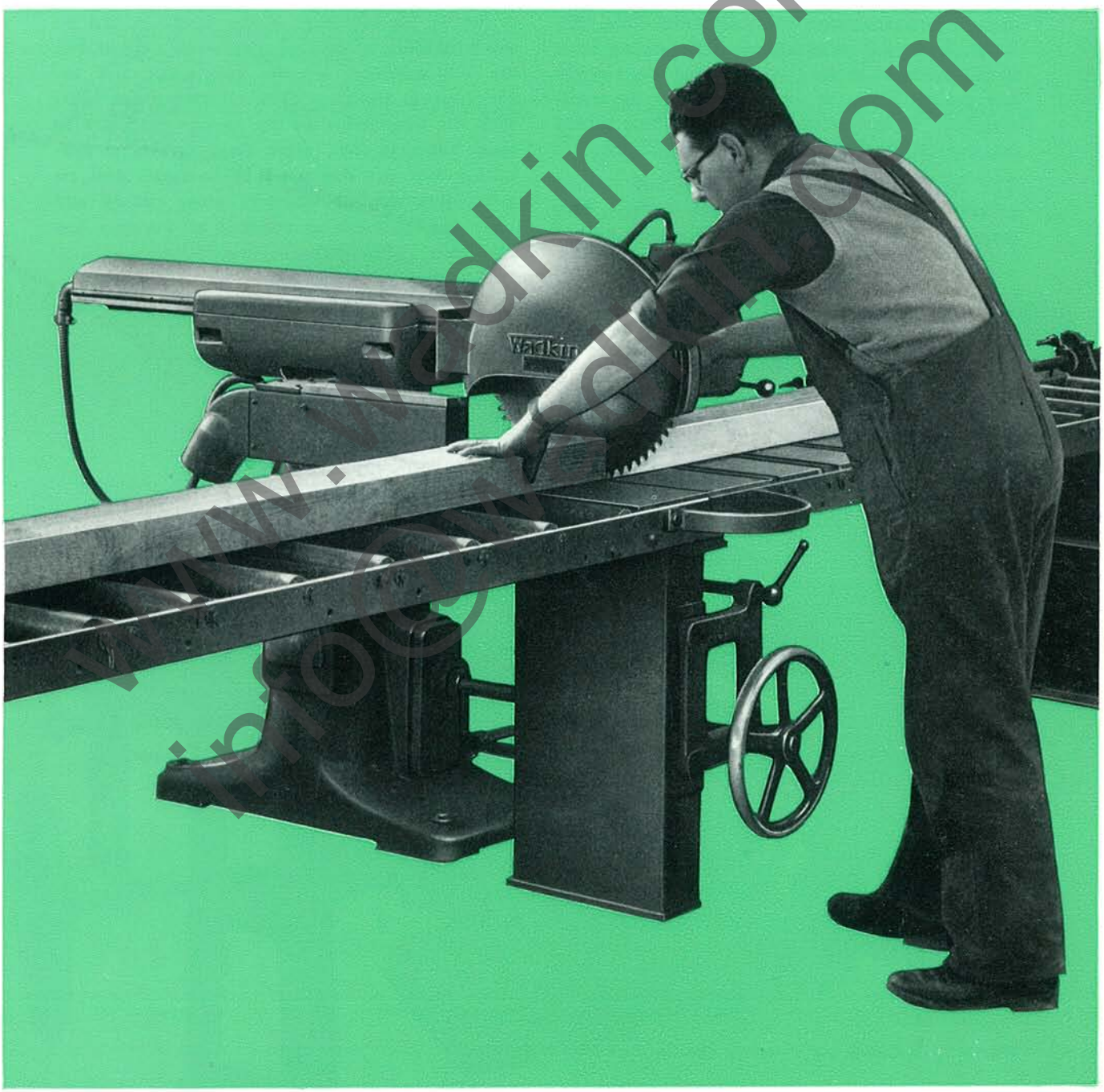
Wadkin

Cross Cutting and Trenching Machine: C.C.

British Standard Classification 12 . 131 . 122



Wadkin

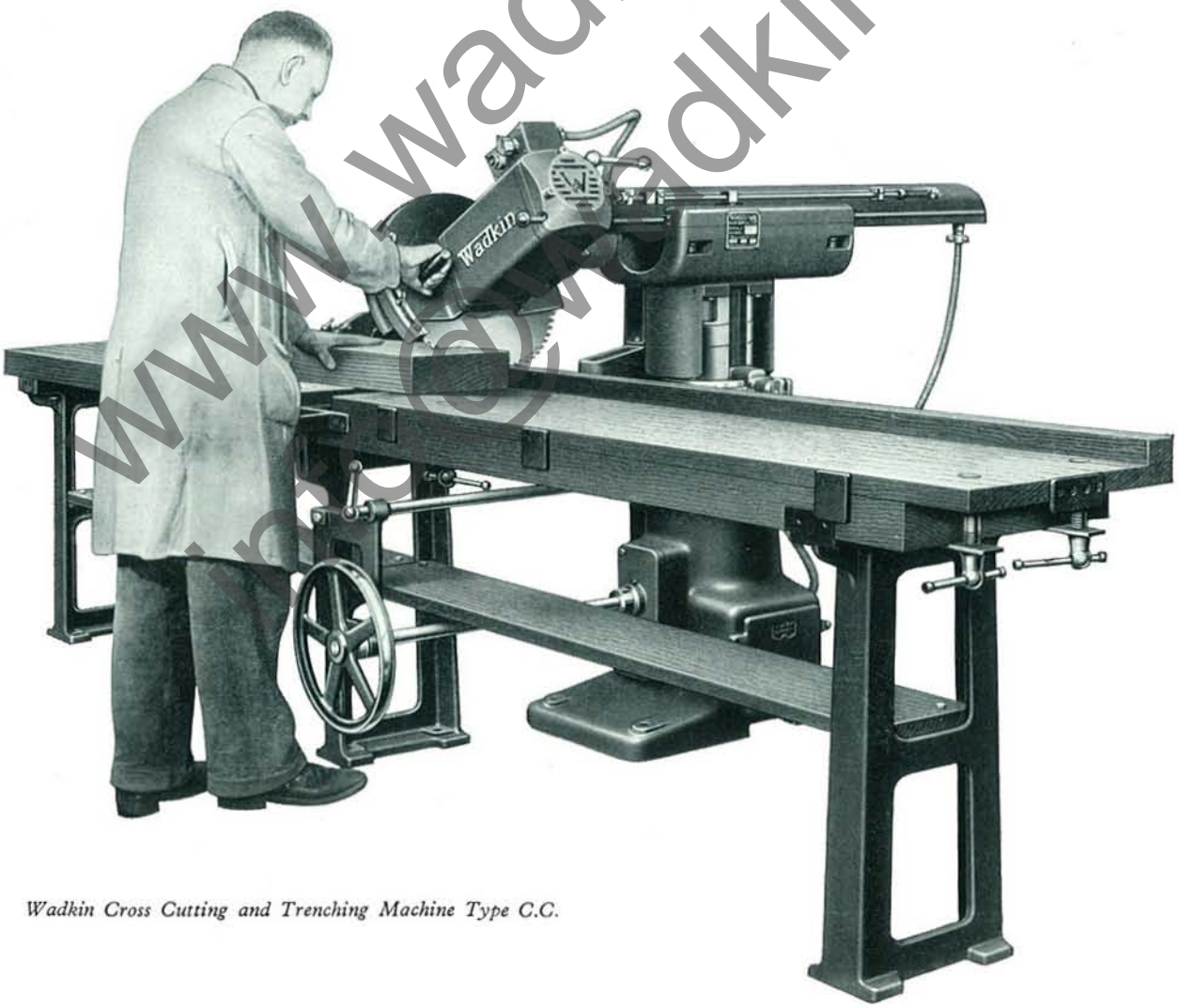
Cross Cutting and Trenching Machine C.C.

Wadkin Cross Cutting and Trenching machines have become recognised as the leading machines of their type, and the standard of comparison for all other similar machines.

This reputation is the result of a combination of features and advantages which are to be found only in the patented Wadkin design. Chief among these is the patented method of obtaining the straight line cutting action, in such a way that the initial accuracy of the movement can be maintained indefinitely and fast, easy operation ensured.

The Saw Carriage is carried by four ball bearing rollers running on circular steel tracks. This arrangement is ideal because of the smoothness of the movement—its rigidity, and the fact that it is impossible for the forward movement of the carriage to deviate from a dead straight line in relation to the fence, thus guaranteeing accuracy of cutting throughout the entire life of the machine.

A further big advantage of the design is, that no overhead fixing of any kind is required. All models are self-contained, simple, convenient and inexpensive to install. These characteristics allied with the adaptability of the various machines to many different jobs, make them invaluable production tools in the shop, out in the timber yard, on a building site, or wherever cross cutting and trenching operations are required on a speedy, low cost basis.



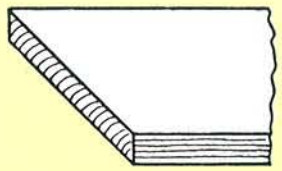
Wadkin Cross Cutting and Trenching Machine Type C.C.

Wadkin Cross Cutting and Trenching Machine, C.C.

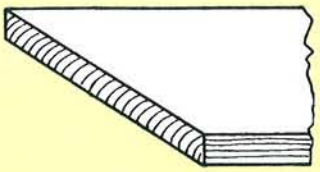
Features

1. *Saw carriage rises, falls and swivels 45 degrees either way. In addition saw spindle cants 90 degrees.*
2. *All principal angles on swivelling and canting movements are located by spring plunger pin.*
3. *Patented design of sliding saw carriage ensures straight line cutting indefinitely.*
4. *The saw carriage moves on ball bearing rollers for easy movement.*
5. *Pneumatic buffer cushions return stroke of saw carriage.*
6. *Rising and falling movement is on heavy circular ram for absolute rigidity.*
7. *All rising and falling mechanism is totally enclosed for easy operation.*
8. *Control gear is built into main frame to prevent damage from falling offcuts or dust.*

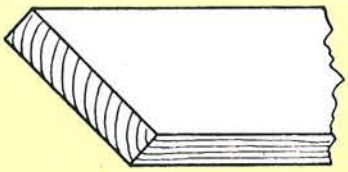
Work done on Wadkin Cross Cutting and Trenching Machines



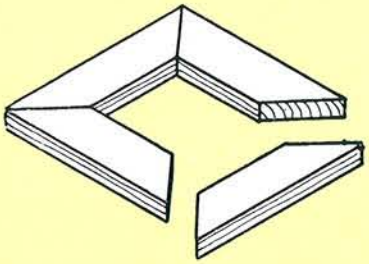
STRAIGHT CUTTING



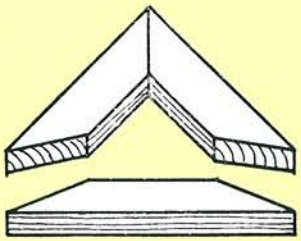
ANGULAR CUTTING



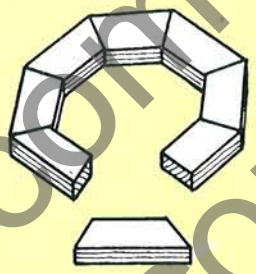
OBLIQUE ANGULAR
BEVEL CUTTING



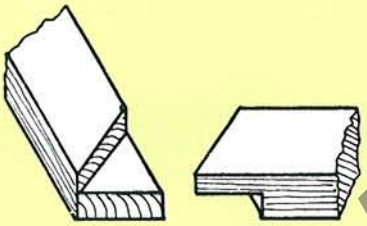
SECTIONS FOR MITRES



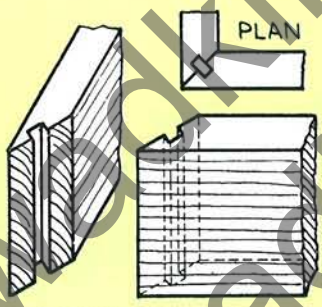
SECTIONS FOR TRIANGLES



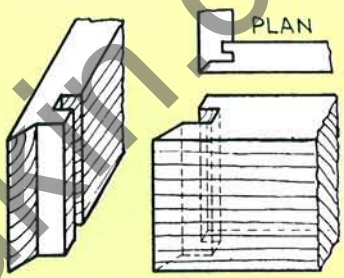
SECTIONS FOR OCTAGONS, ETC.



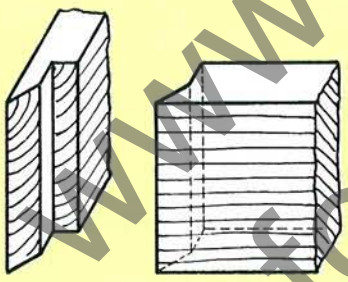
LAPPED MITRE JOINT



TONGUED MITRE JOINT



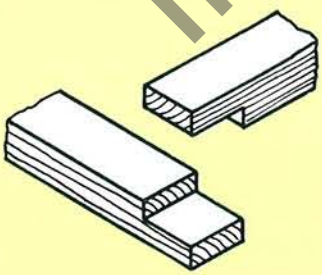
GROOVED & TONGUED
MITRE JOINT



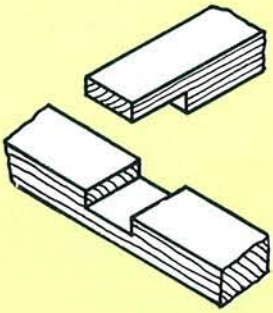
MITRED & REBATED JOINT

SEGMENT CUTTING

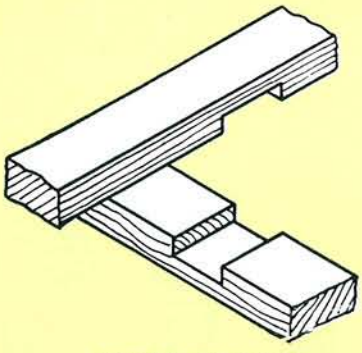
HALF LAPPING FOR
BUILT-UP WORK



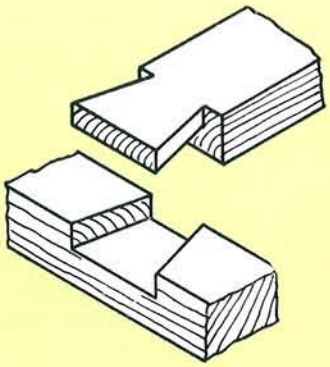
LAPPED JOINT



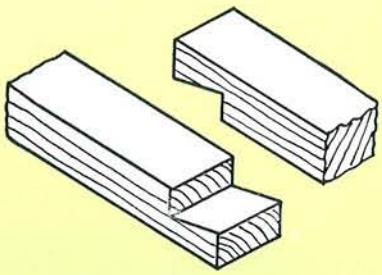
TEE HALVING



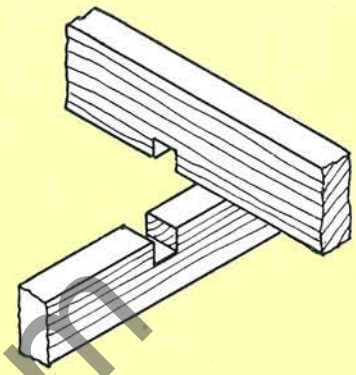
CROSS HALVING



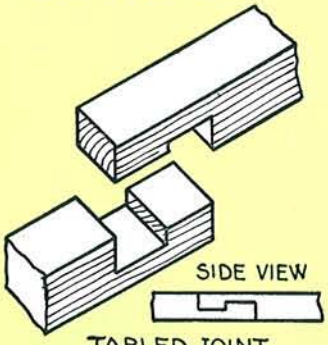
DOVETAIL HALVING



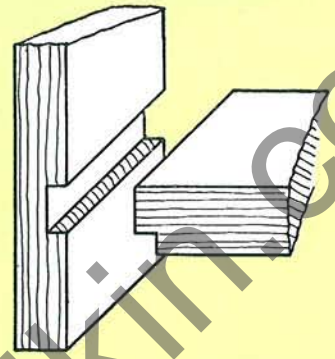
BEVELLED HALVING



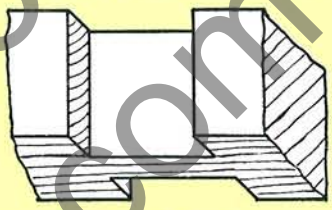
DOUBLE & SINGLE NOTCHING



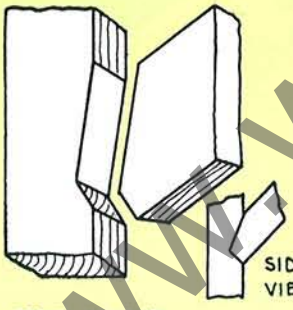
TABLED JOINT



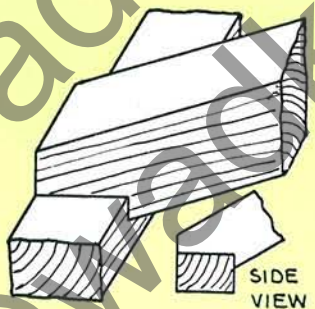
SHOULDERED HOUSING



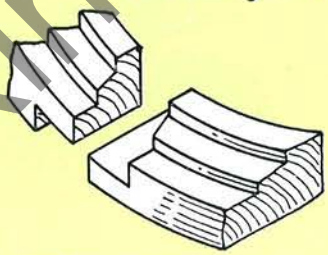
GROOVING FOR DOUBLE LAPPING JOINT



TOE JOINT

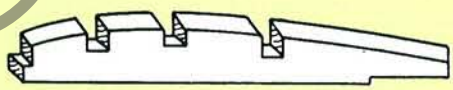


BIRDSMOUTH

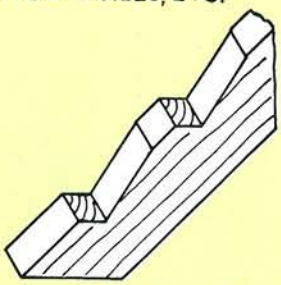


LAPPED JOINT FOR CURVED WINDOW SILLS, ETC.

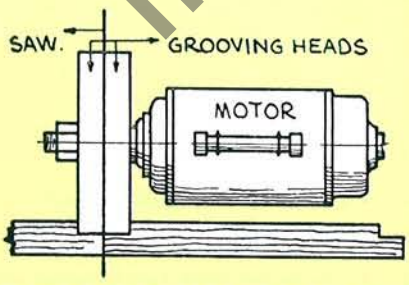
SHAPED NOTCHING FOR DECK CHAIRS, ETC.



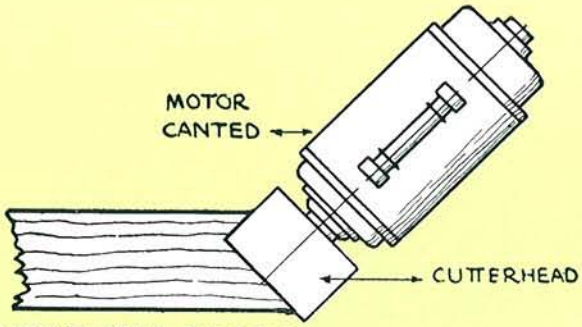
TRENCHING BOTTOM SIDES FOR MOTOR BODIES, ETC.



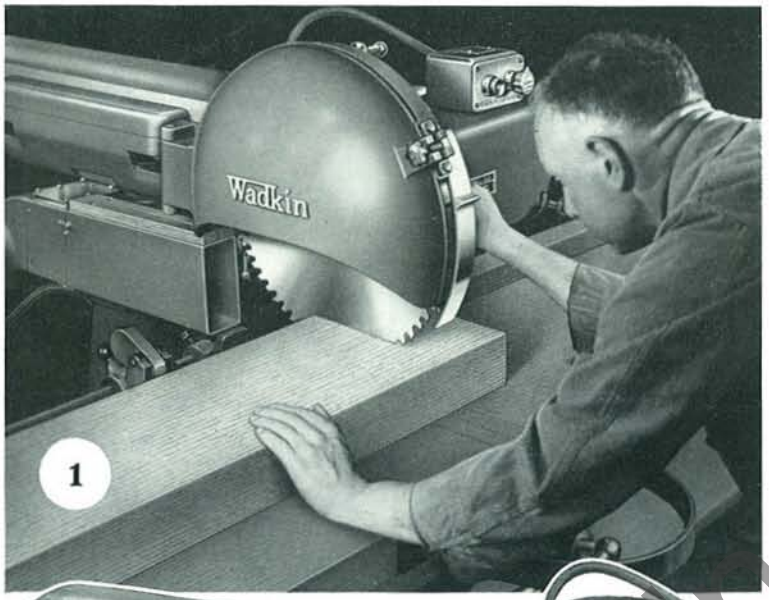
NOTCHING



CROSS CUTTING & HALF LAPPING TWO ENDS AT ONE OPERATION



HEAVY SPAR BIRDSMOUTH.



A machine that will do such a wide variety of work as a Wadkin Cross Cutting and Trenching Machine need never be idle in any wood-working shop.

The illustrations on this and on the preceding two pages, demonstrate the versatility of the machine and indicate some of the varied classes of work that can be done with both speed and accuracy.

Showing the various movements of the C.C. Machines.

Fig. 1. Straight cutting with saw carriage at right angles to table.

Fig. 2. Saw carriage swivels up to 45° for angular cutting. The principal angles are located by spring plunger for quick and accurate setting.

Fig. 3. Saw canted for angular cutting. Angles on canting motion are also positively located by plunger. This canting movement in conjunction with the swivelling carriage gives compound angular cutting.

Specification

The Main Frame

The main frame is machined to receive the circular slide carrying the horizontal saw frame.

The Sliding Saw Frame

The sliding saw frame is raised and lowered by large handwheel placed at the front of the machine. This motion is operated by machine-cut steel gears and screw, which are enclosed inside the column. The weight is taken by a ball thrust washer.

The slide can be locked where desired. The sliding saw frame may be swivelled for angular cutting, which, together with the canting motion to the saw spindle, enables compound cutting to be done. A plunger pin registers the more important angles, and a degrees scale is provided.

The Saw Carriage

The saw carriage moves on four ball bearing rollers on circular steel tracks. Not only does this give a smooth easy movement, but the Wadkin method of mounting the rollers prevents side play in the movement and guarantees that the saw carriage moves forward in a dead straight line.

The saw carriage is returned after a cutting stroke by a long spiral spring, and is received at the end of the stroke by a pneumatic buffer, which effectively cushions the rebound of the carriage. Adjustable stops on the saw carriage can be quickly set to limit the length of stroke if desired.

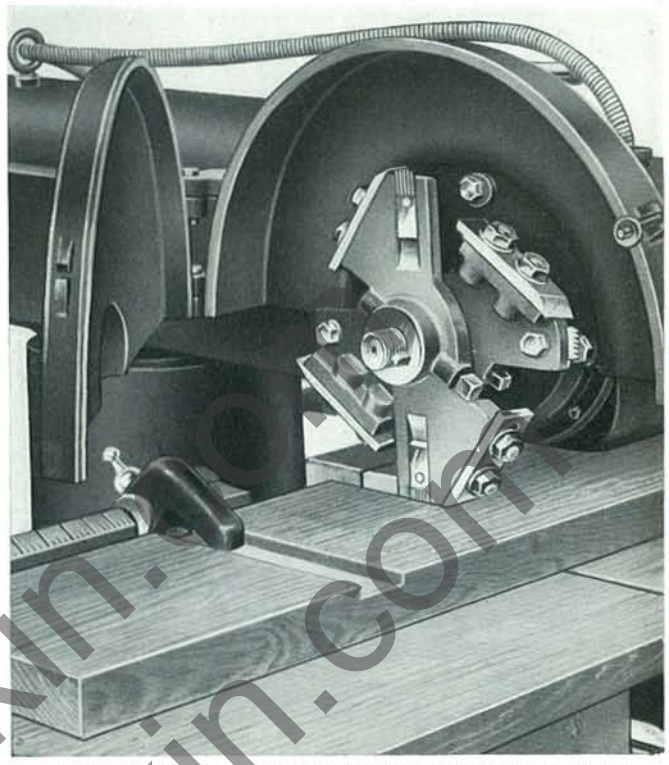
The Motor

The motor is of the totally enclosed fan-cooled type. It can be supplied for practically any alternating or direct current supply.

The motor is mounted on a trunnion so that it can be canted to any angle from the horizontal to the vertical. A plunger pin registers the more important angles, a degrees scale being also provided. A locking handle securely locks it in any intermediate position.

The Motor Spindle

The motor spindle is mounted in heavy ball bearings and is made extra long for taking grooving heads or cutterblocks.



Saw can be taken off and this expanding grooving head substituted in two or three minutes. Head is quickly set to cut any required width within its capacity.

Shows the machine canted for such work as birdsmouthing in roof spars.

Specification (Contd.)

The Spindle Brake

An efficient hand-operated brake is fitted to the saw spindle, for quickly bringing the saw or cutterhead to rest after use.

The Control Gear

The control gear is by leading British manufacturers. In the case of alternating current supply, an automatic start and stop push button control is mounted conveniently to the operator's hand, and the contactor gear built into the base of the main column of the machine.

The Saw Table

The saw table may be of wood and is easily made by the customer in his own shop to suit his particular requirements. In this case a working drawing of the table is supplied by us. We can supply a set of metal legs, as illustrated on page 2. We strongly advise customers to order these with the machine, as they ensure rigidity of the table.

Alternatively, if desired, an all-metal table as shown on page 11 can be supplied.

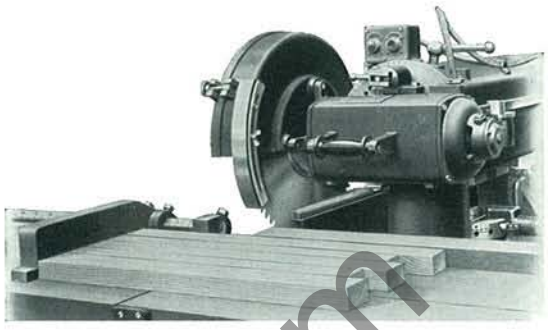
An Automatic Stop Bar

An automatic stop bar can be supplied, which dispenses entirely with the necessity of marking out, and for repetition work is a great labour-saver. This stop device is fixed on the back edge of the saw table, as illustrated on page 11. The stop bar is supplied with three stops. Additional stops can be supplied if required.

The stop bar should be mounted on the left of the saw as illustrated on page 11 in order to obtain full advantage of the machine, and to allow the saw to swivel to the right for angular cutting.

An Adjustable Fence

An adjustable fence as seen in the illustration above may also be supplied for use when several pieces of timber are required to be cut side by side at one operation. This fence is designed to drop on to the stop bar, and it may be attached or detached in a few seconds.



Showing Adjustable Fence for multiple cutting.

The Saw Guard

The saw guard is arranged to give maximum protection to the operator and is hinged for changing and sharpening saws.

The Saws

The saws used on this machine have special characteristics (as detailed on page 10), and it is therefore advisable to order these from us.

The Sawdust Hood

The sawdust hood is fitted to the vertical slide frame and is provided with a nozzle for connecting up to a sawdust system.

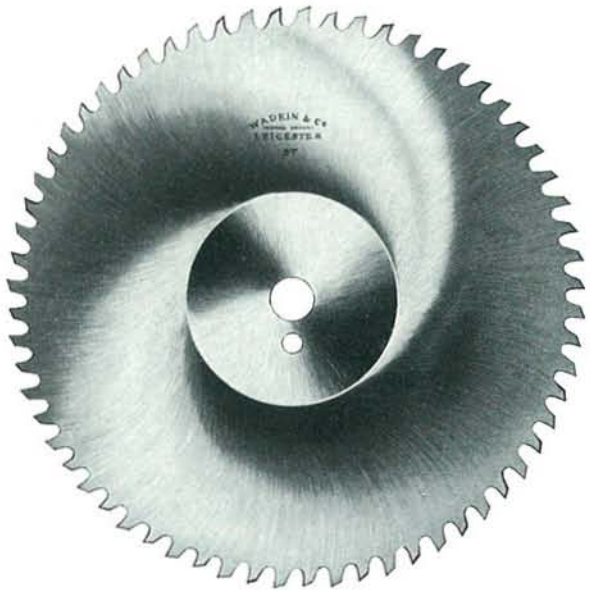
The Wadkin method of mounting the sliding carriage on four ball bearing rollers and circular tracks ensures easy movement and precision accuracy. Two of the four rollers are on eccentric pins quickly adjustable to take up slackness that may develop with wear. NOTE: *Cover has been removed to show rollers.*

Principal Dimensions and Capacities

	Model C.C.1	Model C.C.2
Standard diameter of saw	18″ (450 mm.)	18″ (450 mm.)
Will cut off	21″ ×5½″ deep (530×140 mm.)	27″ ×5½″ deep (685×140 mm.)
Will cut off	23″ ×5″ deep (585×125 mm.)	29″ ×5″ deep (735×125 mm.)
Will cut off	25″ ×4″ deep (635×100 mm.)	31″ ×4″ deep (785×100 mm.)
Will cut off	26″ ×3″ deep (660× 75 mm.)	32″ ×3″ deep (810× 75 mm.)
Will cut off	26½″×2″ deep (675× 50 mm.)	32½″×2″ deep (825× 50 mm.)
Will cut off	27½″×1″ deep (700× 25 mm.)	33″ ×1″ deep (855× 25 mm.)
Will straight cut off when saw is canted 45° up to	21″ ×2″ deep (530× 50 mm.)	27″ ×2″ deep (685× 50 mm.)
Will straight cut off when saw is canted 30° up to	21″ ×3½″ deep (530× 90 mm.)	27″ ×3½″ deep (685× 90 mm.)
Will cut off when saw is swivelled 45° up to	13¼″×5½″ deep (335×140 mm.)	17½″×5½″ deep (440×140 mm.)
Will cut off when saw is swivelled 45° up to	14½″×5″ deep (370×125 mm.)	19″ ×5″ deep (480×125 mm.)
Will cut off when saw is swivelled 45° up to	16″ ×4″ deep (400×100 mm.)	20¼″×4″ deep (515×100 mm.)
Will cut off when saw is swivelled 45° up to	16¾″×3″ deep (425× 75 mm.)	21″ ×3″ deep (530× 75 mm.)
Will cut off when saw is swivelled 45° up to	17¼″×2″ deep (435× 50 mm.)	21½″×2″ deep (545× 50 mm.)
Will cut off when saw is swivelled 45° up to	17¾″×1″ deep (450× 25 mm.)	21¾″×1″ deep (550× 25 mm.)
Will straight groove up to 2⅜″ (60 mm.) deep	in material 20″ (510 mm.)	in material 25¾″ (655 mm.)
Will groove when carriage is swivelled to 45° up to 2⅜″ (60 mm.) deep	in material 12½″ (315 mm.)	in material 16¾″ (425 mm.)
Maximum rise and fall of saw	9½″ (240 mm.)	9½″ (240 mm.)
Speed of saw spindle in r.p.m. for 50 cycles electric supply	3000	3000
	(Motor can be supplied for practically any Alternating or Direct Current supply.)	
Diameter of saw spindle for saws	1¼″ (31·7 mm.)	1¼″ (31·7 mm.)
Horse power of motor	5	5
Overall length of each section of all-metal table to cut off up to 8′ 0″ (2·4 m.) long using stop bar	8′ 5″ (2·5 m.)	8′ 5″ (2·5 m.)
Machine only		
Net weight in cwts.	10¼ (1150 lbs.) (520 Kilos)	11 (1230 lbs.) (560 Kilos)
Gross weight in cwts.	13 (1450 lbs.) (660 Kilos)	13¾ (1600 lbs.) (700 Kilos)
Shipping dimensions in cubic feet	62½ (1·77 cu.met.)	62½ (1·77 cu.met.)
Machine with Metal Legs for Table		
Net weight in cwts.	12¾ (1430 lbs.) (650 Kilos)	13½ (1510 lbs.) (685 Kilos)
Gross weight in cwts.	15½ (1740 lbs.) (790 Kilos)	16¼ (1820 lbs.) (825 Kilos)
Shipping dimensions in cubic feet	62½ (1·77 cu.met.)	62½ (1·77 cu.met.)
With Metal Table		
Net weight in cwts.	17¼ (1930 lbs.) (875 Kilos)	19 (2130 lbs.) (965 Kilos)
Gross weight in cwts.	22½ (2520 lbs.) (1140 Kilos)	24¼ (2720 lbs.) (1230 Kilos)
Shipping dimensions in cubic feet	87½ (2·47 cu.met.)	94½ (2·68 cu.met.)
Truck Model		
Net weight in cwts.	15½ (1740 lbs.) (785 Kilos)	(not available)
Gross weight in cwts.	20½ (2300 lbs.) (1040 Kilos)	(not available)
Shipping dimensions in cubic feet	104 (2·94 cu.met.)	(not available)

Details included with each machine

One 5 h.p. motor, complete with armoured cable to starter.
One pair of saw collars, hexagon nut and key.
One lubricating pump and sample tin of lubricant for ball bearings.
One starter.
Hinged saw guard.
Dust-collecting hood.
One set of spanners.



Saws

The saws used on Wadkin Cross Cutting and Trenching Machines run at a high peripheral speed, and it is therefore essential that they are correctly balanced and tensioned.

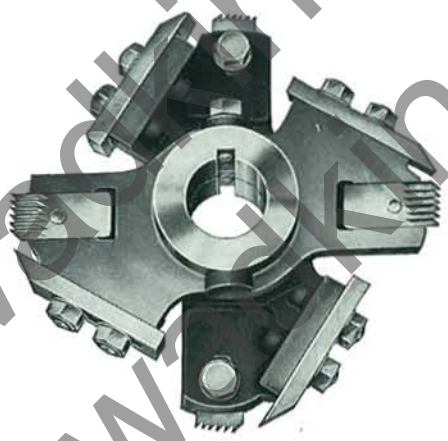
The saws we recommend and supply are manufactured specially for these machines from a high-grade alloy steel, are of the most suitable gauge for utility work, and correctly balanced and tensioned for high-speed running. The special shape and pitch of teeth has been developed to obtain clean cutting.

For a general purpose saw we recommend our 18" W.X.T. Flat Cross Cut Saw. For work demanding high-grade finish, our 18" W.X.T. Hollow Ground Cross Cut Saw is recommended.

It is advisable that all saws used on these machines are obtained from us. No responsibility can be accepted when any other saws are used.

Expanding Grooving Heads, J.P. 468, 460, 464

The Head illustrated is accurately balanced and can be adjusted to cut grooves of any intermediate width within its range, and therefore a tight or loose joint can be made in the work. Each half is held in position on the shaft by a key and set screws.



J.P. 468; 460; 464

J.P. 215

The Heads are made in the following sizes:

J.P.468. 11" diameter cutting circle. For grooves $\frac{3}{8}$" to $\frac{11}{16}$" wide up to $\frac{9}{16}$" deep
J.P.460. 11" " " " " $\frac{3}{4}$" to $1\frac{7}{16}$" " $1\frac{5}{8}$" "
J.P.464. 11" " " " " $1\frac{3}{8}$" to $2\frac{1}{2}$" " $1\frac{5}{8}$" "

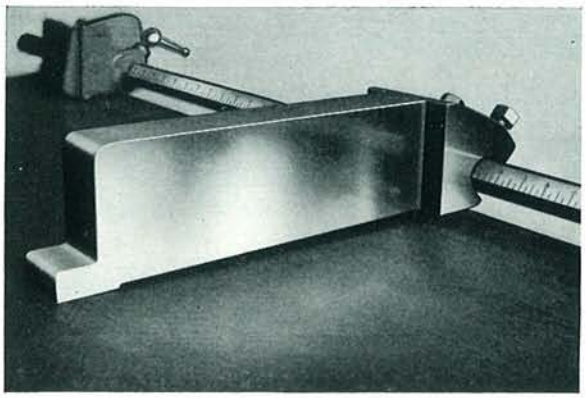
Grooving Head, J.P. 215

This Head is made up of two discs and is adjustable on a screwed bush to take cutters of varying widths. It is locked on the spindle by the spindle nut. The cutting circle is 11" diameter and will cut grooves $\frac{1}{2}$" to 2" wide by using varying width cutters. This Head will groove to a maximum depth of $1\frac{1}{4}$".

Half Lapping and Bevelling Head, J.P. 502

This Head is supplied for use where a wide cut is required at the end of the timber as in half lapping. It can also be used for heavy birdsmouthing, as illustrated in the diagram on page 5. The Head has a cutting circle of $6\frac{1}{2}$" diameter and the cutters have a maximum width of $4\frac{1}{2}$". A guard is supplied with this head.

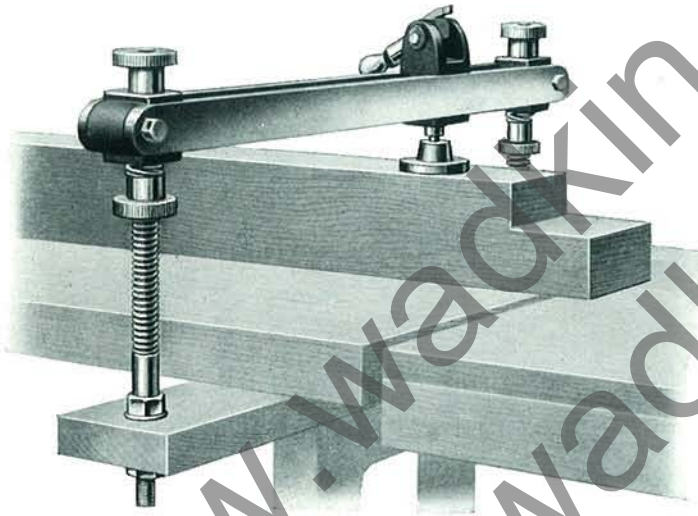
J.P. 502



Adjustable Fence for Multiple Cutting

This fence is designed to drop on to the graduated stop bar of the table, and is for use when several pieces of timber are to be cut at one operation. It is quickly set to give any required size and is attached or detached in a few seconds. Illustration showing this fence in use is on page 8.

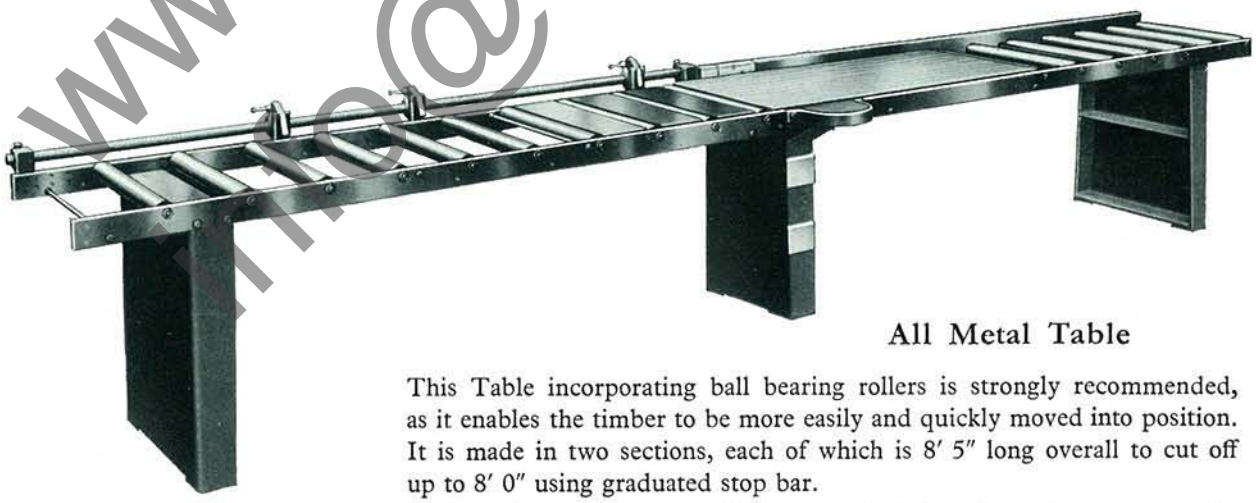
When supplied for use on a 22½″ wide metal table the fence extends the full width and can be locked at both front and back.



Lever Cramps

This quick-acting lever cramp is very useful when taking heavy cuts such as half lapping and birdsmouthing. It is quickly adjustable to suit material up to 8″ in thickness. The eccentric lever is movable along the bars to suit varying widths of timber.

Illustration shows cramp for wood tables. A similar cramp can be supplied for the all metal table.



All Metal Table

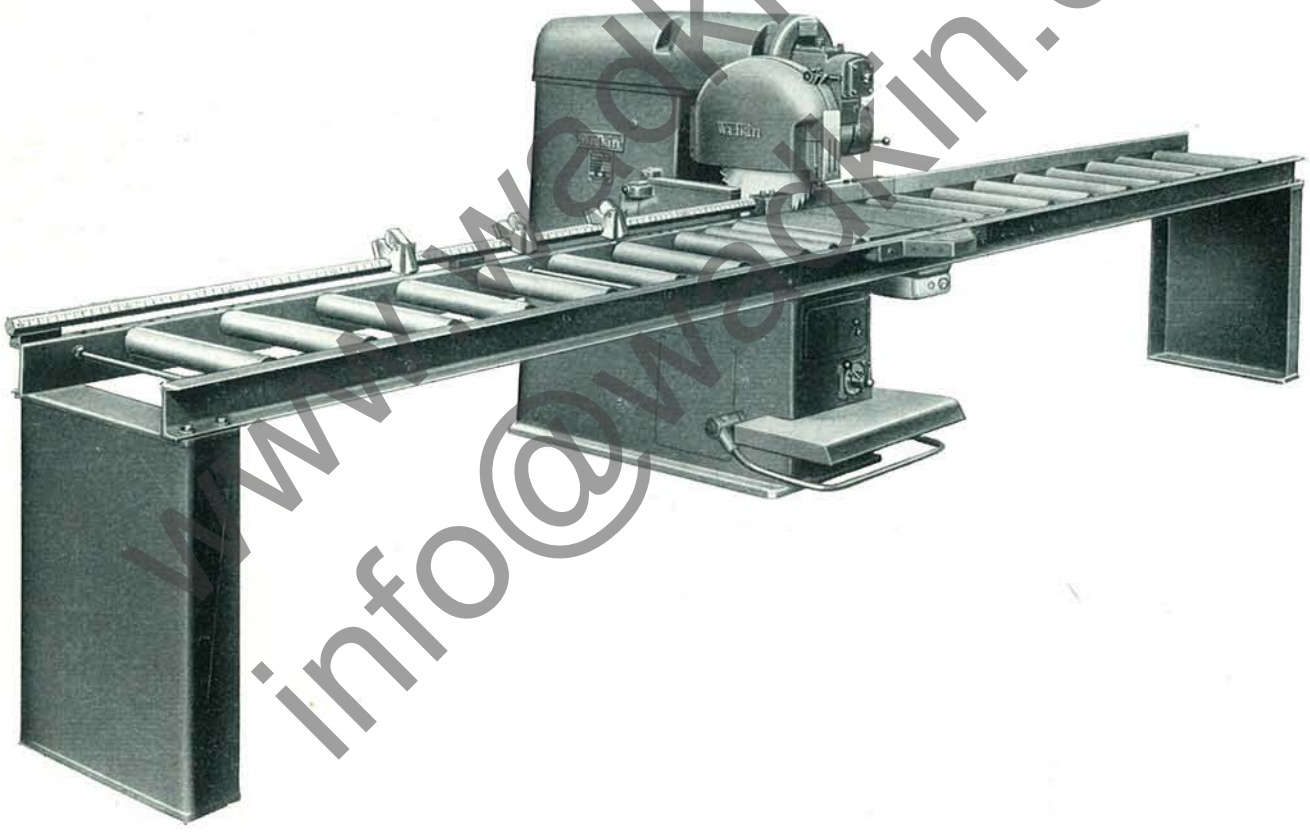
This Table incorporating ball bearing rollers is strongly recommended, as it enables the timber to be more easily and quickly moved into position. It is made in two sections, each of which is 8′ 5″ long overall to cut off up to 8′ 0″ using graduated stop bar.

It is made in two sizes 14½″ wide and 22½″ wide. To special order longer tables can be supplied in additional lengths of 4′ 0″. Tables should when possible be ordered with the machine.

Automatic Cross Cut Saw, Type C.W.

Where straight cross cutting is required on a continuous production basis day in and day out, and where the volume of work demands two or more pull over cross cuts, this machine is strongly recommended. It is an entirely automatic cross cut specially designed for fast production. Its potential output is considerably higher than any hand pull over saw. This is due to the fact that the operator has always both hands free for speedy handling of the stock and is relieved of the physical effort of pulling the saw through the cut. The cutting stroke of the machine is variable both in speed and length of the forward travel, to suit the size of timber being cross cut.

Hydraulic power for the cutting stroke ensures a smooth, even action and the method of control eliminates all trace of jerkiness throughout the entire sequence of operations.



As our policy is constantly to improve the design of Wadkin woodworking machinery the details given in this leaflet are not to be regarded as binding.

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