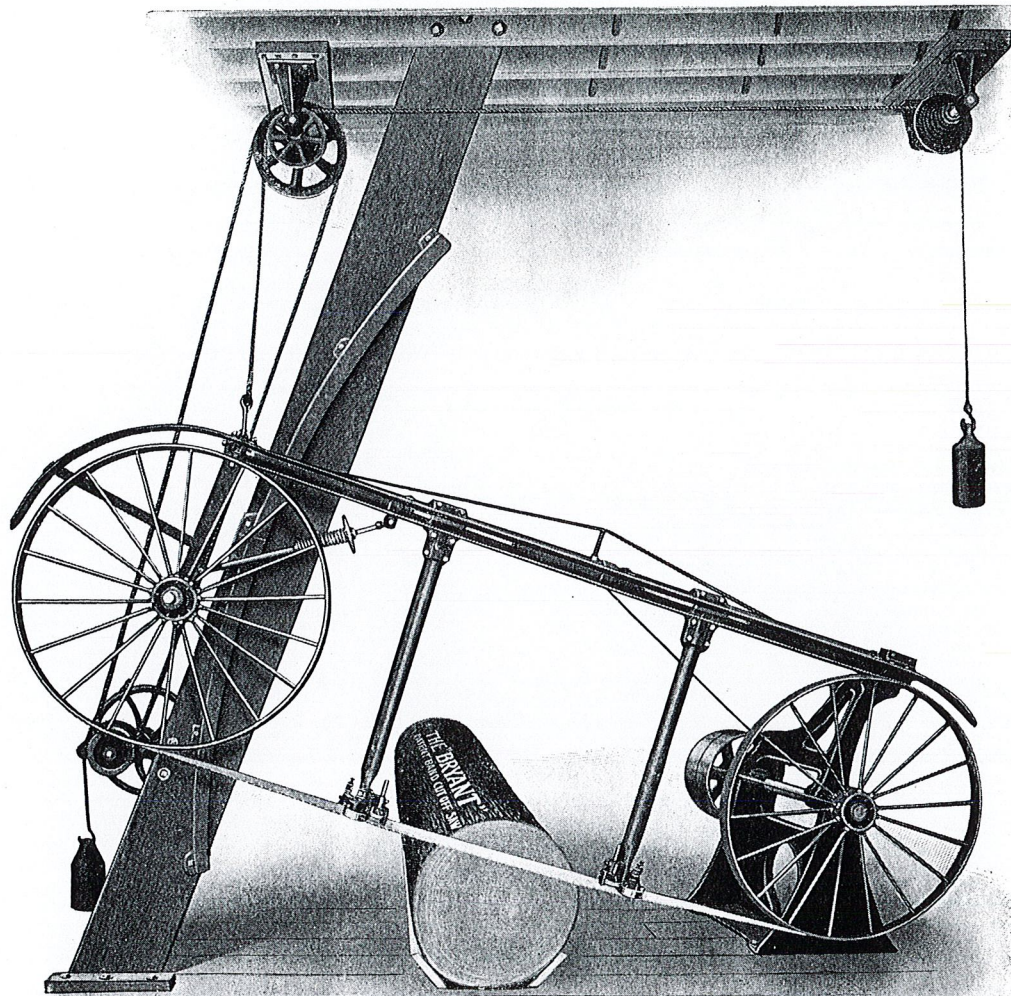




*"Every User
Is a Booster"*

"Oliver" No. 316 Band Cut-Off Saw

PROFITABLE MODERN SAWING



This illustration shows an "Oliver" No. 316 Band Cut-Off Saw Set-Up ready for use on green timber. A battery of these saws will revolutionize your production schedule, step up efficiency and pay real dividends.

MADE IN THREE SIZES
SPEEDY • ACCURATE

- SERVICEABLE •
- ECONOMICAL •

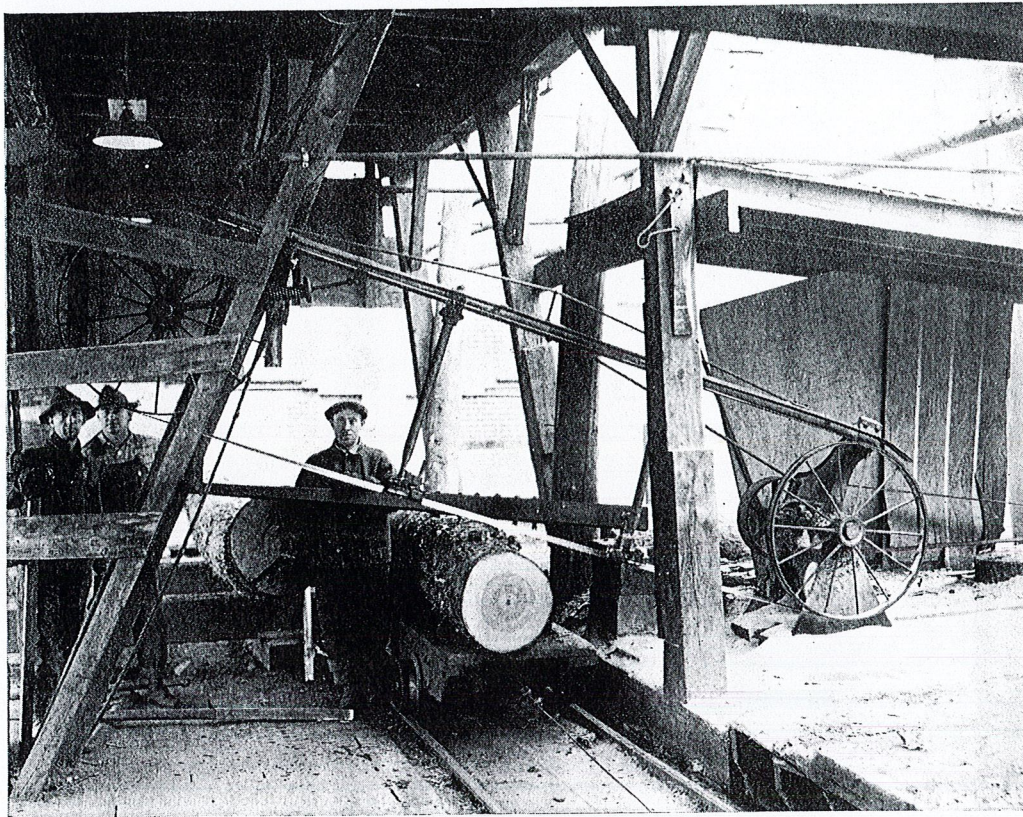
Manufactured by

Oliver Machinery Company

Grand Rapids, Michigan, U. S. A.

BRANCH SALES OFFICES:

New York, Atlanta, Pittsburgh, Cleveland, Detroit, Chicago,
Indianapolis, St. Louis, Minneapolis, Denver, Salt Lake City,
Seattle, Portland, San Francisco, Los Angeles.



Installation of a No. 316 "Oliver" Band Cut-Off Saw at the Roddis Lumber and Veneer Co., Marshfield, Wis. These machines are unsurpassed for quick, snappy sawing, having almost unlimited production possibilities.

Introduction

This "Oliver" No. 316 Band Cut-Off Saw is a remarkably efficient and most satisfactory machine to be used in place of the old fashioned drag saw or circular cut-off saw. It cuts three times faster, requires but a third of the power and reduces waste to a minimum. Excellent results are obtained when using this saw for cutting logs or lumber into short lengths to be used for shingles, staves, heading, tubs, pails, handles, veneer, basket stock, wood pulp and cord wood, etc. A great many other industries have additional uses for this type of cut-off saw which is designed and especially adapted for dimensional cutting of all timber, whether soft or hard wood, up to five feet in diameter and in any lengths. We have received a great many testimonials from enthusiastic purchasers of this machine, some actually claiming this cut-

off saw to do as much work in four hours as was customary to do with old methods in ten hours. Others mentioned the fact one-third to one-half less h. p. was required to operate. Still another satisfied user claims a daily average cut of 30,000 linear feet of logs in 50-inch lengths in a day. Additional features of this band cut-off saw—it requires no special foundation—ordinary floors are satisfactory for attaching—it can also be bolted to a boat or skid when being used in the forests—it is not necessary to hold the log when making the cut—the sawed ends are left clean and smooth—altogether a quiet running, quick acting saw and a demon for work.

Design

All castings are made of semi-steel carefully machined, inspected and tested before being assembled—the two point

suspension of the saw near the cut acts as a track preventing side sway or kinking—a hand wheel quickly adjusts the idler wheel that governs the tension on the saw—a convenient hand wheel operated geared feed requires little effort to raise or lower the saw blade when making the cut—both saw wheels are made of steel, balanced and turned, making a very smooth operating machine—the overhead sheaves are equipped with roller bearings—strong well ribbed castings hold the rotating mechanism firmly in place—this machine is made in three sizes viz: 36-48-60 inches representing the diameter of the wheels the saw runs on as well as the diameter of the lumber it is capable of cutting. This band saw is simple, durable and very dependable. Superior material and workmanship results in smooth and rapid cutting of the saw and adds long life to another of "Oliver's" excellent products.

Base

A heavy semi-steel casting 28 x 45 inches on the 60-inch size, proportionate for other sizes, with wide reinforcing flanges act as an anchorage for the driving end of the machine. Each end of this casting supports a babbitt bearing in which the drive shaft rotates. The yoke, of similar design to the base is also hinged or supported by this base which allows the opposite end of the backbone to swing on the circle guide. This base is easily bolted to any floor, boat or skid and is amply strong to hold the entire machine firmly in place regardless of the nature of the work being done.

Yoke

Is composed of a heavy semi-steel casting having wide flaring reinforcing flanges. The purpose of this yoke is to act as a firm support for one end of the backbone while the other end is being raised and lowered as the saw is cutting the log. The top or upper part of this yoke forms part of a cap with a milled slot which acts as a retainer for a key that drops into another slot machined on the backbone or tubular steel pipe. When this is assembled it prevents any turning or twisting motion of the parts attached to it and as an additional support a heavy brace rod is attached to an angle.

Outer Arm

This is designed for the purpose of supporting the idler wheel. It is made of semi-steel heavily reinforced and one end is clamped by means of a keyed cap held securely by bolts. A hand wheel adjustable spring tension device moves the idler wheel forward or backward until the correct tension is applied to the saw. This arrangement also compensates for different saw lengths which change should breakage occur. A circle guide made of semi-steel and attached to a piece of

upright timber steadies and makes an arc for the outer arm to move in the vertical direction.

Backbone

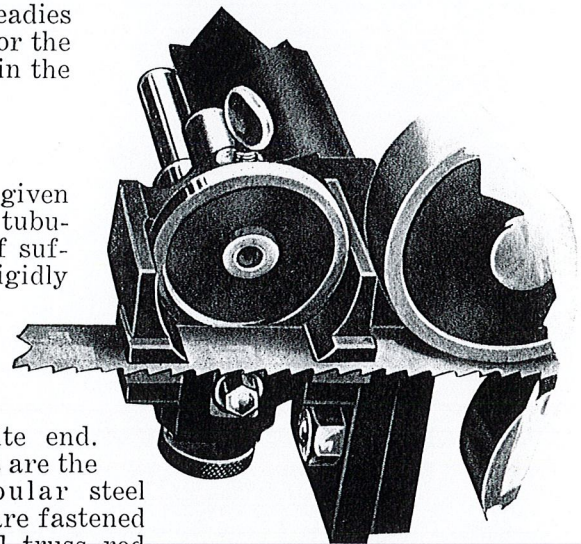
This is the term given to the long piece of tubular steel which is of sufficient diameter to rigidly support the various units. It is attached to the yoke at one end and the outer arm at the opposite end. Between these parts are the drop pipes or tubular steel members to which are fastened the guides. A steel truss rod supported in the middle by a strut acts as additional support and prevents distortion regardless of loads. The drop pipes and members are keyed and bolted to the steel pipe or backbone preventing any twist or tendency to misalignment. The steel supports for holding the guard are also attached to this member.

Drop Pipes

Two tubular steel drop pipes are symmetrically spaced at right angles to the backbone and attached to brackets which are also keyed and bolted to it. To the opposite or lower ends of these two pipes are attached the saw guides. The purpose of the drop pipe is to support the mechanism that guides that part of the saw not supported by the wheels but which actually does the cutting.

Guides

At the lower end of each drop pipe is attached a guide which turns the saw blade in a vertical position as well as makes the blade run true and even when making the cut or idling. Each guide has three steel rollers having vertical and horizontal adjustments with thumb and set screw lock nuts. As the saw enters the guide there is a wheel on each side



A close-up photo of Roller Guides for tracking saw blade.

that turns the saw to make a vertical cut and is held in this position until it leaves the next guide, then it gradually returns to the horizontal plane necessary to make it travel around the wheels. On the side nearest the log are adjustable idler wheels that act as guides and also materially assist in making the saw run quiet and true. These guides are equipped with visible feed oil cups.

Saw Wheels

There are two wheels, one the driving, the other the idler, the latter being equipped with bronze bushings. They are practically unbreakable; the rim and spokes being made of steel and the hubs of semi-steel accurately machined. The steel spokes are screwed into the flange of the hub and held firmly in place by lock nuts, the other end of the spoke being shouldered, is held in the rim. The wheel is then turned and carefully balanced. To the rims of these wheels is cemented a thick live rubber band for the saw to travel on. The driving wheel is keyed to a heavy steel shaft that rotates in Babbitt bearings, the supports of which are integral with the base. To the opposite

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

N O . 3 1 6 ' ' O L I V E R ' ' B A N D C U T - O F F S A W

end of this shaft are attached the tight and loose pulleys to which is belted the power unit. The loose pulley rotates on bronze bushings.

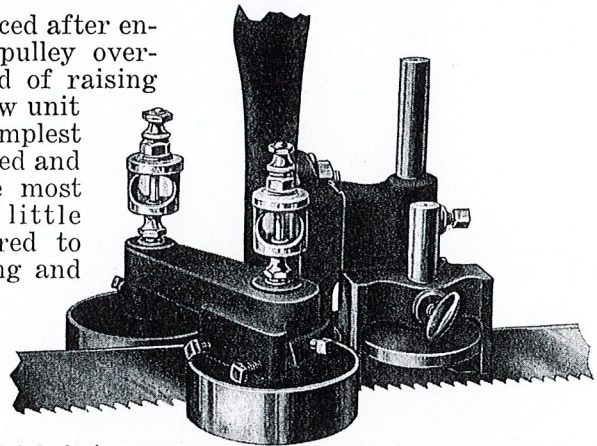
Rope Sheave Pulleys

These pulleys allow a free and easy movement when raising or lowering the saw. One pulley is directly connected to the geared feed mechanism that actually controls the movements of the saw unit. The attaching of a counterweight to a rope on the step groove pulley makes the raising or lowering of the saw a matter of slight pressure on the hand wheel handle.

Gear Feed

Attached to the board or timber supporting the circle guide is the geared feed mechanism. Turning the hand wheel moves a pinion and gear which actuates a grooved pulley, having a counterweight, around

which a rope is placed after engaging a similar pulley overhead. This method of raising or lowering the saw unit is no doubt the simplest that could be devised and has proven to be most practical. Very little pressure is required to operate this raising and lowering mechanism which in reality is the feed determining the speed the saw is to travel through the timber after which it is returned to its original position.



A view of one of the guides as it looks when the machine is ready to saw.

Equipment

The standard equipment regularly supplied with this "Oliver" No. 316 Band Cut-Off Saw is tight and loose pulleys, necessary counterweights, three jack shaft units, clamping arc, geared feed device and one band saw.

Floor Space

Of the three sizes of machines each occupies different floor space which is as follows:

Size of Machine:

- 36" diameter of wheels—44" x 15'-0"
- 48" diameter of wheels—60" x 17'-0"
- 60" diameter of wheels—73" x 21'-0"

SPECIFICATIONS

Size of Machine	Width and Length of Saw	Saw Teeth	Size of Pulleys	Overall	R.P.M. of Wheels	Speed of Saw in F.P.M.
36"	1 1/4" x 33'-0"	4 Points per Inch	18" dia. 4 3/4" face	44" x 15'-0"	370	3500
48"	1 1/2" x 38'-0"	4 Points per Inch	20" dia. 6 1/4" face	60" x 17'-0"	300	3750
60"	2 " x 49'-0"	3 1/2 Points per Inch	24" dia. 8 1/4" face	73" x 21'-0"	250	3925

CODE, WEIGHTS, ETC.

CODE	DESCRIPTION OF MACHINE	WEIGHT IN POUNDS		CUBIC FEET
		CRATED	BOXED	
Difb	No. 316—60 inch Band Cut-Off Saw, complete with T. & L. Pulleys on drive shaft, necessary counterweights, 3 jack shaft units, clamping arc, geared feed device, and one band saw blade, not including rope cable or wooden parts.....	3500	4100	140
Diff	No. 316—48 inch Band Cut-Off Saw, as above except 48" diameter wheels for 48" diameter logs	2200	2700	120
Difg	No. 316—36 inch Band Cut-Off Saw, as above except 36" diameter wheels for 36" diameter logs	1300	1900	100

MOTOR DRIVE EXTRA

Tex Rope Drive, with base and sheaves, but not motor.