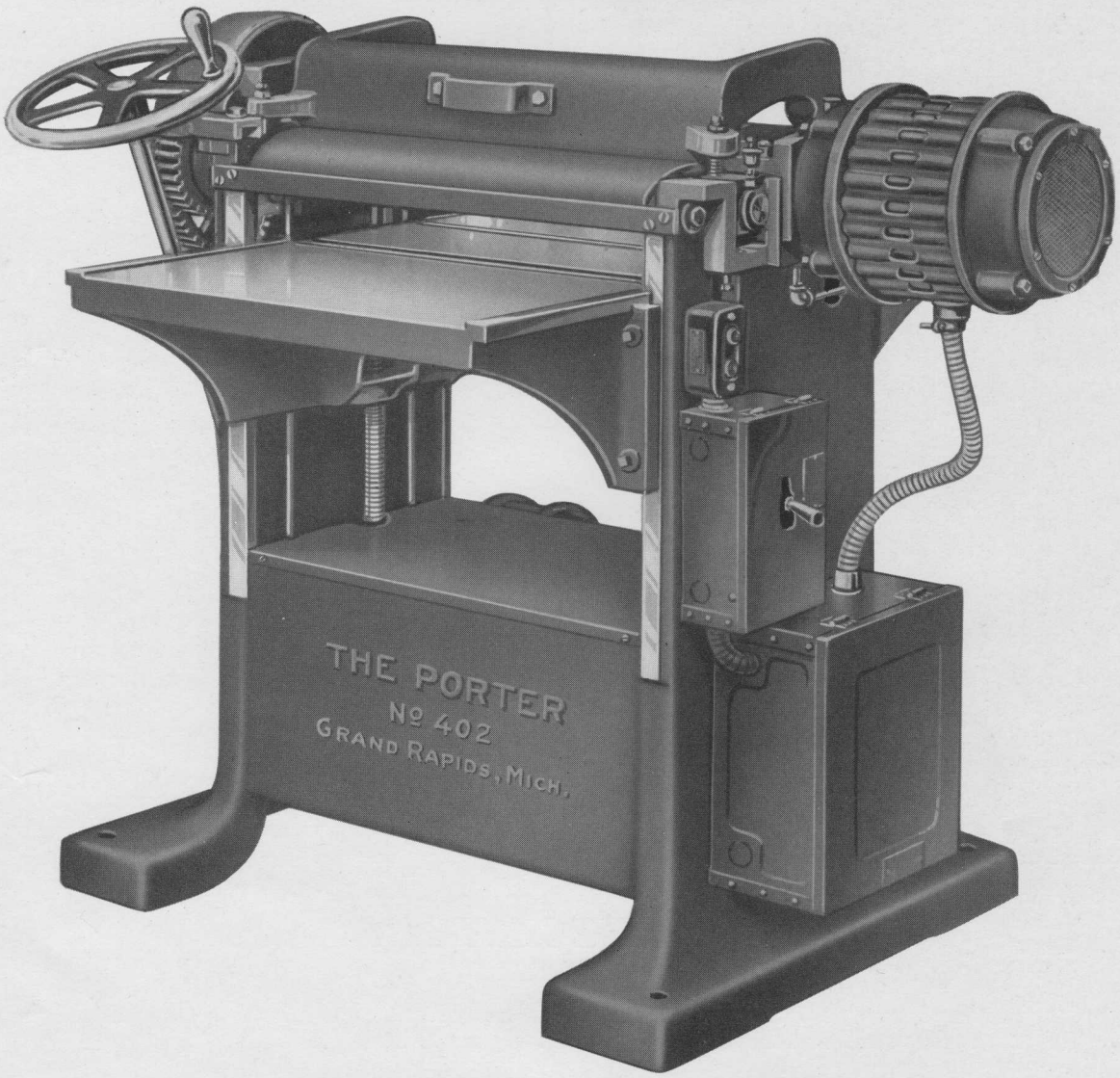
"THE PORTER"

No. 402 24" x 8" Ball Bearing Single Surface Planer



Operating side of The Porter No. 402 Surfacer. Note the omission of complicated mechanisms which would require attention. No couplings, no belts, exceptionally clean cutting and sturdily built.

C. O. PORTER MACHINERY COMPANY ~ Grand Rapids, Michigan

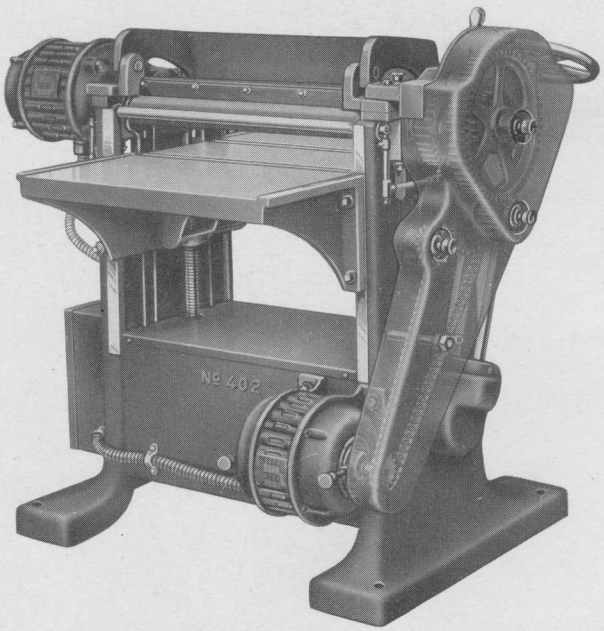
The Light Surfacer with a Satisfying Performance

THE Porter No. 402 Ball Bearing Surfacer unfolds the advantages that the small single surface planer may possess. It is a capable and economical means of planing stock to thickness, free running and competent to handle effectively a wide range of work.

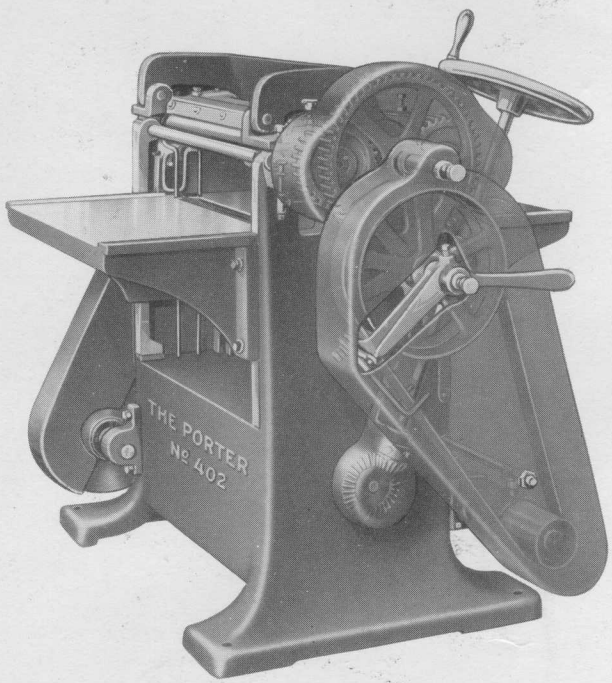
The compact arrangement of the rolls, chipbreaker, cylinder and pressure bar, in addition to the free cutting of the Type C head, gives a class of work that is demanded. Between the chipbreaker and the pressure bar, there is a space of only 2¼" and actual runs of stock corroborates the fact that the ends of the material are not gouged out. A nice clean cut is always perferred and this machine produces it.

A striking example of simplicity is particularly evident in the M (motor driven) machine. The head motor confines its power to the cut while the feed is driven by an independent motor. A novel, and protective method of starting the motors deserves attention (see "control").

The rigid construction, consideration of all details, appointments, and complete protection from injury are further vital points to be remembered. The Porter Single Surface Planer does meet the demands of the particular.



Feed side of motor-driven machine, roller chain transmits power of small motor to the feed.



Belt driven type

SPECIFICATIONS

GENERAL

Application: For planing rough or finished lumber to thickness with accuracy, and economically. It is compact, not complicated and involves a comparatively small investment.

Frame: Iron sides conservatively ribbed, accurately machined and securely joined together by equally rigid girts giving the solidity of a single piece. Table ways are planed. Recesses for feed roll bearings and pressure bar machined.

Table: Stocky, ribbed and surface ground, adjustable for depth of cut on large diameter, acme thread, quick acting screws operated through machine cut gears by means of the handwheel. Gauge to show depth of cut is furnished.

A Simplified and Positive Motor Drive

Cylinder: Type C circular with three high speed steel knives and chipbreaker with point that is close to the cutting edge assuring nice work. Two-knife square head can be furnished.

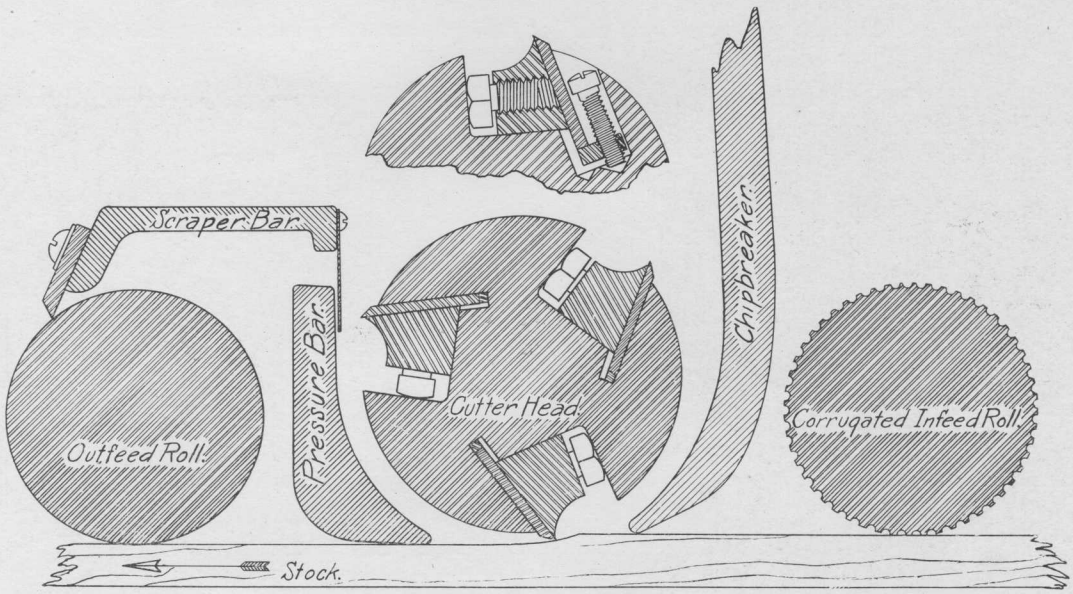
Bearings: Selected, reputable make and long life assured by their generous size. Carefully protected from dirt and with proper lubrication provided for.

Feed Rolls: Made of steel. Upper infeed roll corrugated and outfeed as well as lower rolls are smooth. Solid infeed roll regularly furnished; and sectional type recommended only when used in connection with sectional chipbreaker.

Chipbreaker: Planed edge casting of proper weight to hold stock down firmly. Fits close to cylinder and reaches near to point of cut. May be swung out of the way quickly.

Sectional chipbreaker which can be furnished, but in majority of cases not required, features forged contact fingers two inches wide with pressure applied by coil springs. Entire finger assembly can be raised without interfering with knives.

Pressure Bar: Planed on edge that comes in contact with stock and on ends where fitted into receiving ways. Is close to cylinder and only 2¼" from chipbreaker. Held securely by oil tempered coil springs.



The Cutting Group

The points of the chipbreaker and pressure bar are separated only 2¼". Feed rolls are closely related to the parts mentioned. This compact arrangement in addition to the type C Porter Cylinder assures clean cutting without gouging.

Gears: All gears throughout are machine cut.

Guards: Cast guards, enclosing all moving parts and quickly removed.

Finish: Light grey enamel over two coats of iron filler sanded and sealed.

Test: All machines tested for accuracy of cut, running and on motor driven models through the controls.

Guarantee: Guaranteed to be high grade, free from defective material and imperfect workmanship. Ball bearings are guaranteed for one year.

SPECIFIC TO MOTOR DRIVE

Motor: (***Cylinder***) 5 HP, 220, 440 or 550 volt, 60 cycle, 2 or 3 phase, 3600 RPM mounted directly on arbor (no coupling). Rotor (revolving part) is mounted on the cylinder bearing extension and stator (field winding) is securely bolted to flanged casting. A trouble free and effective drive.

Motor: ***(Feed)*** ½ HP, 220, 440 or 550 volt, 60 cycle, 2 or 3 phase, 3600 RPM mounted on frame, fitted with sprocket and driving feed through roller chain with bronzed bearing adjustable idler.

Control System: A relay magnetic push button control operates both motors simultaneously, but the feed may be shut off by means of the hand control. Both motors have low voltage protection and each is protected from overload independently. The feed cannot be operated unless the cylinder is running.

Feed: Through roller chain to large sprocket which drives machine cut gears to give proper reduction. Idler takes up chain slack.

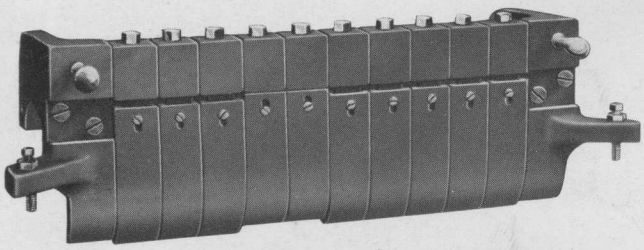
Equipment: Cylinder motor, feed motor, magnetic push button control, hand control, set of knives in head, guards, wrenches, and screw driver. Completely wired.

SPECIFIC TO BELT DRIVE

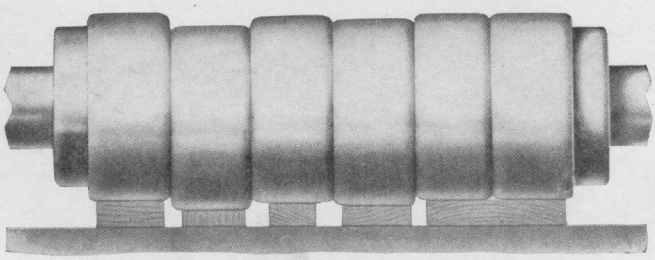
Feed: Belted from cylinder through ball bearing feed shafts. Furnished with leather belts. Shifter with tight and loose pulleys is provided.

Countershaft: Furnished for belt drive machine and of conventional design. Supplied only when specifically ordered.

Equipment: Set of three knives in the head, all belts, necessary wrenches and screw driver. Guards are always furnished.



Sectional chipbreaker. (Furnished on special order.)



Sectional feed roll. Twelve sections, each two inches long. (Furnished on special order.)

TECHNICAL SPECIFICATIONS

	MOTOR DRIVEN	BELT DRIVEN
Width of cut	24¼"	24¼"
Thickness of cut	8"	8"
Size of base	30x39"	30x39"
Length of table	40"	40"
Number of knives in cylinder	3	3
Size of knives	1½x⅛"	1½x⅛"
Speed of cylinder	3600 (sync.)	4000
Horsepower furnished and recommended	5½	5
Size of cylinder pulley		4½x5"
Size drive pulley on countershaft		20x5"
Size tight and loose pulleys on countershaft		10x5"
Speed of countershaft (recommended)		900 R.P.M.
Net weight of machine	1700 lbs.	1850 lbs.
Crated weight of machine	1900 lbs.	2050 lbs.
Weight boxed for export	2100 lbs.	2250 lbs.
Cubic measure	70′	70′
Floor space required	40x54"	40x54" (Mach. only)