsepower is increased by a full one-half—lots of power in reserve for the heaviest work.

2. BACKED BY RELIABLE FIRM

dering, a year from now, how to get a part if you buy a Wade! For many years, the U. S. Government has used the Wade Drag Saw. Scores were bought and used during the World War, and again for use in C.C.C. service the Government has purchased a large number of Wades. The Wade is recognized as being superior.

The new Certified Chrome Nickel Cylinder Block is an exclusive feature found only in the Wade Drag Saw. This tough, close grained, wear-resisting metal assures a substantial reduction in cost of operation. The hard, polished cylinder wall finish assures lasting compression, which means sustained power over

R. M. Wade & Company has been in business since 1865. They have been manufacturing Wade Drag Saws for over 25 years. Every Wade is backed and guaranteed by this pioneer firm. Wade parts are always available—whether it is for the first Wade ever built, or the latest model. You'll not be won-

3. QUICK CHANGE SAW HOLDER

idly in place. By loosening a single nut the blade is easily removed.

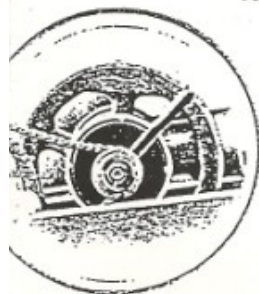
WADE has a patented saw blade holder. Two chrome-nickel pins and one bolt hold the saw blade rigidly in place.



4. Full Floating DISC CLUTCH

is the most efficient, practical and reliable release developed for drag saw use. This clutch will allow the motor to run without operating the saw blade, a necessary feature when the blade becomes pinched in a tight place. It also makes a very flexible power plant out of your drag saw, such as running a feed mill, pump, or any other engine work about your place.

WADE DRAG SAWS are equipped with a Full Floating automobile type multiple disc clutch. The Wade Patented Clutch Release shown in this picture



WADE

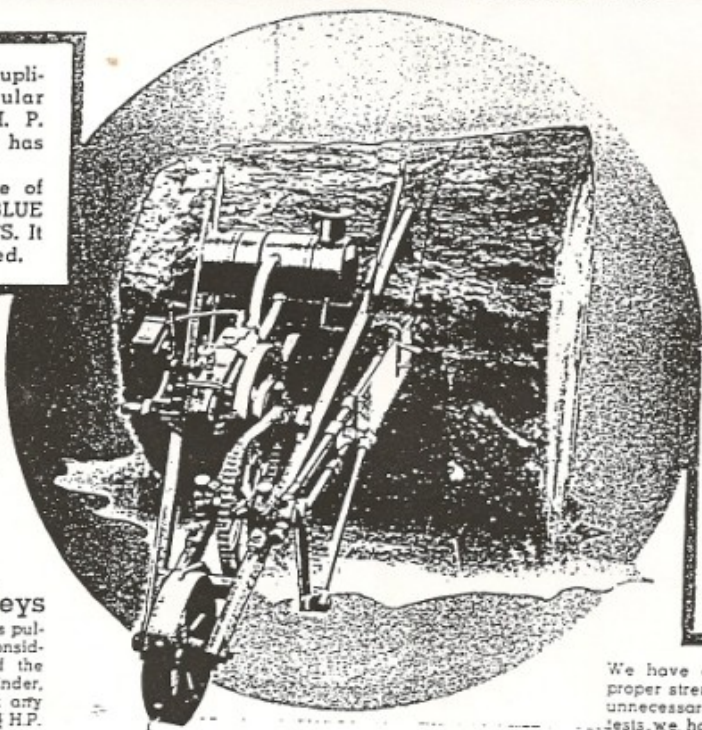
STEEL FRAME

ONE MAN DRAG SAW

This model is a duplicate of our regular wood frame 4½ H. P. Saw, except that it has steel frame. The frame is made of OPEN HEARTH BLUE ANNEALED SHEETS. It is electrically welded.

Model SSM1
Standard Weight Steel Frame Drag Saw with 5-foot blade, magneto and clutch. **\$139.50**

WADE Power Attachment Pulleys
The simple installation of this pulley to the engine shaft will considerably increase the use of the drag saw. Runs feed grinder, grind stones, pumps; in fact any utility work requiring up to 4½ H.P. Furnished as extra only. Weight 7 pounds. **\$2.65**

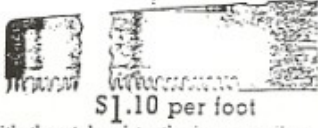


NEW IMPROVED MODEL
4½ Horsepower

Another exclusive feature of the WADE Steel Frame is the RUBBER Engine mounting. The Rubber Mounting absorbs the motor vibration or any external shock or strain, thereby preventing crystallization, and adding years to the life of the machine.

We have designed this frame of the proper strength steel and eliminated all unnecessary braces. After exhaustive tests, we have found this saw to be the lightest possible weight practical for a 4½ H.P. Drag Saw.

Wade Drag Saw Blades



Not only are WADE blades with the style of teeth shown in illustration the best all-purpose blade for machine wood-coring but they are also guaranteed by the manufacturer to be absolutely uniform in temper of the proper degree of hardness, insuring greatest possible service with least amount of rebitting. Furnished with single raker type tooth in lengths of 4 feet to 12 feet. Eight per foot, 3 pounds. **\$1.10 per foot**



Wade Buzz Saw Attachment

Cuts limbs, branches, sapling poles, etc. It will pay for itself in a remarkably short time on small wood that is usually wasted. Attached quickly, easily to any regular One-Man WADE Drag Saw.

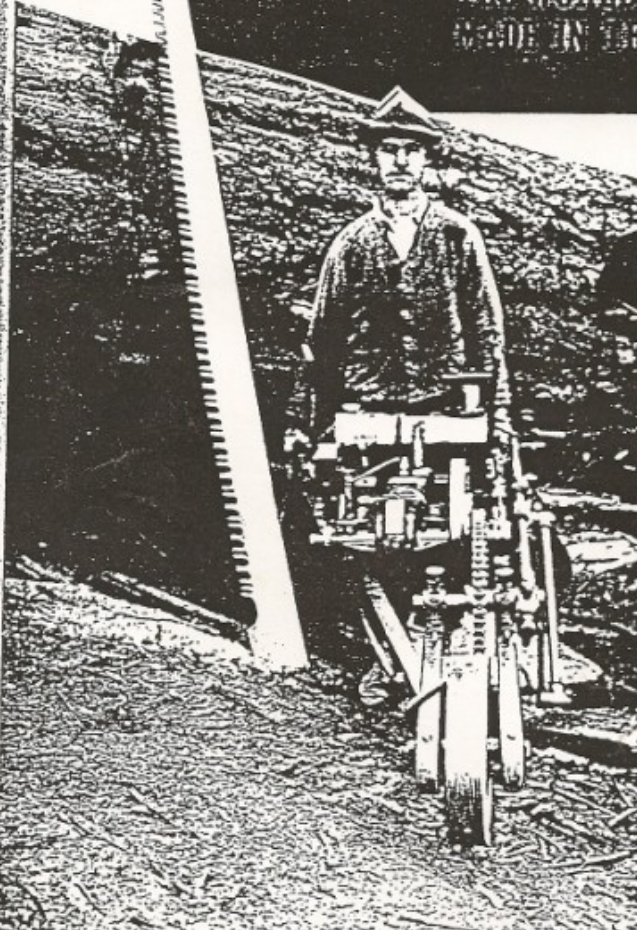
NOTHING TOO BIG
NOTHING TOO SMALL
THE WADE CUTS IT ALL
\$31.20

SOLD BY

IMPROVED WADE

ONE MAN REG. U.S. PAT. OFF. DRAG SAW

THE WORLD'S BEST
MADE IN THE WEST



BIG INCREASE
IN POWER

NO INCREASE
IN PRICE

SUSTAINED POWER

CHROME
NICKEL
CYLINDER
BLOCK

R. M. WADE & CO.
SYNOPSIS
PORTLAND, ORE