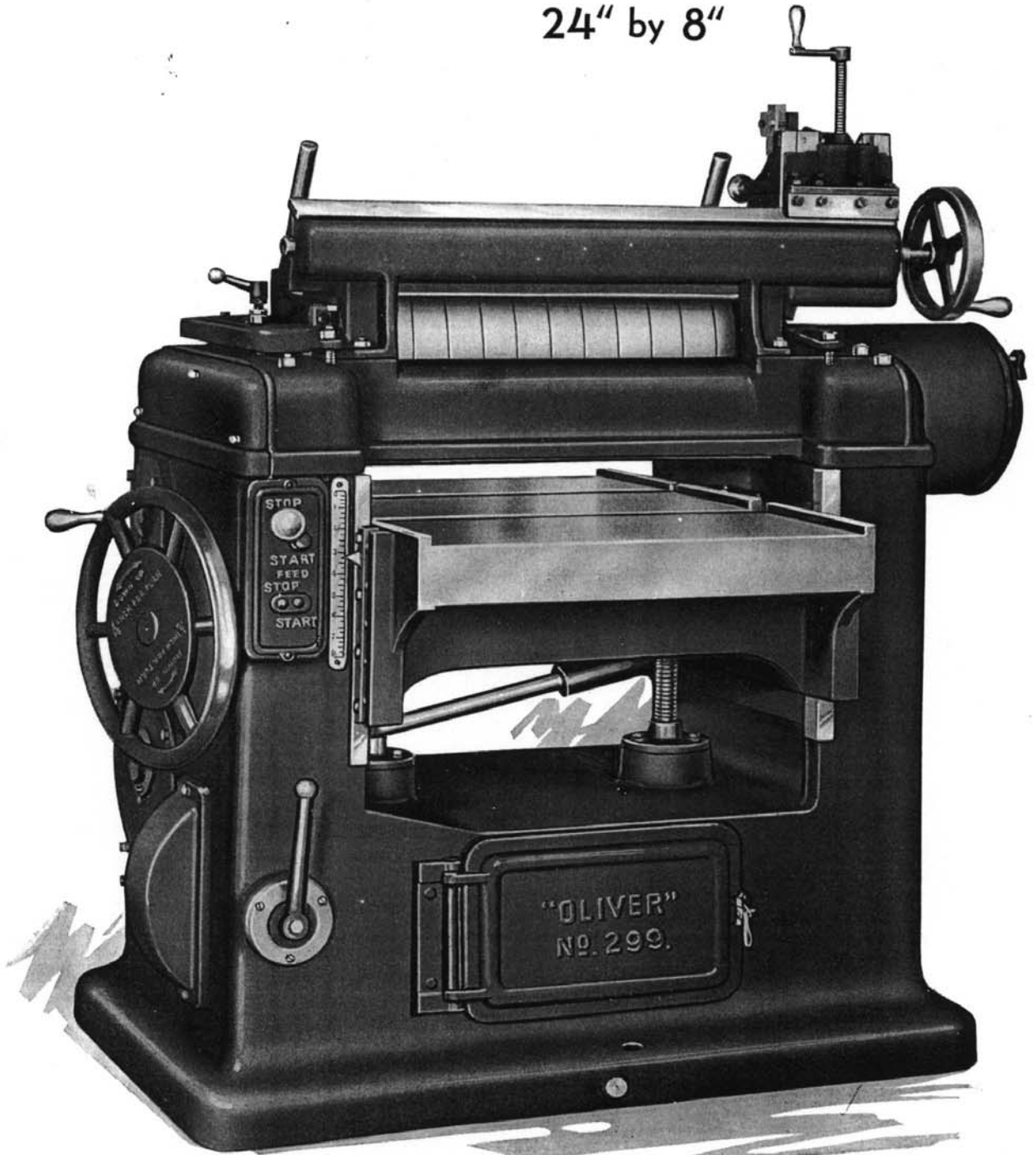




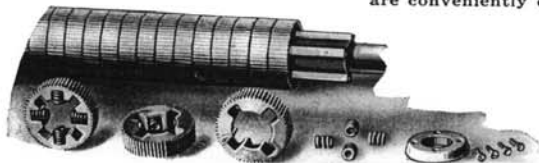
"Every User
Is a Booster"

"Oliver" No. 299 Single Surface Planer 24" by 8"



NO. 299-D "OLIVER" SINGLE SURFACE PLANER

Front view of complete machine with Sectional Chipbreaker, Sectional Roll and Permanently Located Knife Grinding and Jointing Attachment. Note that all controls, both electrical and mechanical are conveniently concentrated directly in front of the operator.



SECTIONAL UPPER IN-FEED ROLL
Note the Positive Drive and the Fool-Proof Construction

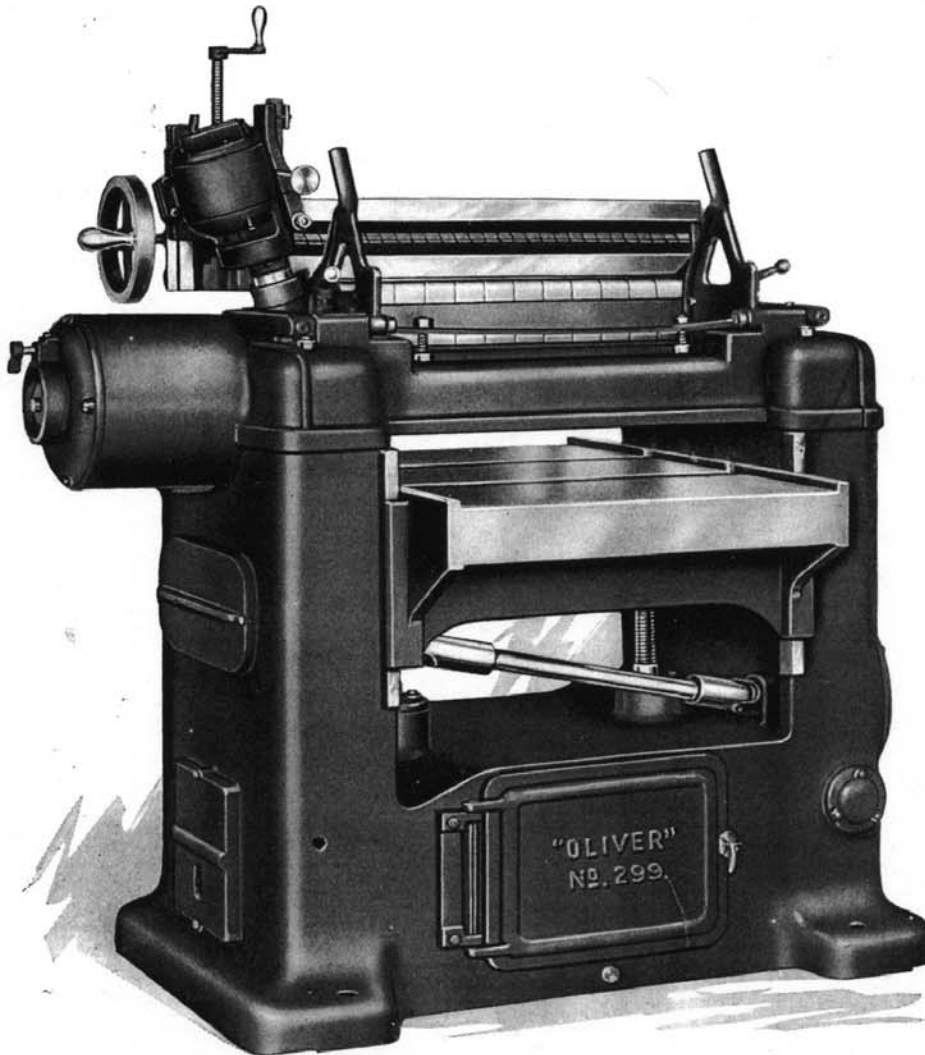
Manufactured by

Oliver Machinery Co.

Grand Rapids, Michigan, U.S.A.

BRANCH SALES OFFICES:

New York, St. Louis, Minneapolis, Los Angeles, San Francisco,
Chicago, Denver, Salt Lake City, Seattle, Manchester, Eng.



NO. 299-D "OLIVER" SINGLE SURFACE PLANER

Rear view of complete machine with Sectional Chipbreaker, Sectional Roll and Permanently Located Knife Grinding and Jointing Attachment. Note that the Knife Grinding Motor Head Unit when not in use remains at the end of the bar—out of the way, yet instantly available. Straight Wheel Knife Grinding Unit is now regularly furnished.

Outstanding Points of "Oliver" No. 299 Surfacer

- 1—One piece base casting—insures rigidity and lasting alignment of all working parts.
- 2—One piece cylinder yoke—rigidity and lasting alignment of working parts.
- 3—Revolving parts fully enclosed—excludes dirt—maximum safety—reduced maintenance expense.
- 4—Lubrication—Centralized Alemite Zerk—convenient.
- 5—Ball Bearings on all rotating parts in the machine. This includes not only all feed roll and cutter head bearings, but all other bearings of revolving parts.
- 6—Control—Centralized at left of operator, easy of access—dust-proof—cylinder brake.
- 7—Feed—any rate in feet per minute by dial indicator—minimum 18, maximum 40 feet per minute. Any rate of feed within these limits secured by merely turning a hand dial. Higher or lower feeds on request.
- 8—Accessibility—All rolls and cylinder with attached bearings—withdrawn as units from end of machine. Modern unit construction predominates.
- 9—Adjustments—Adjustments of all units from outside of machine in quickest and easiest fashion.
- 10—Cutter Head—Cutting circle of $4\frac{1}{4}$ " gives a cylinder 20 per cent stiffer than a cylinder having 4" cutting circle. Guarantees smooth accurate planing.
- 11—Knife Grinder—Easy to operate—Permanent mounting insures accurate knife grinding and jointing at all times.
- 12—Wiring—All wiring between motor and control fully enclosed, no external conduit used.
- 13—Doors—All doors and covers are cast iron with machined joints; no sheet metal used.
- 14—Weight—Approximately 2800 lbs. Floor space, 38" x 48".
- 15—All parts of the Jointing Device and the Motor Knife Grinding attachment may be left on the machine on the permanently attached Knife Grinding Bar, saving time and insuring accuracy.
- 16—The pulling force on all the rolls is horizontal, thus having no tendency to raise or lower the rolls.

Capacity

Will surface up to 24-inch wide and up to 8-inch thick, at any speed from 18 to 40 feet per minute. Pieces as short as 10½ inches will feed through one at a time.

Base

A single massive box type casting, having three-point contact with the floor, forms the base of the surfacer, guaranteeing a properly aligned base for support of the table and cutter head yoke. The cast iron doors on the front and rear of the base provide ready access to the 1 h.p. Ball Bearing Feed Motor and V-belt Variable Speed feed drive. The left side houses the worm gear reduction unit and electrical control mechanism. Large flat vertical ways,

spaced apart in excess of the roll spacing, provide more than adequate support for the table, and supplement the table elevating screws located on a heavy section midway between the vertical ways. The single base casting, eliminating the built-up bolted construction, insures accurate alignment of the entire machine for all time and is your guarantee of unexcelled planing and freedom from surfacer trouble.

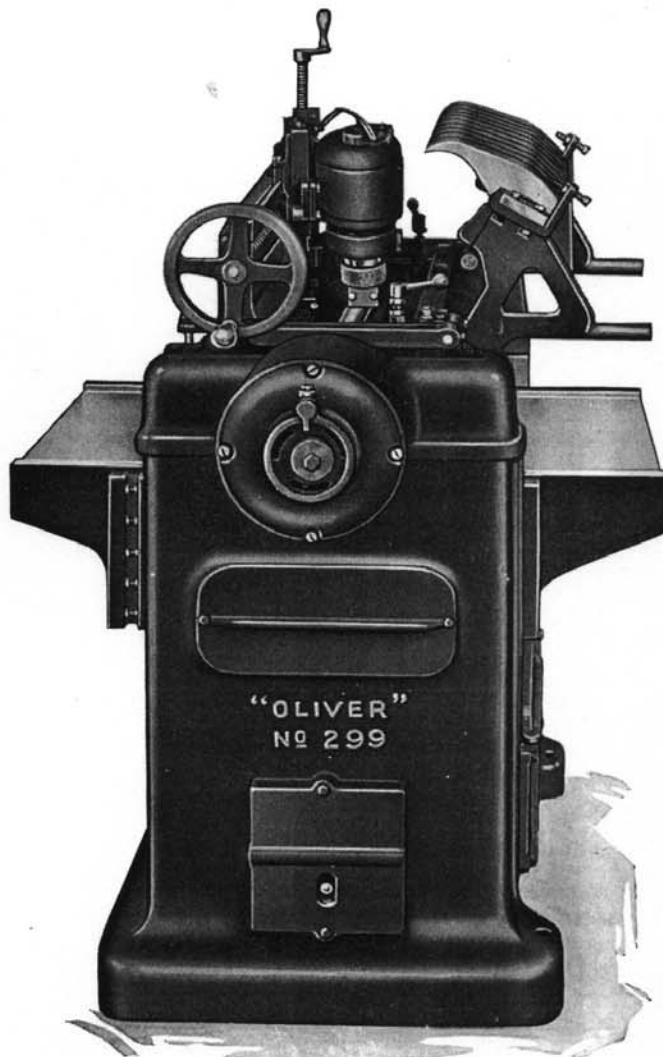
Cutter Head Yoke

A single casting, properly proportioned for adequate strength, is located on the top of the main frame. Locations for both upper rolls, chipbreaker, pressure bar, cutter head and cutter head motor and grinding bar, being machined in this single casting with due references to one

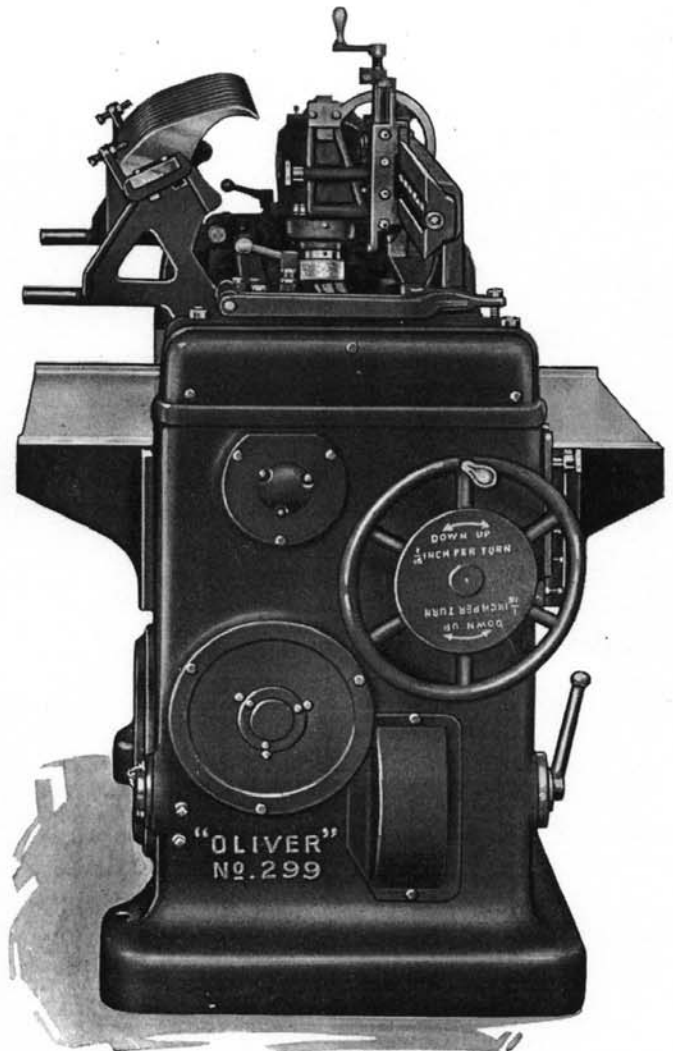
another, guarantee proper alignment of these important parts for all time.

Table

The heavily ribbed semi-steel table casting carries the two table rolls, providing a fully enclosed cavity for the roll drive mechanism. The vertical ways with adequate adjustable gibs provide maximum bearing area to mate with the corresponding ways on the main frame. A hand wheel of generous size, at left of operator, serves to operate the two large elevating screws, through worm and gear mounted in grease packed, fully enclosed cavities. The thrust of the screws is taken on ball bearing thrust bearings.



NO. 299-D "OLIVER" SINGLE SURFACE PLANER
Right Side View with Sectional Chipbreaker swung back and Knife Grinding Motor Head Unit advanced with the Jointing Attachment swung down in position for action. Note that while the knives are being jointed the grinding wheel is about two inches above the knives and does not revolve. Knife Grinder is now straight wheel type.



NO. 299-D "OLIVER" SINGLE SURFACE PLANER
Left Side View with Sectional Chipbreaker swung back and Knife Grinding Motor Unit lowered to grinding position, while the Jointing Attachment is locked in upper neutral position—out of the way, yet instantly available. Straight Wheel Grinder is now regularly furnished.

Feed Rolls

3 5/8-inch diameter; roll spacing, 10 1/2 inches. The table rolls and upper outfeed roll are of steel and are mounted on ball bearings. Each roll with its bearings can be withdrawn as a unit endwise from the machine without disturbing any other part of the mechanism. The infeed roll is sectional or solid as required, has adequate vertical float and downward vertical pressure. It can be withdrawn with its bearings as a unit from the end of the machine. All rolls are adjusted for alignment from the outside of the machine without reference to any other machine part.

Sectional Roll

The sectional roll consists of twelve 2-inch cast steel sections mounted on an alloy steel forged spider. The entire unit with its ball bearings can be withdrawn endwise from the machine without disturbing any other machine part. Each section has ample yield.

Roll Drive

Upper rolls through fully enclosed alloy steel sprocket and chain running in oil-filled cavity in cylinder yoke casting and main frame casting. Lower rolls through universal joints, alloy steel sprockets and chain running in fully enclosed cavity in right side of table casting.

Chipbreaker (Sectional)

The sectional toes are 2-inch wide cast steel. Each toe is loaded with an helical spring and has an independent lift of 1/4-inch. The group of toes mounted on a pivoted steel bar swing up and away from the cylinder when greater movement than this of the independent toes is necessary. The entire assembly swings out of position when knives are ground.

Chipbreaker (Solid)

When specified, a solid chipbreaker of substantial design is furnished in lieu of the sectional chipbreaker at lower cost.

Pressure

A semi-steel heavy section pressure bar, adjusted by permanently attached handles, is located back of the cutter head. The pressure bar is readily removed from the machine without disturbing any other machine part.

Knife Grinder — Jointing Device

A heavy U section bar is permanently attached to the cylinder yoke. A gibbed slide having long ways mounted in permanent position on the bar is moved along the bar by screw and hand wheel. The slide carries a rotating plate arranged to carry in permanent fashion both the Jointing Stone and Grinding Motor. Rotation of the plate presents the desired tool to the knives and permits location of the device at end of bar when grinding or jointing of knives is completed. Vertical adjustment of Grinder and Jointing Stone by micrometer screw and permanent mounting of entire grinding unit on machine guarantees utmost accuracy in preparing knives, in a minimum amount of time. The grinding unit is a constant speed ball bearing motor with cord and switch and V-belt drive to a straight emery grinding wheel which is superior to the old style cup-wheel. A convenient lock is furnished for positioning cylinder when grinding knives.

Control

All electrical and mechanical control is centralized at operator's left, being fully enclosed in the main frame, is dust-tight and readily accessible. Overload and low voltage magnetic type control with start and stop buttons for both the cutter head motor and feed motor is provided. Operation of the master stop button disconnects both cutter head and feed motors and applies brake to the cylinder for quick stop.

Bearings

All rotating parts of this Surfacer are mounted on ball bearings of adequate capacity.

Cutter Head or Cylinder

Alloy steel, Circular Safety Type, carrying three inserted tungsten-chromium high speed steel knives. The large 4 1/4-inch cutting circle insures utmost accuracy and smoothness in finished work. Cutter head is mounted on high speed precision ball bearings and is balanced for operation at any frequency. Slots behind the knives permit easy introduction of the knife setting device. The cutter head and its bearings can be withdrawn as a unit from the machine. The diameter in the bearings is 2 inches. The chipbreakers are the inserted wedge type, continuous nickel chromium alloy steel, one piece chipbreakers and clamping screws assure long life and maximum safety.

Lubrication

All revolving parts, except the two Universal Joints, are fully enclosed in cast iron chambers and run in a continuous bath of lubricant. Centralized Alemite Zerk system of lubrication is employed on independent bearings where required.

Motor Drive

The cylinder or cutter head is driven by a 5 h.p., 3600 r.p.m. Enclosed Ventilated Motor. For three phase A.C. this motor is mounted directly on the cylinder shaft and held in a housing cast integral with the top yoke and finished in perfect alignment. For Single Phase A.C. and for D.C. the cylinder motor is mounted at the end of the cylinder and coupled to it in a self-contained manner, the coupling being enclosed and the whole appearance being similar to the three phase motor drive. The feed motor is a separate 1 h.p., 1800 r.p.m. motor mounted in the base of machine in a self-contained yet easy accessible manner.

Standard Equipment

5 h.p., 3600 r.p.m. cutter head motor for 3 phase, 60 cycle, 220 or 440 volt current, as required. 1 h.p. Ball Bearing Feed motor, 1800 r.p.m. regular, but 1200 r.p.m. when desired. Magnetic Control with push button station directly in front of operator. One set of high speed knives mounted in the cylinder; knife puller and setting gauge; wrench; grease gun.

CODE, WEIGHT, ETC.

CODE	DESCRIPTION	WEIGHT IN POUNDS		CUBIC FEET
		CRATED	BOXED	
Dihib	No. 299-D—24 x 8-inch Single Surfacer complete with motor for cutter head and motor for feed works and starter.....	2800	3100	72

