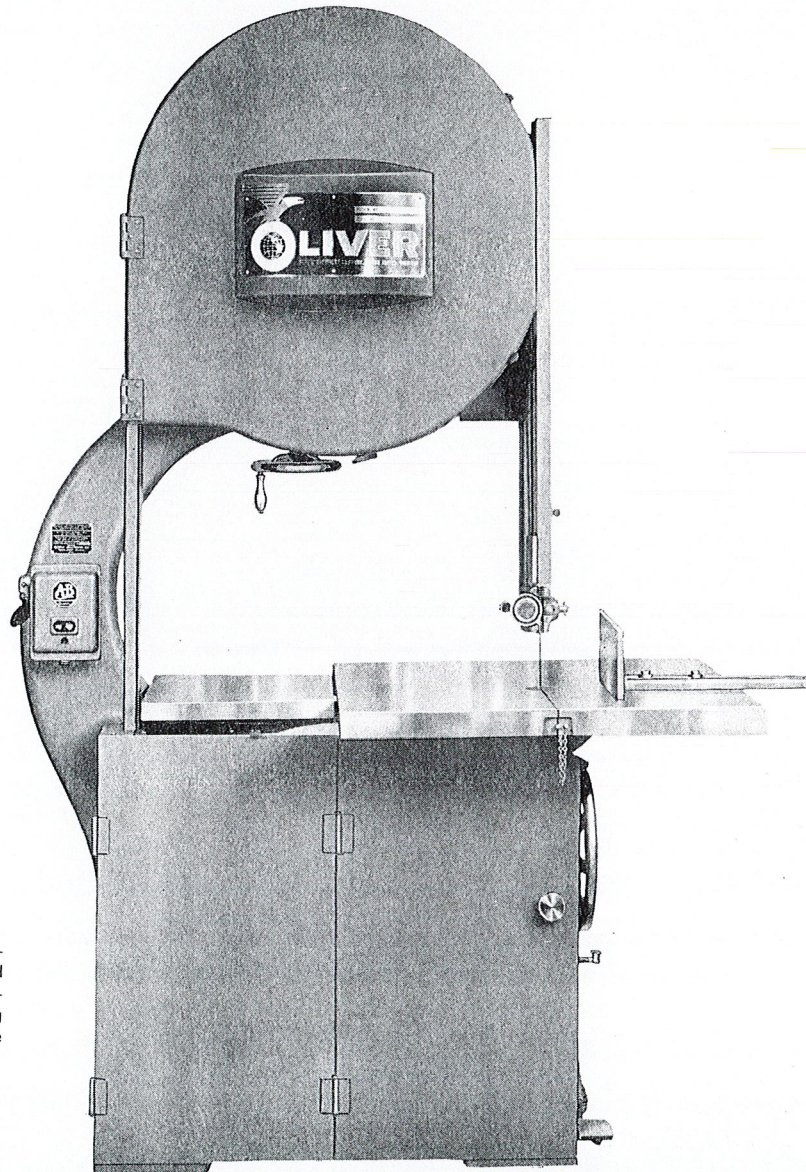


OLIVER

No. 416 36-inch

Band Sawing Machine



Front view of Oliver 36-inch high-speed Band Sawing machine with folding door and large tilting table carried on double rockers.



OLIVER MACHINERY COMPANY, GRAND RAPIDS 2, MICHIGAN, U.S.A.

For cutting wood, metals, plastics, the Oliver No. 416 Band Saw is the finest made, bar none!

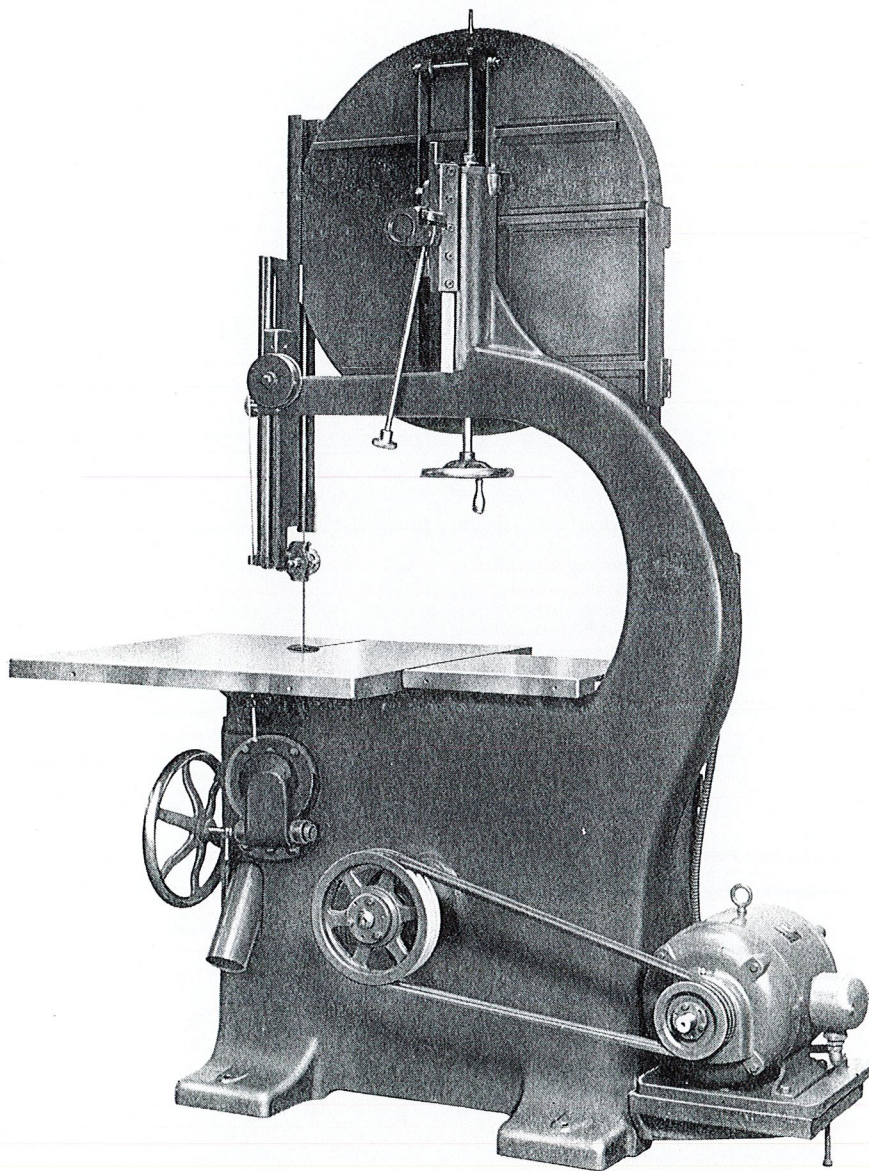
The Oliver No. 416 Band Saw is favorably recognized by users for its fine design and engineering. It merits this recognition with its clean-cut rigid design, construction, finish and efficiency—the most serviceable 36-inch Band Saw made. We encourage careful examination of its details which include many essential points of advantage found only in Oliver Band Saws for cutting wood, sheet metal, aluminum, brass, plastics, etc.

Frame

The frame of the Band Saw is a one-piece casting in the cored form—strong, durable, and free from vibration at any speed. The bottom is machined straight, and all parts are finished square to the bottom, assuring perfect and permanent alignment. Provision for blower connections is made directly back of the hand-wheel that tilts the table. The base is 42 inches long, 21 inches wide, 7 inches high.

Capacity

The height of the cut made under guide is 22 inches. It swings 35½ inches between saw and column; takes saws 18 feet 4 inches to 19 feet 6 inches long, up to 1½ inches wide. Blades up to 2 inches wide may be used but require two No. 2 Saw Guides with No. 1 Guide Wheels.



No. 416-A V-belt driven Band Saw. Has 5 h.p. motor for direct current or 25 cycle drives. A metal beltguard is furnished as regular equipment.

OLIVER

36-INCH BAND SAWING MACHINE

The table is 36 inches square and tilts 45 degrees to the right and 5 degrees to the left. Available with speed up to 1200 r.p.m. if desired; but standard is 720 r.p.m. The No. 416 Band Saw has frequently been adapted for special cutting requirements to operate at exceptionally slow speeds — as low as 13 r.p.m. Such motor drives require careful engineering where the experience of Oliver engineers is of unusual value.

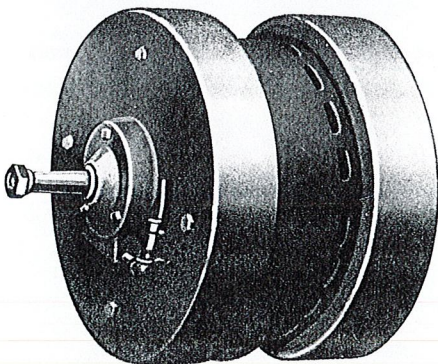
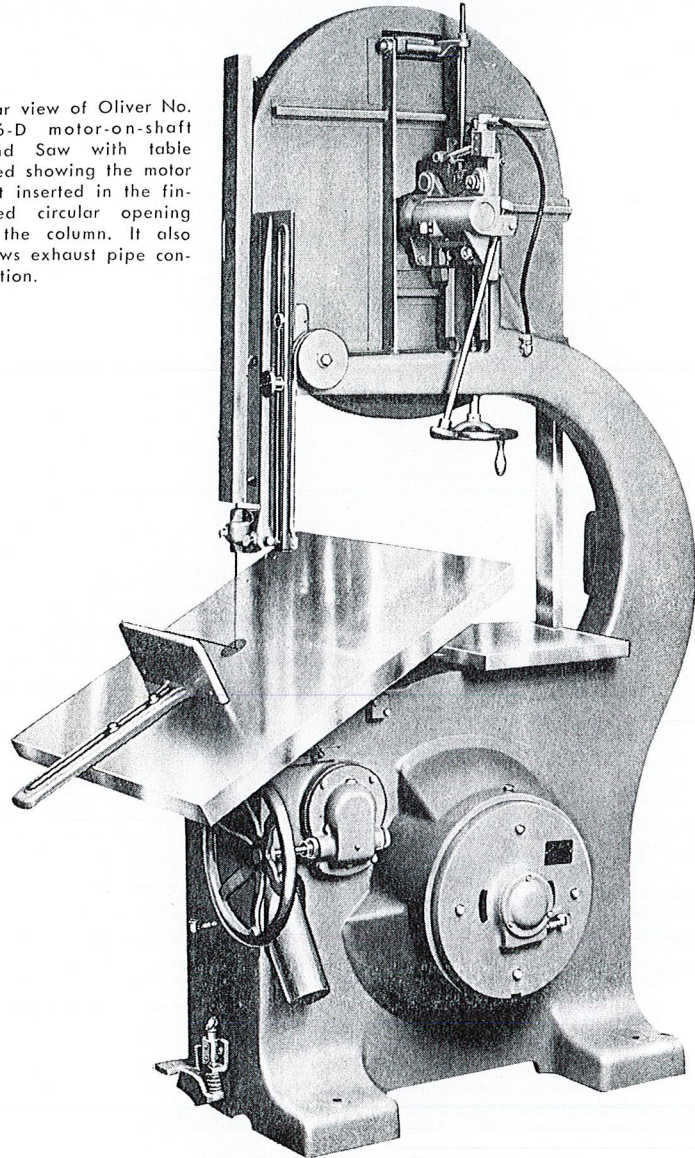
Wheel Shaft and Bearings

The shaft is made of special spindle steel, machine ground, tapered to receive the wheel hubs. The upper wheel shaft is 1 7/8 inches diameter, 16 inches long. The lower wheel shaft is 2 1/2 inches diameter, 23 inches long. Both shafts run in anti-friction oil-lubricated ball bearings, assuring permanent alignment and long life.

Motor Drives

We can furnish any type of motor drive desired — belted,

Rear view of Oliver No. 416-D motor-on-shaft Band Saw with table tilted showing the motor unit inserted in the finished circular opening in the column. It also shows exhaust pipe connection.



The motor-on-shaft unit is inserted in the finished round opening in the column, giving a compact, rigid, yet easily accessible direct motor drive.

chain, or our fully enclosed, built-in motor-on-shaft drive. Where direct current or 25 cycle motors are used, we recommend the No. 416-A belted drive which supports the motor on a self-contained bracket bolted to the frame on a finished square pad. It is fitted with metal belt guard, V-belts and slide base with screw take-up for belt stretch.

When 600, 720 or 900 r.p.m. 2 or 3 phase alternating current motors can be used, we recommend our ball bearing, fully enclosed motor-on-shaft drive, giving the most efficient self-contained motor drive ever developed.

Adjustments

The lower wheel is positively aligned with the frame of the

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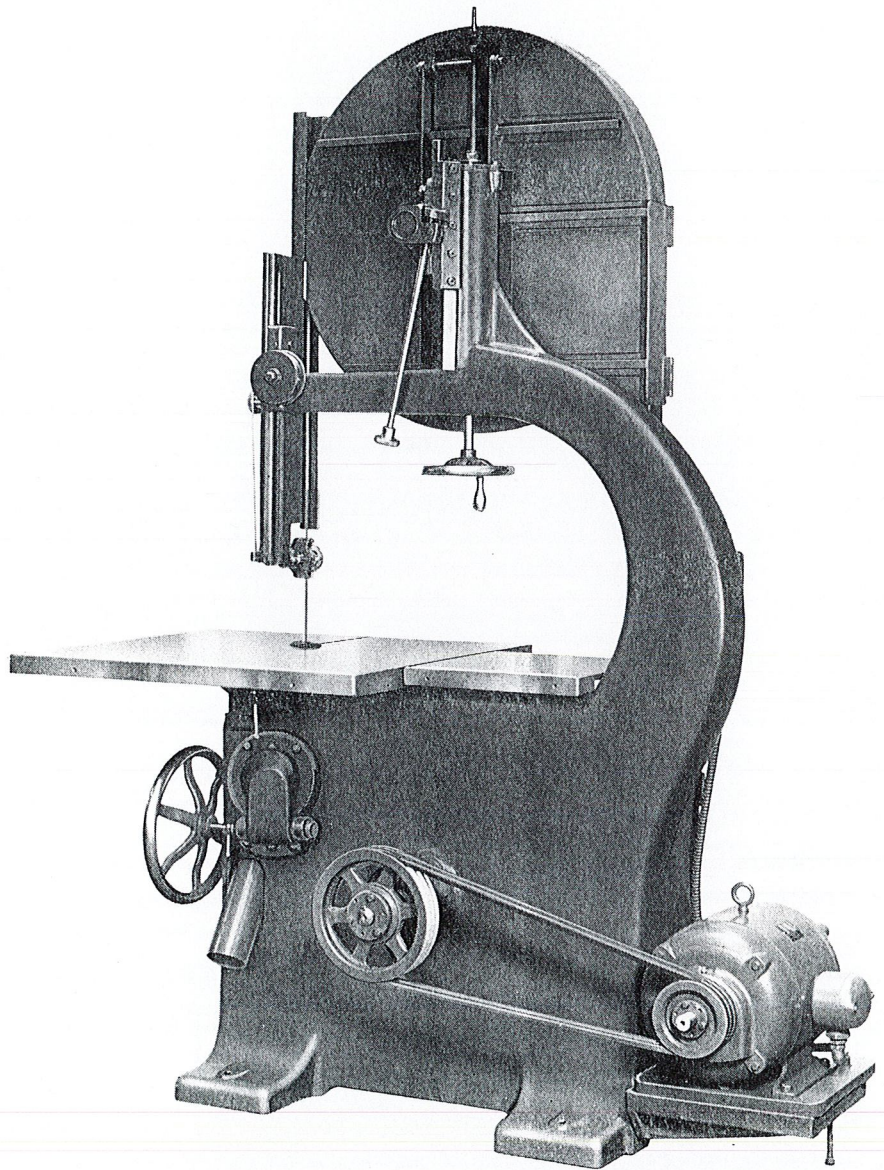
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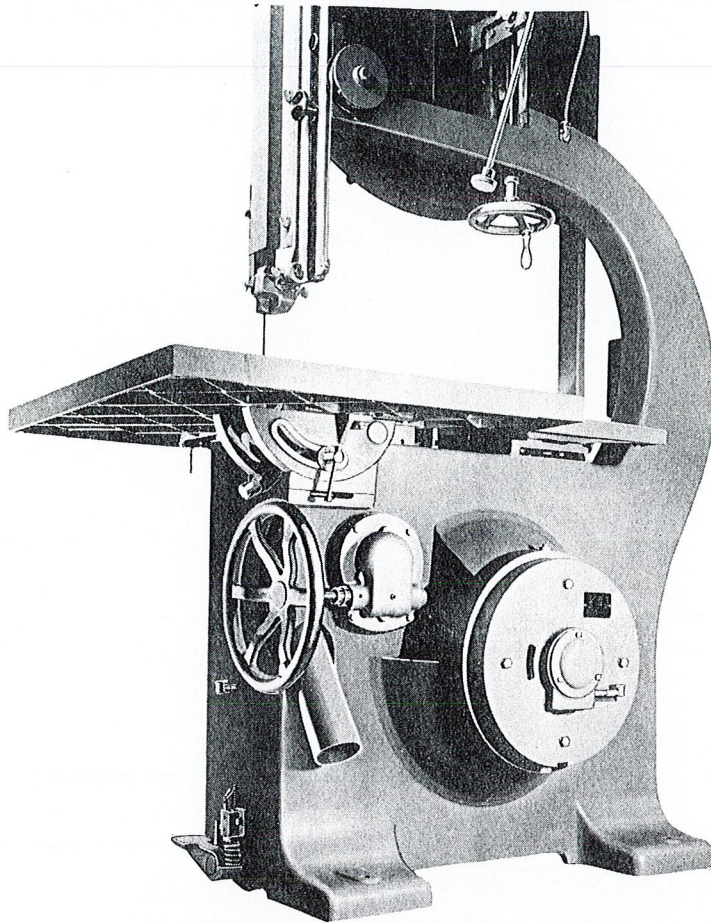


No. 416-A V-belt driven Band Saw. Has 5 h.p. motor for direct current or 25 cycle drives. A metal beltguard is furnished as regular equipment.

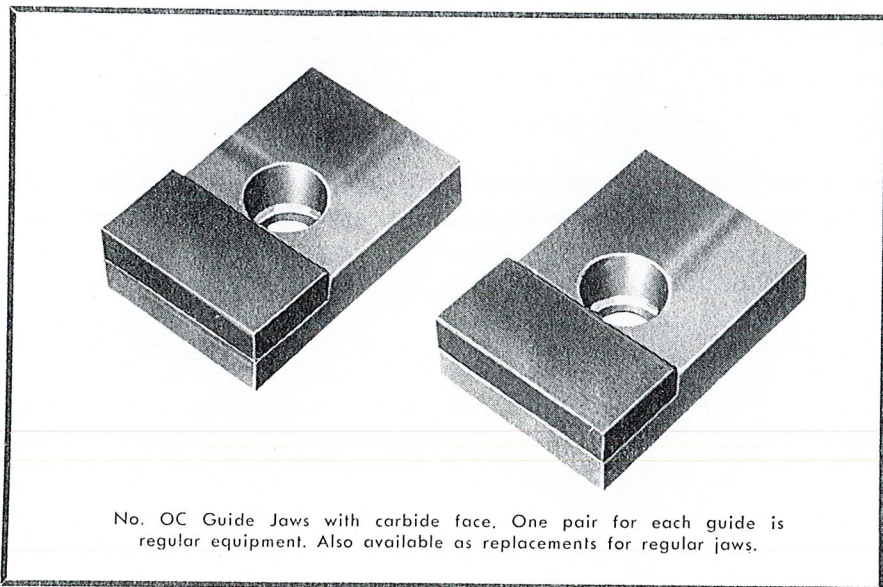
machine. The upper wheel has a 9-inch vertical screw adjustment fitted with helical springs for saw tension. An indicator finger and comparative scale shows tension on saw blade. The upper wheel also has a micrometer screw tilting device for tracking the saw. All adjustments are controlled by hand-wheels conveniently located to operator.

Rolling Table

It is sometimes found necessary and to great advantage to use a rolling table. We can now supply any Oliver 36-inch Band Saw with such a table. The rolling table measures 18 inches wide by 28 inches long, and is made of semi-steel casting, well ribbed and highly machined. The table travels 26 inches on right hand side of the saw. A bracket, mounted to the front of the base, supports a roller track which is 54½ inches long. This roller track contains two machined ways and a stop cast integral with the track. The ways receive ball bearing supported



Notice the excellent engineering of the Oliver No. 416 Band Saw. The heavy table has modern ribbing. The top is ground mirror-smooth. The heavy rockers are 14 inches diameter. Positive clamping. The tilting device is totally enclosed and packed in grease.



No. OC Guide Jaws with carbide face. One pair for each guide is regular equipment. Also available as replacements for regular jaws.

wheels that are mounted to the under side of the table. Self-contained stops keep the table from overrunning. We also supply a stationary rear table, 18 x 24 inches, containing a built-in chute allowing the small scrap pieces to slide away.

Left Hand and Right Hand Band Saws

This combination is ideal for pattern shops or factories having large patterns or work which would normally interfere with the column or neck of the machine, or the upper guard unit. With the combination of

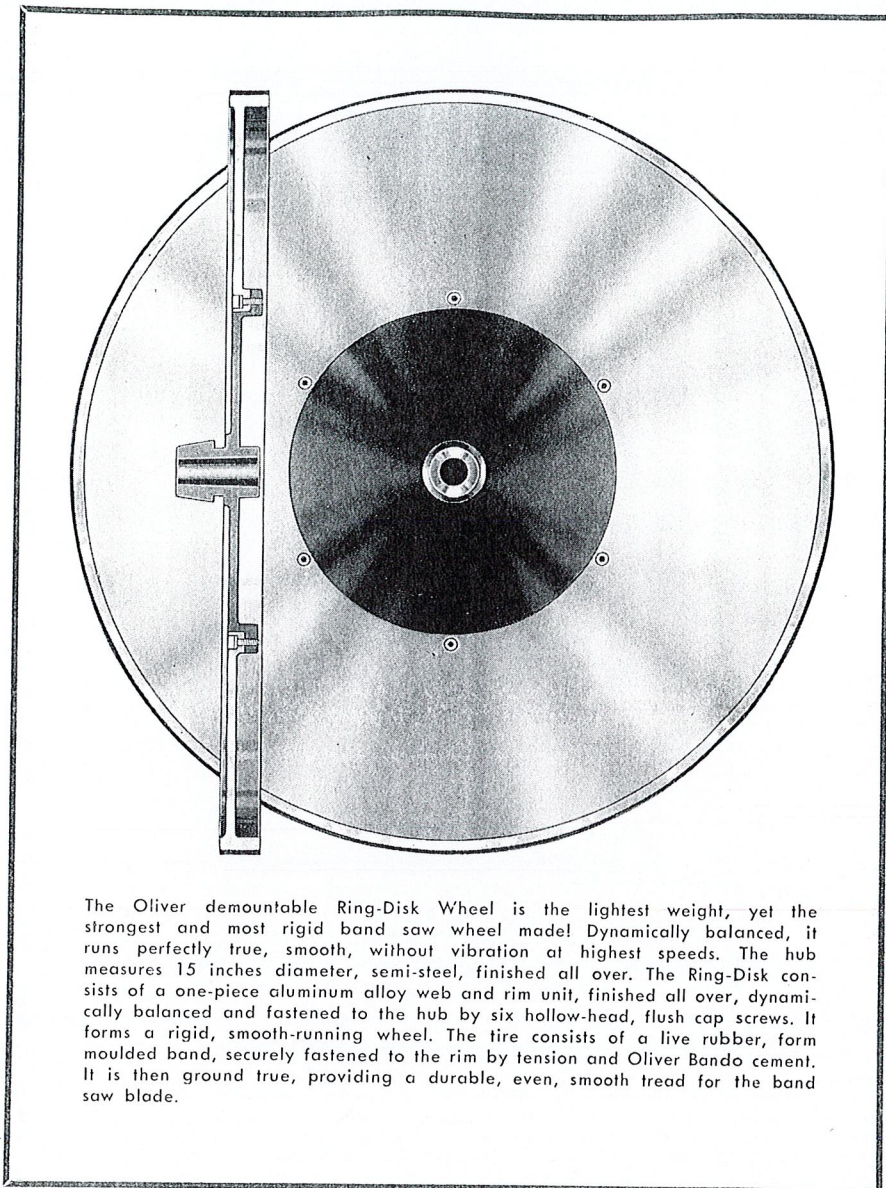
right hand and left hand machines the scope of band sawing is unlimited. Many shops use this combination to advantage. Each machine can be used for ordinary work. Any shop requiring two machines should seriously consider this highly productive combinations of two band saws.

Brakes

Both wheels are provided with positive brakes for greater safety. On high-speed production Band Saws a handy foot lever within easy reach of the operator shuts off the electric current and applies a formed brake shoe on the inside of the rim near the floor. It gently but quickly stops the wheels a few seconds after the power is shut off, saving operator's time while changing saw blades. The brake for the upper wheel is fully automatic. It is located near the top of the wheel at the rear. It is normally kept open by the same mechanism that applies tension to the saw blade, and the instant the pressure is released for any reason (either by the saw breaking or by running off the wheel) the formed brake shoe is automatically applied against the inside of the rim of the upper wheel and promptly stops the wheel. This prevents coiling of the broken blade around the wheel or throwing the broken upper end of the blade against the table. It assures maximum safety to the operator and saves the table.

Guides and Post

The post is a one-piece casting. It carries the upper guide and also serves as a guard for the face of the upper wheel and saw blade directly above the



The Oliver demountable Ring-Disk Wheel is the lightest weight, yet the strongest and most rigid band saw wheel made! Dynamically balanced, it runs perfectly true, smooth, without vibration at highest speeds. The hub measures 15 inches diameter, semi-steel, finished all over. The Ring-Disk consists of a one-piece aluminum alloy web and rim unit, finished all over, dynamically balanced and fastened to the hub by six hollow-head, flush cap screws. It forms a rigid, smooth-running wheel. The tire consists of a live rubber, form moulded band, securely fastened to the rim by tension and Oliver Bando cement. It is then ground true, providing a durable, even, smooth tread for the band saw blade.

guide. The post is counterbalanced by an encased coil spring, and is fitted with a small glass window to assist the operator in tracking the blade properly on the wheel. The guide post is adjustable vertically and can be locked in various positions with a knurled hand knob. The guide wheels are ball bearing, one above and one below the table. The saw runs against the outer edge of a hardened wheel which revolves in enclosed ball bear-

ings. The carbide jaws or lips are adjustable and prevent turning of the saw blade sidewise.

Oliver Carbide Jaws

A newly designed jaw faced with carbide offers much longer jaw life, greater accuracy of work and less danger of blade breakage. The No. OC Carbide Jaws will fit the No. 0 and No. 1 Saw Guides, and are standard equipment on new machines.

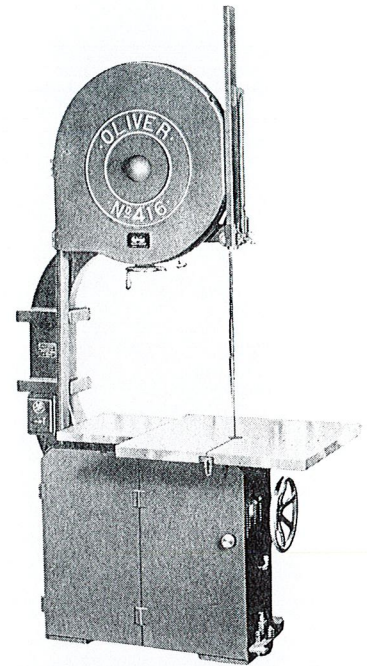
Safety Guards and Doors

The saw blade runs in a fully enclosed metal guard at back of machine, which has a narrow slot for inserting the blade. The saw is guarded at the front by the guide post, which forms a U-shape guard around the saw, and also covers the saw down to the work. The upper wheel is totally enclosed in a steel housing, the front half acting on hinges and swinging out for access to wheel. Lower wheel is also totally enclosed and has a two-piece steel door at front swinging on hinges. Upper and lower doors are locked to frame by spring clasps. This Oliver is the most completely safeguarded Band Saw on the market. All moving parts are covered except

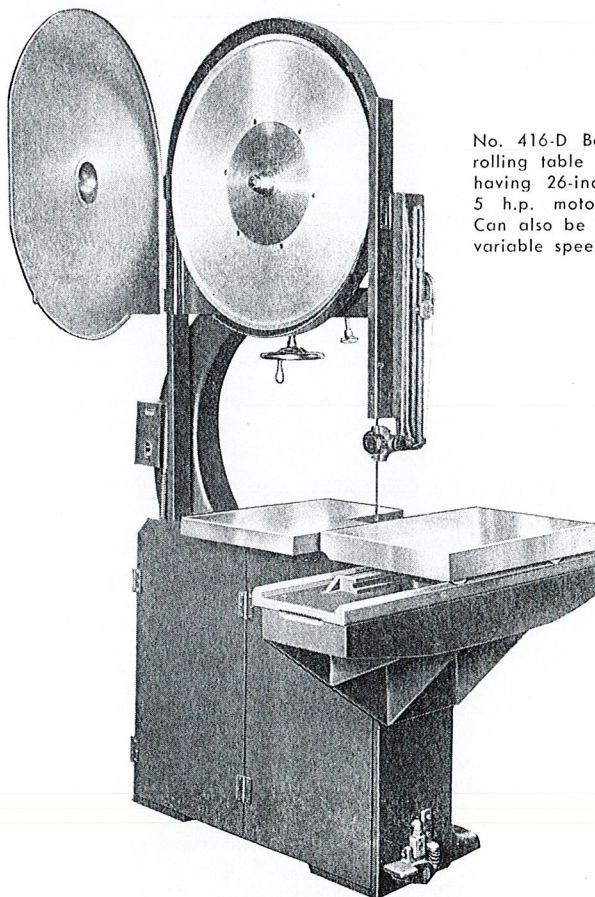
that part of the blade doing the sawing between the guide and table.

Table

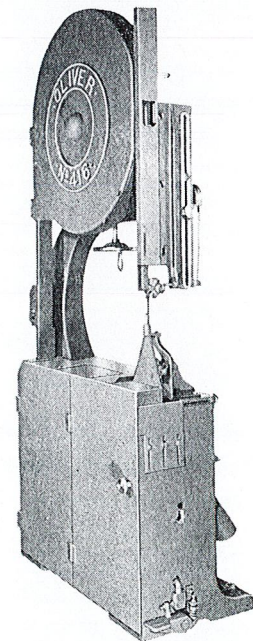
The cast iron table measures 36 x 36 inches, 40 inches high, made exceptionally deep, cross-ribbed for strength and fitted with double rib around the edge to assure rigidity and provide a good hold for form clamps. The table is mounted on two machined rockers and rocker seats having a tongue and groove fitting. Table tilts 45 degrees to the right and 5 degrees to left by a handwheel, worm and worm gear self-locking enclosed tilting device having index and pointer to automatically register the tilt. Auxiliary table, 18½ x 17



Oliver No. 416-DH Band Saw with column height increased 13 inches to give 35 inches under the guide. Also available with 30 inches capacity under the guide.



No. 416-D Band Saw with rolling table 18x28 inches, having 26-inch travel. Has 5 h.p. motor, 720 r.p.m. Can also be furnished with variable speed motor drive.



No. 416-T Trim Saw cuts off outside edges of aluminum stampings. Has 5 h.p., 720 r.p.m. motor with blade speed of 6780 f.p.m. Has throat capacity of 36 inches, and 15 inches from point of cut to top of lower wheel housing.

inches, is finished and securely mounted in alignment with the main table when horizontal.

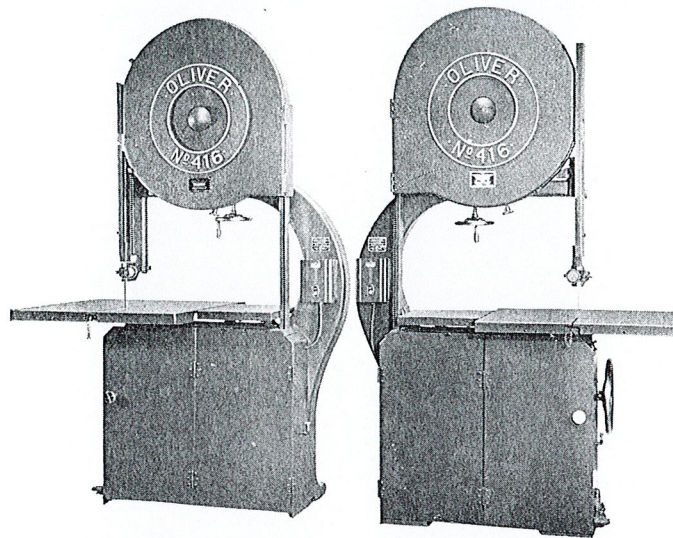
Electrical Control

An enclosed push button switch with overload and under-voltage protection is mounted on the column at the left of the operator and wired to the motor, ready for use.

Saw Tension Unit

Proper tension on the saw blade is accomplished by means of an electric tension device. This unit consists of a tension arm and micro switch which permits operation of the machine only when the proper tension is applied to the blade. This type of unit prevents blade

breakage and damage to wheel tires caused by over-tension.



At the left in the above illustration is a left hand band saw located at the left of a conventional right hand machine.

Floor Space

Maximum floor space: 30 x 30 inches.

Horsepower

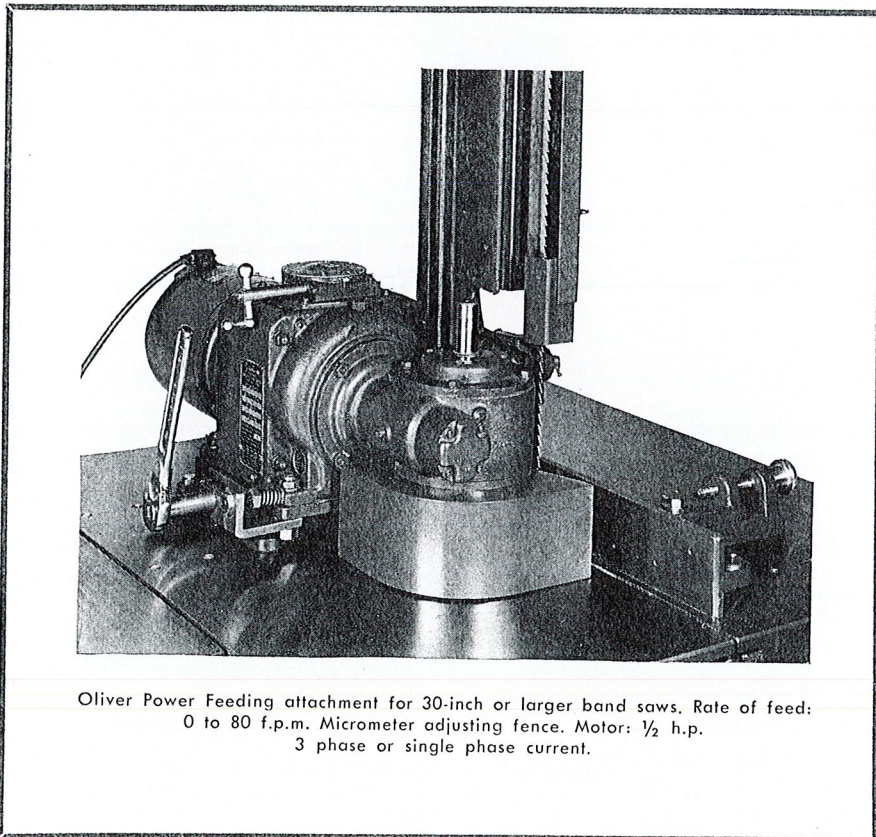
A 5 h.p. motor is regularly furnished.

Equipment

Machine is regularly equipped with one saw blade 1/2 inch wide, saw guards, and No. 138 ripping fence.

Hand Ripping Fence for Band Saws

As it is frequently required that our various sizes of Band Saws be fitted with a hand ripping fence, we have designed one that may be applied to the table of any size Oliver Band Saw machine built. The fence is now furnished as regular equipment on new machines.



Oliver Power Feeding attachment for 30-inch or larger band saws. Rate of feed: 0 to 80 f.p.m. Micrometer adjusting fence. Motor: 1/2 h.p. 3 phase or single phase current.

CODE, WEIGHT, ETC.

Code	Machine Description	Weight in Pounds		Cubic Feet
		Crated	Boxed	
Deludo	No. 416-D — Motor-on-Shaft Band Saw, right hand.....	2500	3200	124
Delude	No. 416-DL — Left Hand 36" Band Saw.....	2500	3200	124
Deluna	No. 416-A — ATTACHED BELTED MOTOR DRIVE, consisting of motor bracket, sliding top, belt guard, mounting of motor, but no motor....

EXTRAS

Demag	No. 139 — Special Spring Roll Device for Hand Resawing.....		25	2
Delup	5 H.P. 600 R.P.M. in place of regular.			
Demaj	3 H.P. 600 R.P.M. in place of regular.			
Delot	Rolling table at right of saw 18" x 28" travels 26".			
Delunb	1½" wide slot in table with No. 2 cross-cut gauge.			



OLIVER MACHINERY COMPANY
Grand Rapids 2, Michigan, U.S.A.

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