Wadkin

OPERATING AND MAINTENANCE INSTRUCTIONS

Cross Cutting and Trenching Machines
Types CC · CD · CF

INSTRUCTION BOOK No. 726

Wadkin

Cross Cutting and Trenching Machines

Types CC · CD · CF

	CC1	CC2	CD1 For material 14″ × 5″	CD2 For material 22″ × 5″	CD3 For material 16″ × 7″	CD4 For material 45″ × 5″	CD5 For material 40″ × 7″	CF1 For material 14″ × 5″	CF2 For material 22″ × 5″	CF3 For material 16″ × 7″	CF4 For material 45″ × 5″	CF5 For material 40″ × 7″
Standard diameter of saw ..	18″	18″	18″	18″	24″	18″	24″	18″	18″	24″	18″	24″
Will cut off	22″ × 5″ deep	27″ × 5″ deep	14″ × 5″ deep	22″ × 5″ deep	16″ × 7″ deep	45″ × 5″ deep	40″ × 7″ deep	14″ × 5″	22″ × 5″ 3 phase	16″ × 7″ electric	45″ × 5″ supply	40″ × 7″
Will cut off	23½″ × 4″ deep	28½″ × 4″ deep	15″ × 4″ deep	24½″ × 4″ deep	19″ × 6″ deep	45½″ × 4″ deep	40½″ × 6″ deep					
Will cut off	25″ × 3″ deep	30″ × 3″ deep	16½″ × 3″	26″ × 3″	20½″ × 5″	46½″ × 3″	41½″ × 5″					
Will cut off	26″ × 2″ deep	31″ × 2″ deep	17½″ × 2″	27″ × 2″	21½″ × 4″	47½″ × 2″	42″ × 4″					
Will cut off	27″ × 1″ deep	32″ × 1″ deep	18″ × 1″	27½″ × 1″		48″ × 1″						
Will cut off, when saw is canted 45°, up to	22″ × 1¾″ deep	27″ × 1¾″ deep										
Will cut off, when saw is canted 30°, up to	22″ × 4″ deep	27″ × 4″ deep										
Will cut off, when saw is swivelled 45°, up to	13″ × 5″ deep	18″ × 5″ deep	9½″ × 5″	15½″ × 5″	10″ × 7″	32″ × 5″	30″ × 7″					
Will straight groove up to 1½″ deep	In material 20″ wide	In material 25½″ wide	Up to 10¾″ wide	Up to 20″ wide	Not available	Not available	Not available					
Will groove, when carriage is swivelled to 45°, up to 1½″ deep	In material 13½″ wide	In material 17¾″ wide	Up to 8″ wide	Up to 14¾″ wide	Not available	Not available	Not available					
Maximum rise and fall of saw ..	9½″	9½″	9½″	9½″	9½″	9½″	9½″					
Speed of saw spindle in r.p.m. for 50 cycle electric supply ..	2,850	2,850	2,850	2,850	1,440	2,850	1,440	2,850	2,850	1,440	2,850	1,440
Diameter of saw spindle for saws ..	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″	1¼″
Horse-power of motor	5	5	5	5	6	5	6	5	5	6	5	6
Approximate nett weight of machine in cwts.	10¼	10¼	8¾	9¼	9½	10	10½	6¾	7½	8	9	10

GENERAL VIEW OF CC MACHINE

LUBRICATION

POINTS **'A'**

Give 4 to 6 depressions of grease gun every three to six months, using Wadkin ball bearing grease, grade L6.

POINTS **'B'**

Oil once per day, using Wadkin grade L4 oil.

BALL BEARING LIST

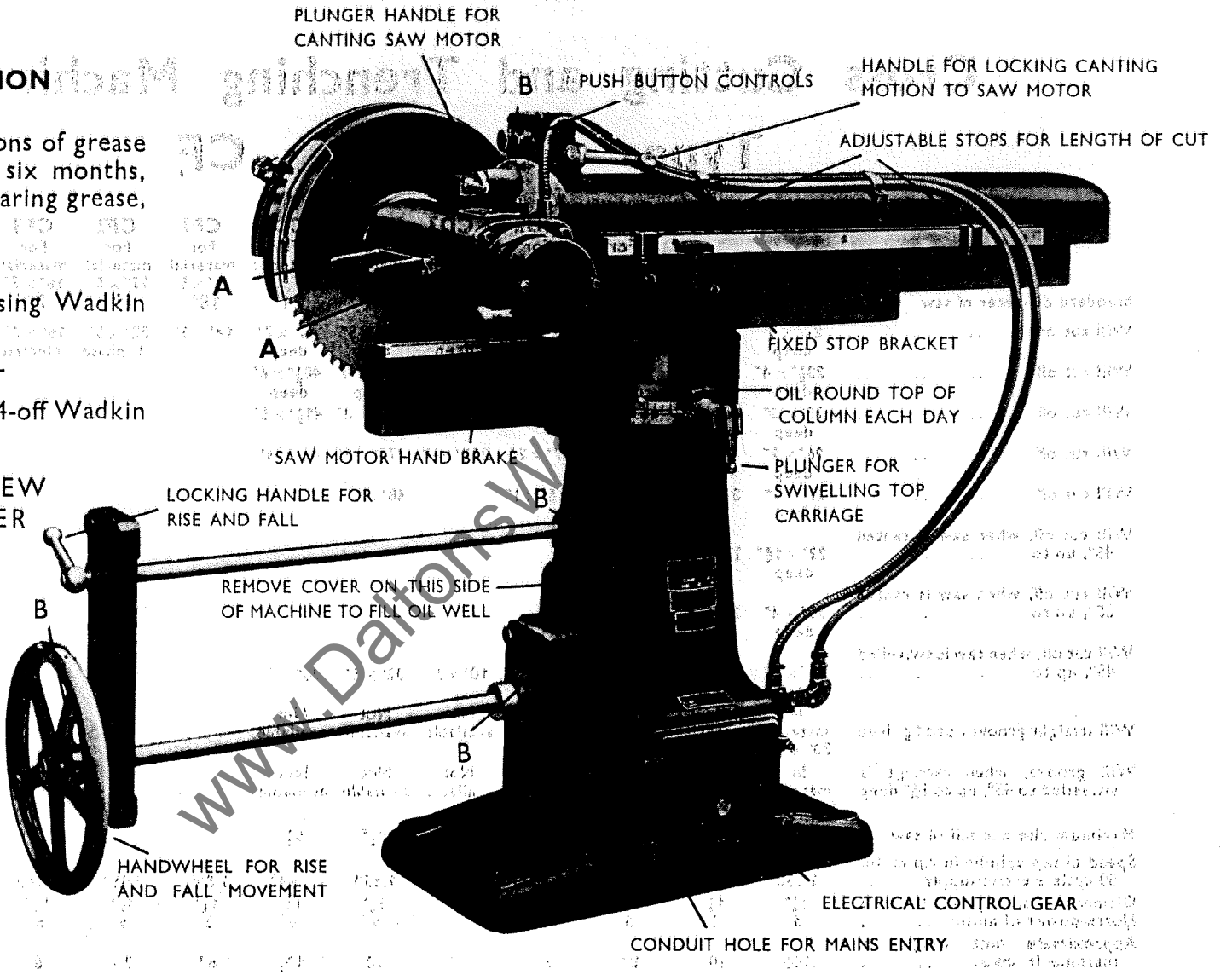
Saw carriage rollers 4-off Wadkin part No. FG 410.

ELEVATING SCREW THRUST WASHER

1-off. SKF-0-14.

$1\frac{3}{4}$" bore x $2\frac{11}{16}$" dia. x $\frac{3}{4}$"

Saw Spindle Bearings.
See Page 9



INSTALLATION

The machines are despatched from the Works with all bright surfaces greased to prevent rusting. This must be removed by applying a cloth damped in paraffin or turpentine.

FOUNDATIONS

$\frac{5}{8}$" diameter foundation bolts should be used to bolt the machine down to the floor. If the mill floor consists of 6" solid concrete, no special foundation is necessary. Rag type foundation bolts may be used in the position shown on the foundation plan. 6" to 8" square holes should be cut in the concrete and the machine carefully levelled. It is essential that the table be fixed absolutedly parallel with the saw carriage. This should be tested in the full travel of the slide before finally bolting down the machine. Fences must be at right angles to the saw. Finally the machine should be grouted in with liquid cement.

DUST EXTRACTION EQUIPMENT

All machines are fitted with a $4\frac{1}{2}$" outside diameter exhaust connection. On CC and CD machines it is necessary to provide for raising, lowering, and angular movement of the saw when attaching dust extraction piping.

WIRING

It is necessary to fit a triple pole isolating switch adjacent to the machine to enable the electrical gear to be readily isolated for inspection purposes. If desired, it can be obtained from Wadkin Ltd. to special order The mains entry is shown in the general view of the machine and the three mains wires should be connected to the terminals L1, L2, L3, as shown on the wiring diagram, Page 14, and connect the machine to earth.

CC MACHINE SAW CARRIAGE

The saw carriage moves on four ball bearing rollers on circular steel tracks. These rollers are correctly positioned on assembly, but should any further adjustment be found necessary, it should be noted that only the two rollers on the saw guard side of the carriage are adjustable. Fig. 1 shows the roller eccentric screwed spindle. Release the square head setscrew, slacken the nut and adjust the eccentric screwed spindle with the square shank. Firmly relock the nut and setscrew before putting the machine to use. The long tension springs fitted to assist the return stroke of the saw are adjusted by the hexagon nuts shown in Fig. 4.

The forward stroke of the carriage is controlled by a spring fitted on a stop rod which is situated underneath the carriage at the opposite end to the saw motor. This spring is adjusted by a sliding stop fitted on the rod. By releasing the hexagon head screw, the stop can be moved along the bar to the required position and clamped with the screw. Two stops are provided outside the carriage, shown on Page 2, for controlling the lengths of cut. To lock the saw motor and slide in a fixed position, the stops are secured one either side of the stop bracket.

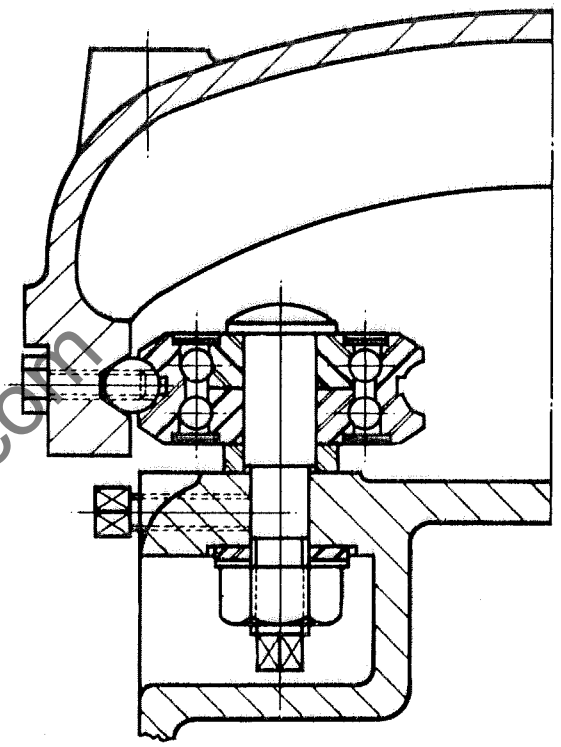


FIG. 1.

PNEUMATIC BUMPER

This is shown at Fig. 2 and is accurately positioned on assembly. If any adjustment to the bumper stroke is found necessary, release the hexagon locknut and turn the hexagon head screw until the required stroke has been obtained.

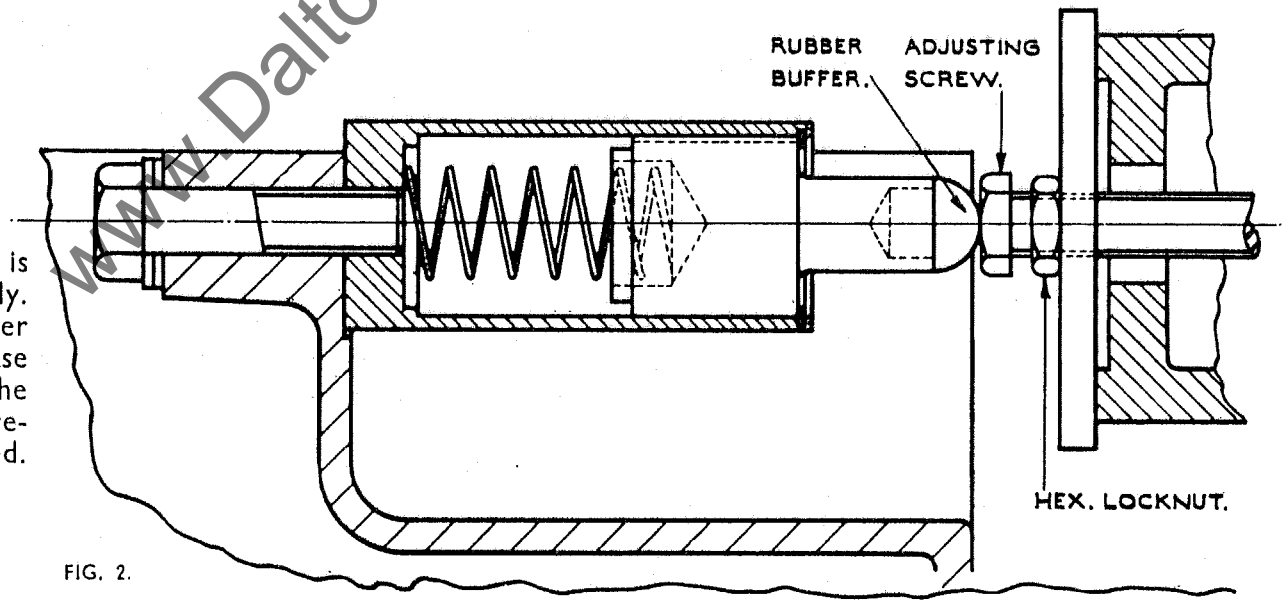


FIG. 2.

REMOVAL OF SAW CARRIAGE ON C.C. MACHINE

Should it be necessary to remove the saw carriage for removal of rollers and guide rods it is important to bring the isolating switch on the "OFF" position in order to electrically isolate the motor. Remove the flexible cable from the clips on the top of the carriage and take off the saw. Withdraw the complete motor by first removing the end plate C, Fig. 5. Support the weight of the motor on two wood blocks resting on the top of the table.

By removal of stop D and nuts E and rod F, the carriage is now clear. Pull the carriage outwards sufficient only to clear the back rollers G and lug H and swing round for complete withdrawal. Take care to support the carriage in order not to strain the rollers. For adjustment of rollers after assembly, see Fig. 1.

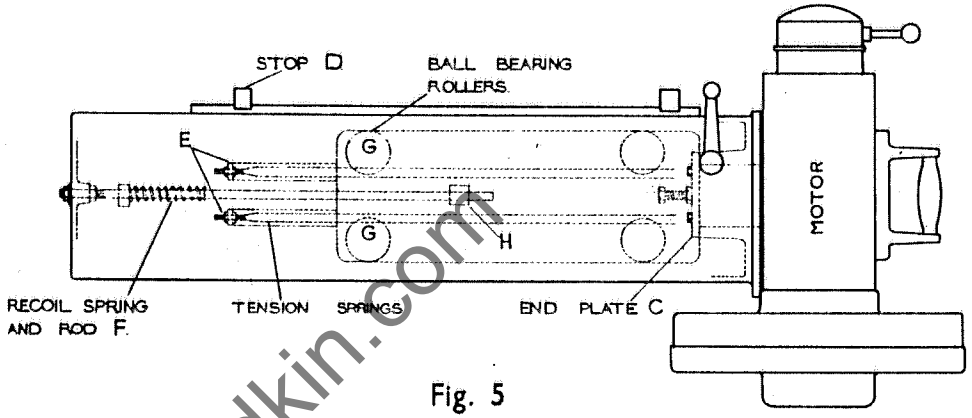


Fig. 5

LUBRICATION (APPLICABLE TO ALL MACHINES)

POINTS A. On the general views of the machines are grease lubrication points to the saw motor : four to six depressions of the greasegun every three to six months is sufficient to keep the motor bearings well lubricated. Too much lubricant will cause the bearings to run hot. Use WADKIN Ball Bearing Grease, Grade L6.

POINTS B. On the views of the machines are oil lubrication points. Oil all moving parts once per day using WADKIN Oil, Grade L4. The oil well for the raising and lowering gears should be filled with oil before putting the machine to use, and the oil level checked each week.

NOTE. The carriage rollers are packed with grease on assembly and no further lubricating is necessary. Oil round the top of the raising and lowering column on CC and CD machines each day. The circular steel carriage tracks and rollers must be thoroughly cleaned periodically free from corrosion with petrol or paraffin. If it is desired to use lubricants other than WADKIN, the equivalents are listed below:

WADKIN BALL BEARING GREASE L6	EQUIVALENT: SHELL MEX AND B.P. LTD., SHELL "NERITA" GREASE 3 (VW). VACUUM OIL CO., GARGOYLE BRB3.
WADKIN OIL, GRADE L4	EQUIVALENT: SHELL MEX AND B.P. LTD., SHELL VITREA OIL 33. VACUUM OIL CO., "VACTRA" OIL (HEAVY MEDIUM).

GENERAL VIEW OF CD MACHINE

LUBRICATION

POINTS **'A'**

Give 4 to 6 depressions of grease gun every 3 to 6 months; using Wadkin ball bearing grease, grade L6.

POINTS **'B'**

Oil once per day, using Wadkin oil, grade L4.

BALL BEARING LIST

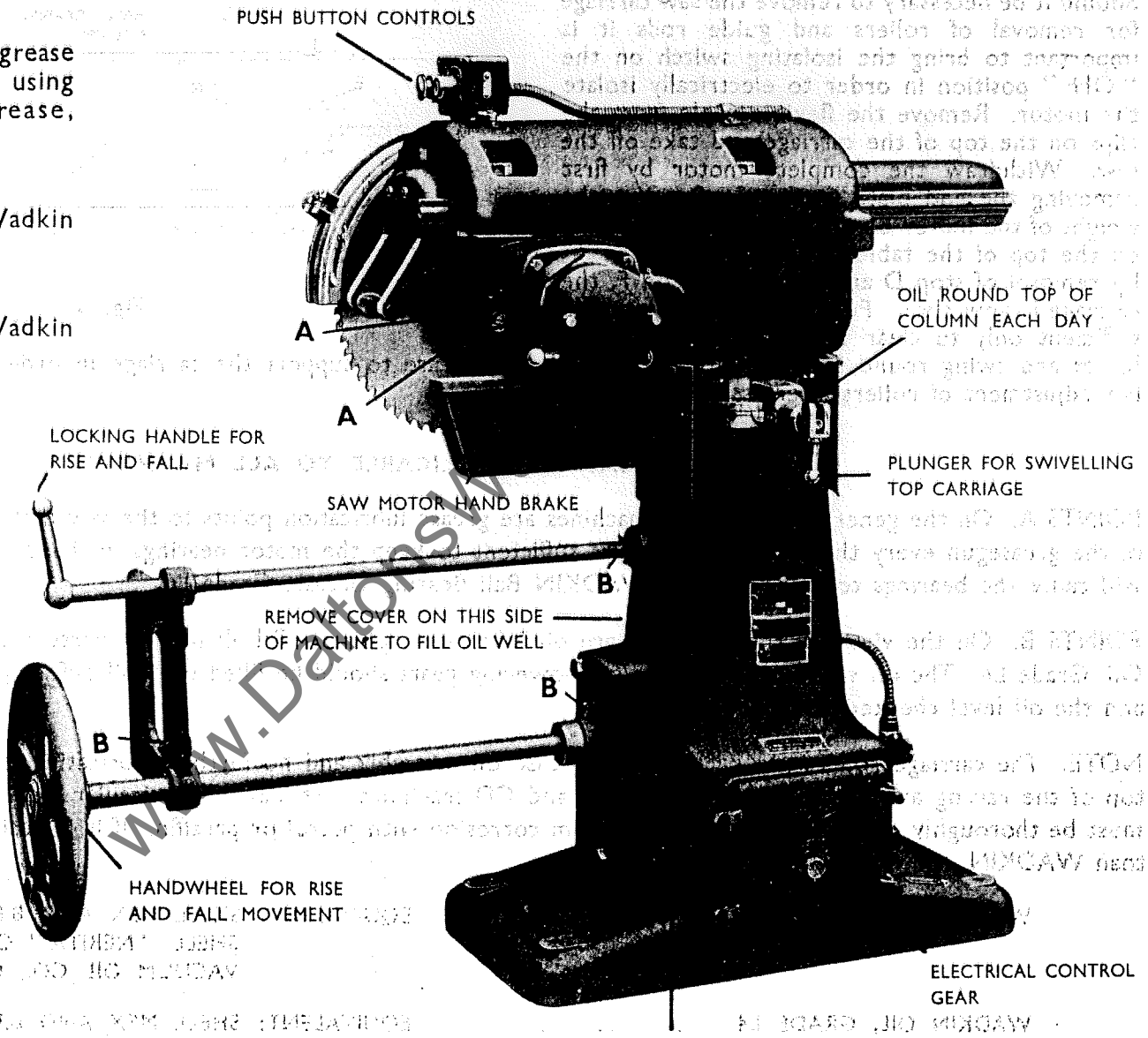
Saw carriage rollers, 4-off. Wadkin part No. FG 410.

ELEVATING SCREW THRUST WASHER

1-off. SKF-0-14.

$1\frac{3}{4}$" bore x $2\frac{11}{16}$" o/d x $\frac{3}{4}$" wide.

Saw Spindle Bearings.
See Page 9



CD AND CF MACHINES SAW CARRIAGE

The saw carriage moves on four ball bearing rollers on circular steel tracks. These rollers are correctly positioned on assembly, but should any further adjustment be necessary, it should be noted that only the two rollers on the saw guard side of the carriage are adjustable. Fig. 3 shows the roller eccentric screwed spindle. Release the grubscrew, slacken the nut and adjust the eccentric screwed spindle with the square shank. Firmly relock the grubscrew and hexagon nut before putting the machine into use. The long tension springs fitted to assist the return stroke of the saw are adjusted by the hexagon nuts shown in Fig. 4.

The forward stroke of the carriage is controlled by a spring fitted on a stop rod. This rod is fitted along the top of the saw carriage arm at the opposite end to the saw motor. The spring is adjusted by a sliding stop fitted on the rod; by releasing the screw the stop can be moved along the bar to the required position and clamped with the screw.

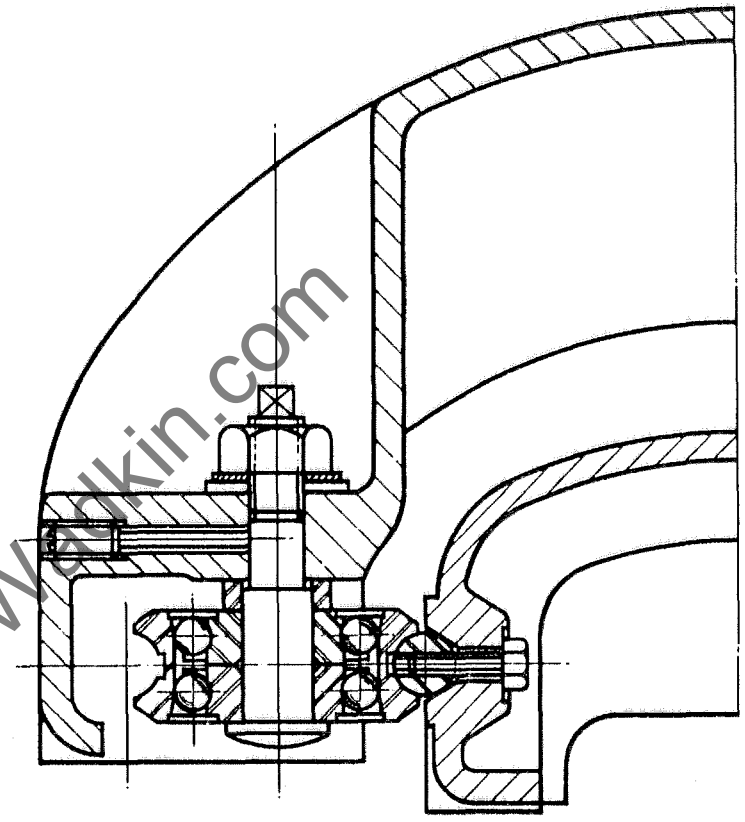


FIG. 3. DIAGRAM SHOWING CARRIAGE ROLLER MOUNTING.

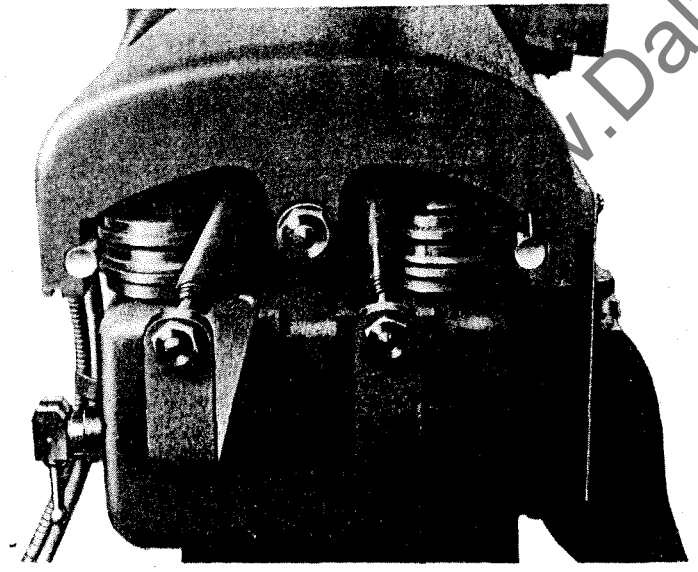


FIG. 4. NUTS FOR ADJUSTING SPRING TENSION.

PNEUMATIC BUMPER

A similar type bumper to that described on Page 4 is fitted. Adjustment is by means of a large hexagon head screw, fitted with a locknut. It should be noted that the screw head must be adjusted sufficient only to engage with the buffer.

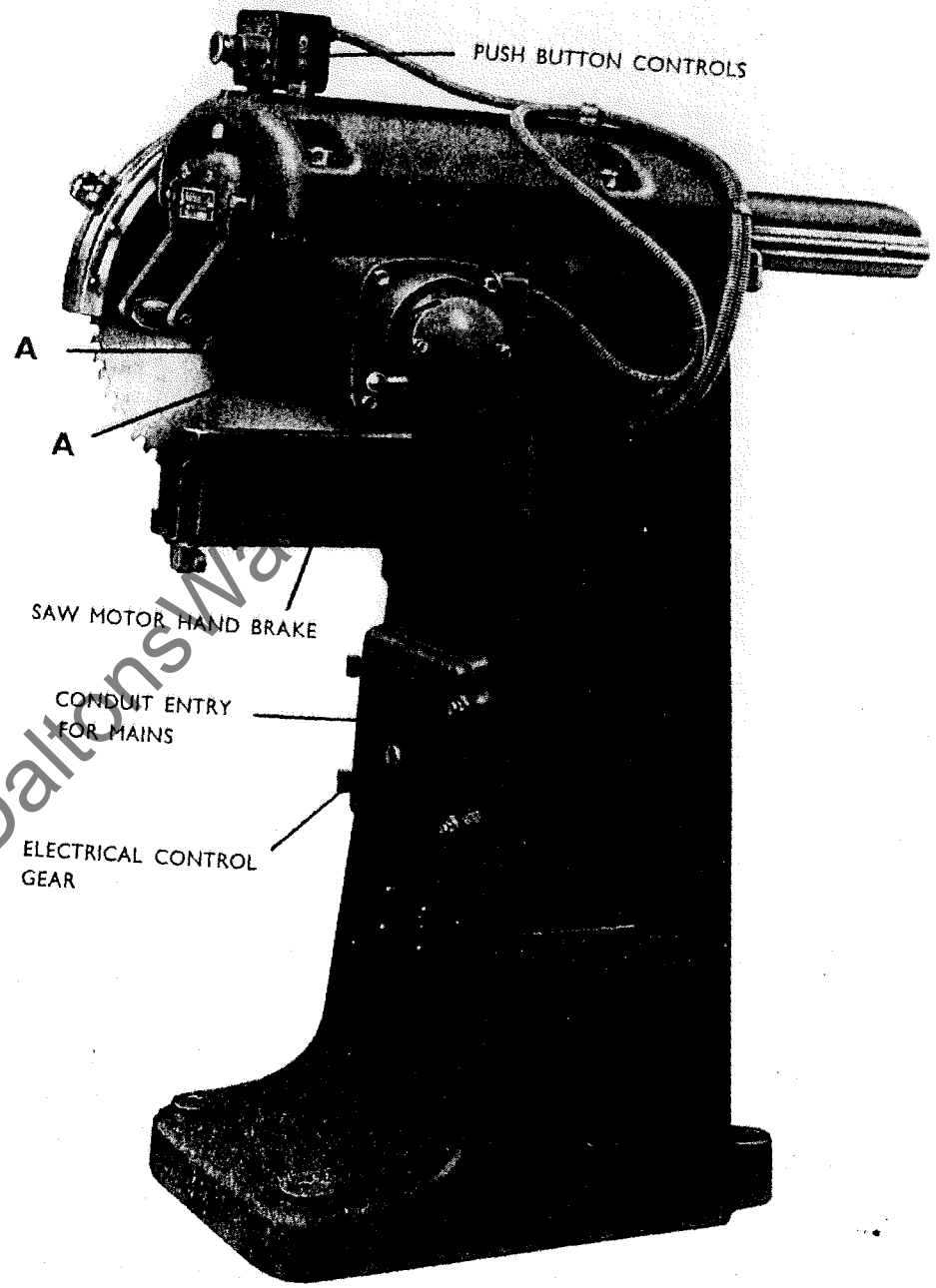
GENERAL VIEW OF CF MACHINE

LUBRICATION

POINTS 'A'
Give 4 to 6 depressions of grease gun, every 3 to 6 months, using Wadkin ball bearing grease grade L6.

BALL BEARING LIST
Saw carriage rollers, 4-off, Wadkin Part No. FG 410.

Saw Spindle Bearings, See Page 9.



BALL BEARINGS

5 H.P. MOTORS

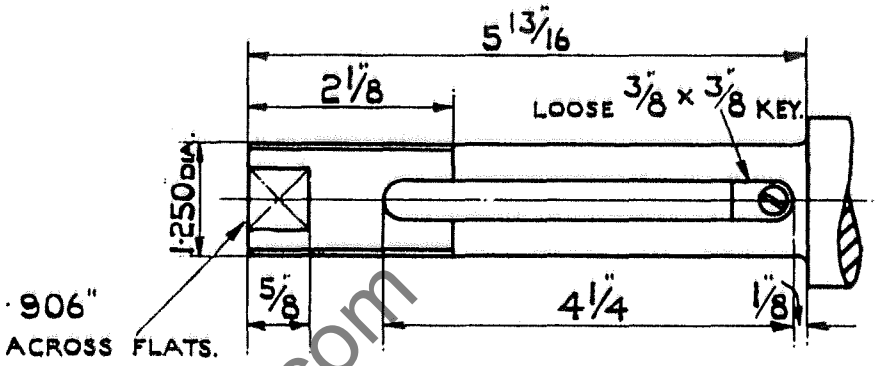
SAW END: SKF. RL16 DOUBLE ROW SELF-ALIGNING.
2" BORE × 4" OUTSIDE DIA. × $\frac{13}{16}$" WIDE.

TAIL END: SKF. RM9 DOUBLE ROW SELF-ALIGNING.
$1\frac{1}{8}$" BORE × $2\frac{13}{16}$" OUTSIDE DIA. × $\frac{13}{16}$" WIDE.

6 H.P. MOTORS

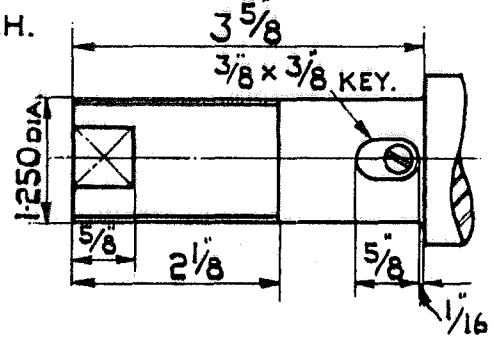
SAW END: SKF. RM11 DOUBLE ROW SELF-ALIGNING.
$1\frac{3}{8}$" BORE × $3\frac{1}{2}$" OUTSIDE DIA. × $\frac{7}{8}$" WIDE.

TAIL END: SKF. RM8 DOUBLE ROW SELF-ALIGNING.
1" BORE × $2\frac{1}{2}$" OUTSIDE DIA. × $\frac{3}{4}$" WIDE.

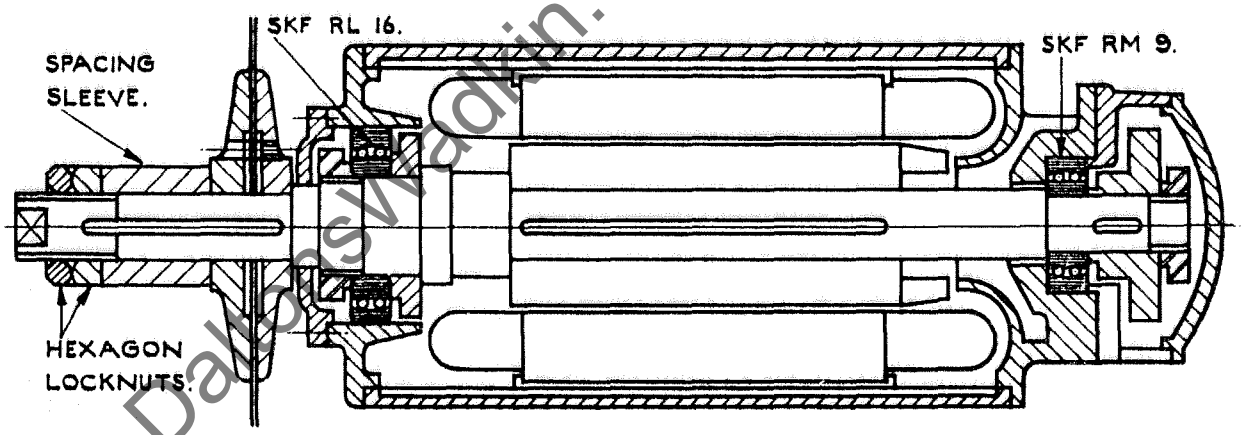


SPINDLE END, 5 H.P MOTOR, USED ON CC1-CC2, CD1-CD2-CD4.

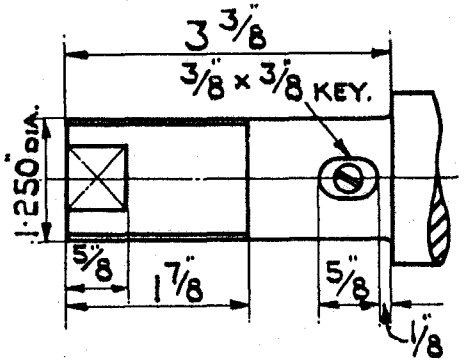
ALL SPINDLE ENDS SCREWED 7 T.P. 1" L.H.



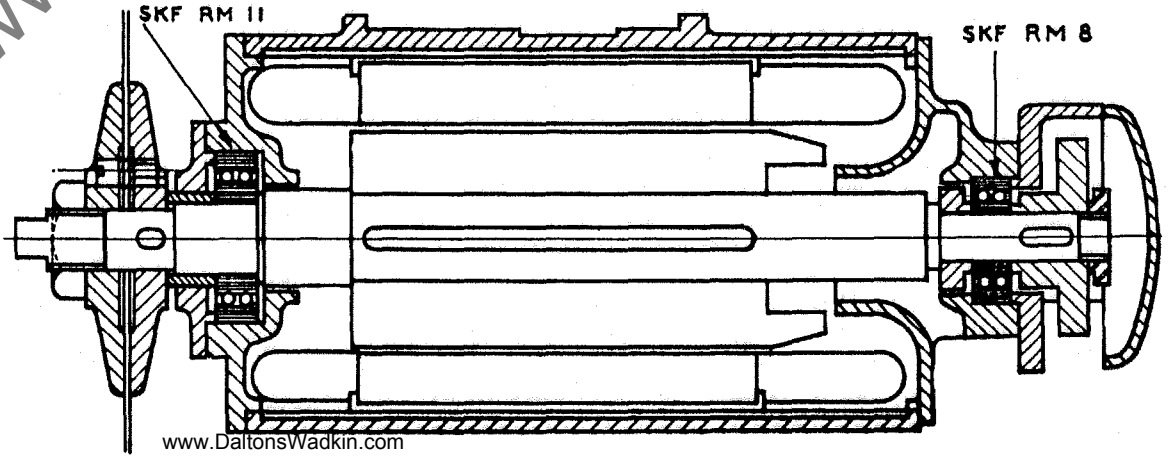
SPINDLE END, 5 H.P. MOTOR, USED ON CF1-CF2, CF4.



SECTION THROUGH 5 H.P. MOTOR USED ON CC1-CC2, CD1-CD2-CD4.



SPINDLE END, 6 H.P. MOTOR, USED ON CD3-CD5, CF3-CF5.



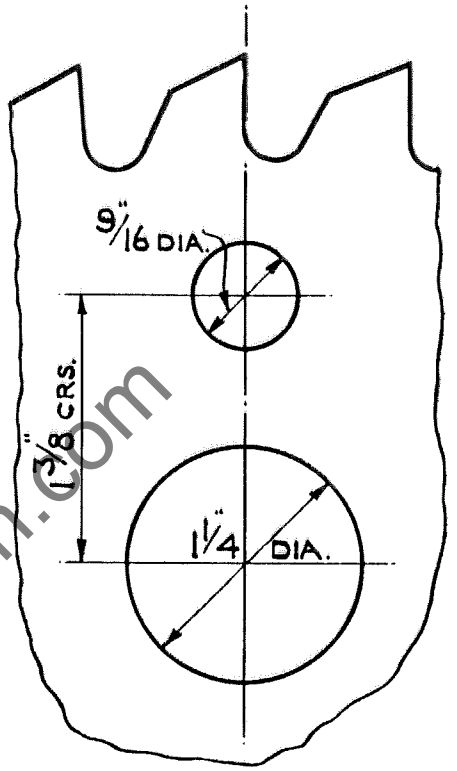
SECTION THROUGH 6 H.P. SAW MOTOR USED ON CD3-CD5, CF3-CF5.

ACCESSORIES FOR CROSS CUTTING AND TRENCHING MACHINES

SAWS. The saws used on Wadkin Cross Cutting 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 designed for high speed running. To obtain satisfactory sawing, it is necessary to retain the same angle on the teeth as when new. When sharpening, make all the gullets the same depth and uniform in shape, otherwise the saw will run out of balance, causing vibration.

For a general purpose saw, we recommend our 18″ flat cross cut saw Q.S.11.

For work demanding high grade finish, we recommend our 18″ hollow ground cross cut saw Q.S.12.



TOOTH PROFILE OF QS11 AND QS12 SAWS WITH DIAGRAM OF SAW AND PEG HOLES.

EXPANDING GROOVING HEADS J.P.468, 460, 464

The head illustrated is made up of two discs accurately balanced. It can be adjusted to cut grooves of any intermediate widths within its range and therefore a tight or loose joint can be made in the work. Each disc is held in position on the spindle by a key and setscrews.

To fit the head, remove the spindle locknuts, distance sleeve, and saw collar, and *fit the loose key* supplied on the keyway. Fit the head close up to the spindle shoulder and lock the square head screws on to the key after adjusting for width of groove. The spindle locknuts should be replaced on the spindle end to prevent the head from accidentally falling off when in use

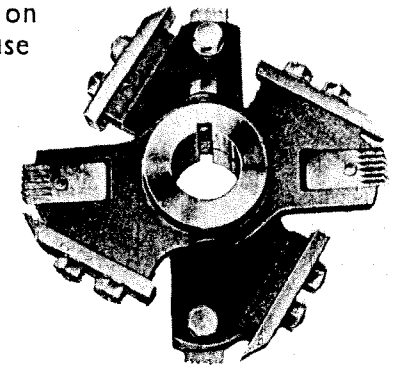
These nuts are not intended to hold the heads in position.

The heads are made in the following sizes:

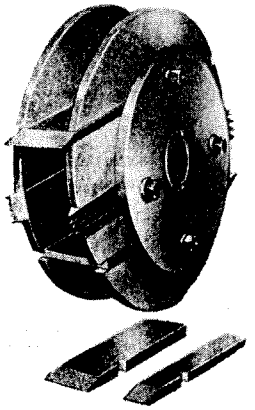
J.P.468. 11″ diameter cutting circle.
For grooves $\frac{3}{8}$″ to $\frac{11}{16}$″ wide up to $\frac{9}{16}$″ deep.

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

J.P.464. 11″ diameter cutting circle.
For grooves $1\frac{3}{8}$″ to $2\frac{1}{2}$″ wide up to $1\frac{5}{8}$″ deep.



J.P.468-460-464.



J.P.215.

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. The cutting circle is 11″ diameter and will cut grooves ½″ to 2″ wide by using varying width cutters. The Head will groove to a maximum depth of 1¼″. Remove the spindle locknuts, distance sleeve, and saw collars, and fit the Head close up to the spindle shoulder. Replace the distance sleeve and lock up the whole assembly with the spindle locknuts.

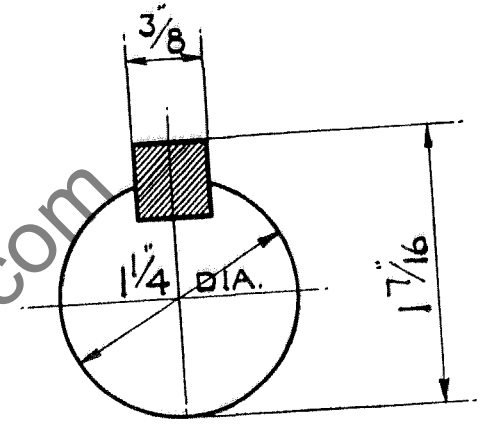
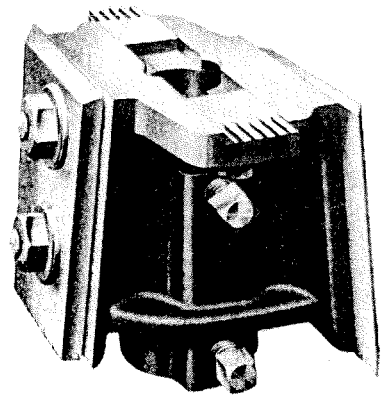


DIAGRAM OF SPINDLE END FOR GROOVING HEADS.

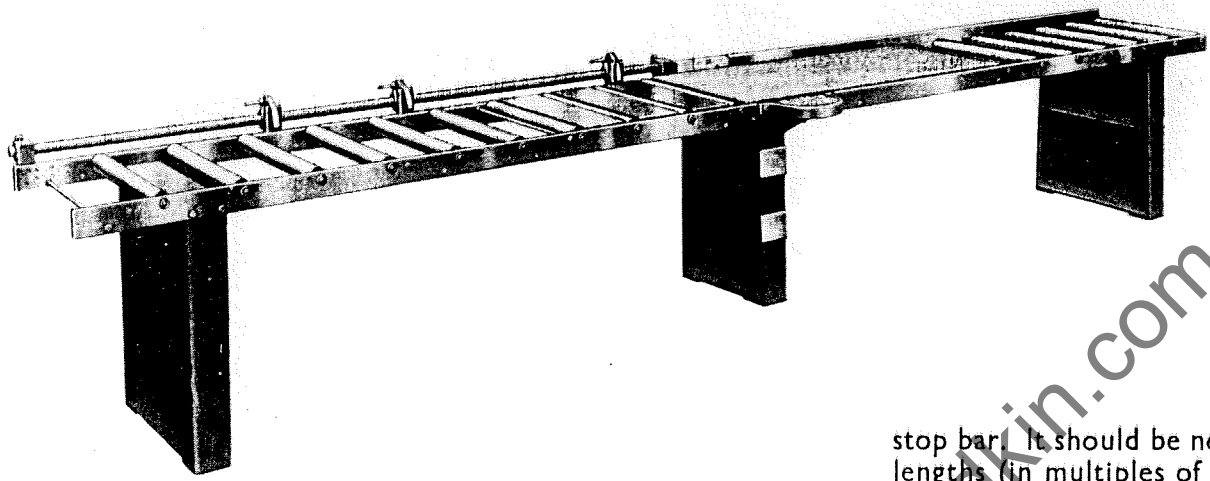
HALF LAPPING AND BEVELLING HEAD J.P.502

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. The Head has a cutting circle of 6½″ diameter and the cutters have a maximum width of 4½″. Note a special saw guard is necessary for machines using this type of head. Remove the spindle locknuts, distance sleeve, and saw collars, and *fit the loose key* supplied in the keyway. Fit the Head up to the spindle shoulder and lock in position with the hexagon locknut which fits inside the recess in the Head. A special box spanner is supplied for this locknut.



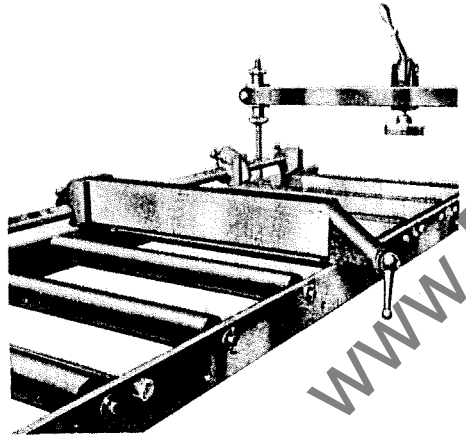
J.P.502.

ACCESSORIES FOR CROSS CUTTING AND TRENCHING MACHINES



ALL METAL TABLE TYPE XT

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 sizes 14½″ and 22½″ wide and in any multiple lengths of 4′ 0″, right or left hand, complete with support legs and graduated stop bar. It should be noted that any combination of table lengths (in multiples of 4′ 0″) can be arranged as all table components are interchangeable, ready drilled, and easily erected.

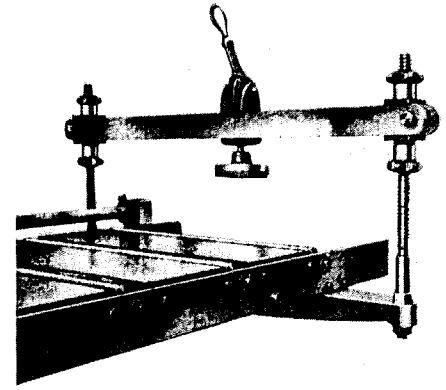


ADJUSTABLE FENCE FOR MULTIPLE CUTTING

This fence is designed to drop on to the graduated stop bar of the metal 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. A locking handle is fitted for clamping on the front table bearer.

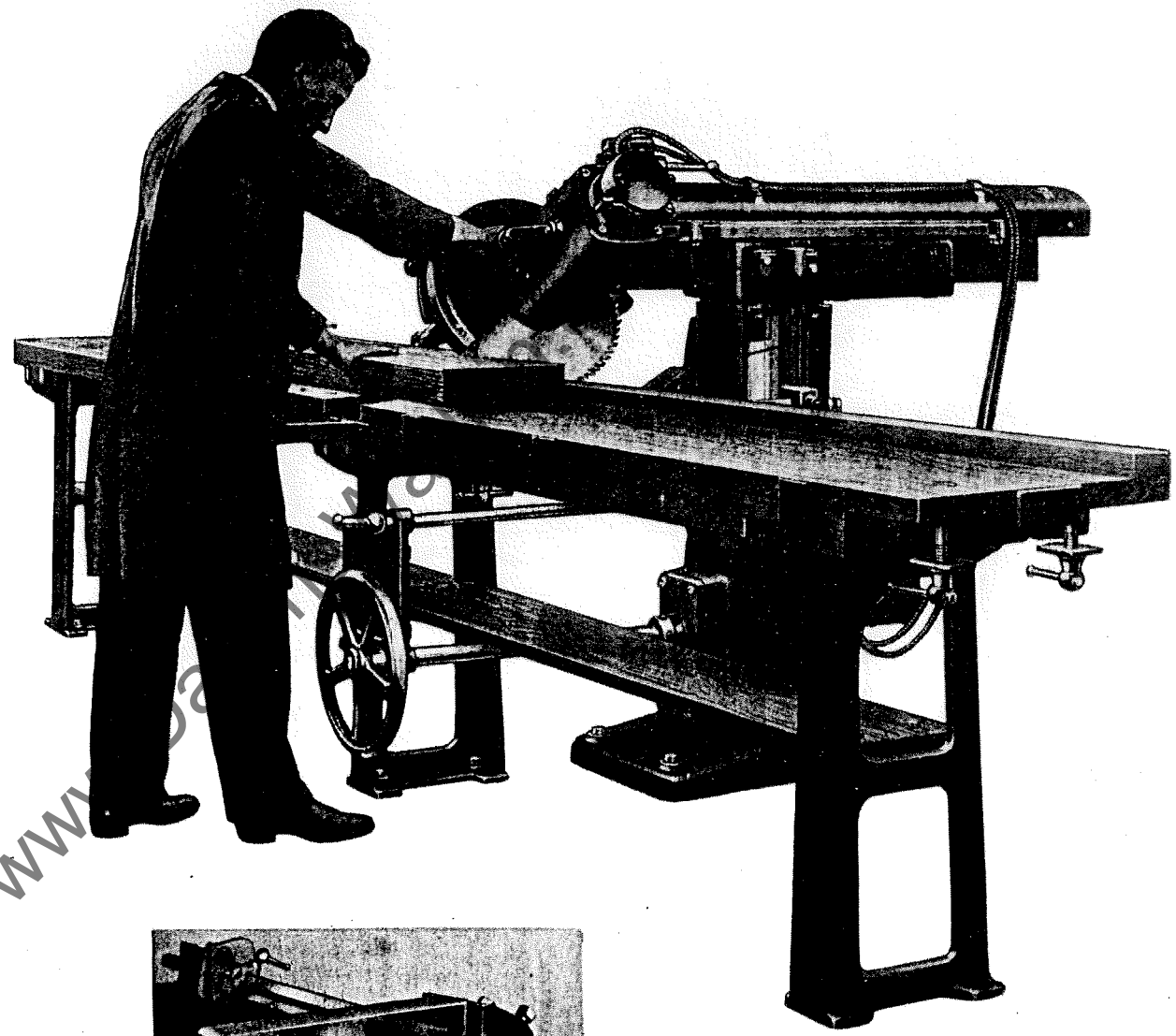
LEVER CRAMPS

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″ thickness. The eccentric lever is moveable along the bars to suit varying widths of timber. Illustration shows the cramp in position on XT table.

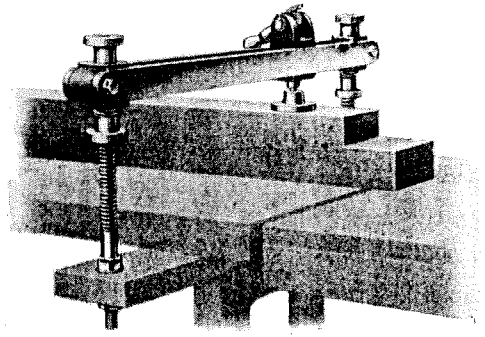


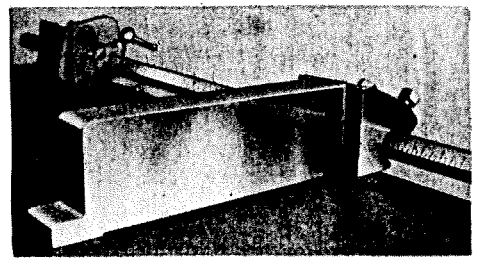
As an alternative to the all metal table type XT, we can supply drawings to enable the customer to build his own wood table, using legs supplied by WADKIN Ltd. A view of such a table is shown on this page.

Drawing No. CC31 gives particulars of construction for a wood table suitable for machines CC1-CD1-CD2-CD3. Drawing No. CC31/A gives particulars of construction for a wood table suitable for machining type CC2.



LEVER CRAMP SUITABLE FOR MOUNTING ON WOOD TABLE.



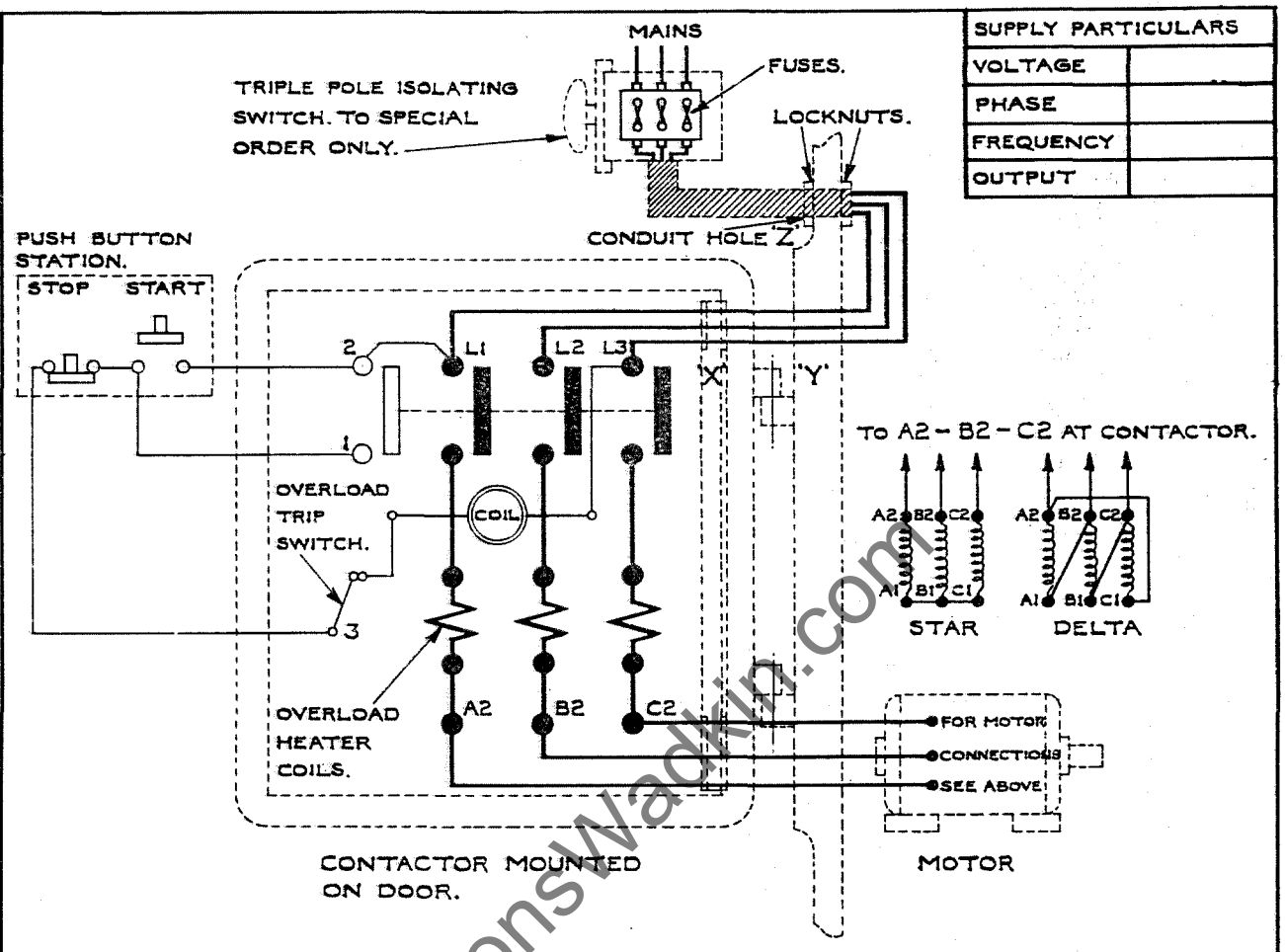


ADJUSTABLE FENCE FOR MULTIPLE CUTTING. SUITABLE FOR MOUNTING ON WOOD TABLE.

RETAIN THIS DIAGRAM FOR FUTURE REFERENCE.

FOR PARTICULARS OF WADKIN PORTABLE ELECTRIC BLOWER FOR CLEANING M/C. & ELECTRICAL GEAR SEE LEAFLET No. 687.

SUPPLY PARTICULARS	
VOLTAGE	
PHASE	
FREQUENCY	
OUTPUT	



INSTALLATION INSTRUCTIONS.

FIT TRIPLE POLE ISOLATING SWITCH NEAR MACHINE UNLESS SUPPLIED BY WADKIN LTD. TO SPECIAL ORDER, SO THAT THE ELECTRICAL GEAR MAY READILY BE ISOLATED FOR INSPECTION PURPOSES. BRING LINE CABLES TO ISOLATING SWITCH AND TO L1 - L2 - L3 AT CONTACTOR THROUGH CONDUIT WHICH SHOULD BE SCREWED INTO THE MACHINE AND SECURED BY MEANS OF LOCKNUTS. A HOLE IS PROVIDED IN THE MACHINE FRAME AT 'Z' FOR THE CONDUIT CARRYING THE LINES TO THE CONTACTOR.

OPERATING INSTRUCTIONS.

TO START MOTOR, CLOSE ISOLATING SWITCH AND PRESS START BUTTON. TO STOP MOTOR PRESS STOP BUTTON. TO LOCK OFF MACHINE PRESS AND TURN STOP BUTTON. THIS MUST BE RELEASED BEFORE A START CAN BE MADE.

NOTE :-

CABLING SHOWN THUS ▨ TO BE CARRIED OUT BY CUSTOMER UNLESS ISOLATING SWITCH HAS BEEN FITTED BY WADKIN LTD.

IMPORTANT.

SECURE LINE CABLES AT 'X' BY MEANS OF THE CLEAT PROVIDED. LEAVE SUFFICIENT SLACK IN LINES AT 'Y' TO ALLOW THE DOOR TO OPEN FREELY.

WHEN DUAL VOLTAGE MOTORS ARE EMPLOYED THE FOLLOWING CONNECTIONS SHOULD BE MADE 200/250 VOLT CIRCUITS CONNECT MOTOR IN 'DELTA', 340/440 VOLT CIRCUITS CONNECT MOTOR IN 'STAR', THE CONNECTIONS BEING MADE EITHER WITHIN THE CONTROL GEAR CAVITY OR AT THE MOTOR TERMINAL BLOCK.

ENSURE THAT THE MACHINE IS ADEQUATELY 'EARTHED' AND THAT THE DIRECTION OF ROTATION IS CORRECT BEFORE PUTTING INTO SERVICE. TO REVERSE ROTATION INTERCHANGE L1 & L2.

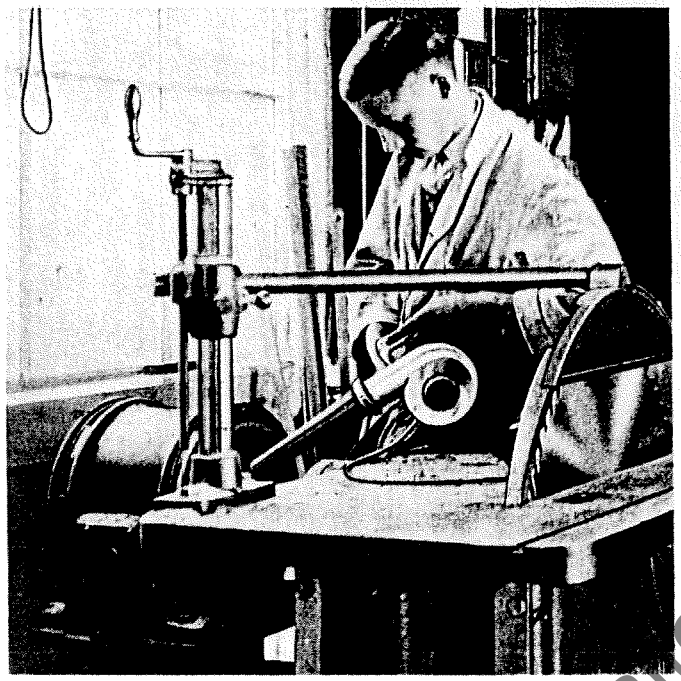
OVERLOAD.

SHOULD THE MOTOR STOP DUE TO OVERLOAD, WAIT FOR A SHORT TIME TO ALLOW THE HEATER COILS TO COOL AND THEN START IN THE USUAL MANNER.

EARTH MACHINE.

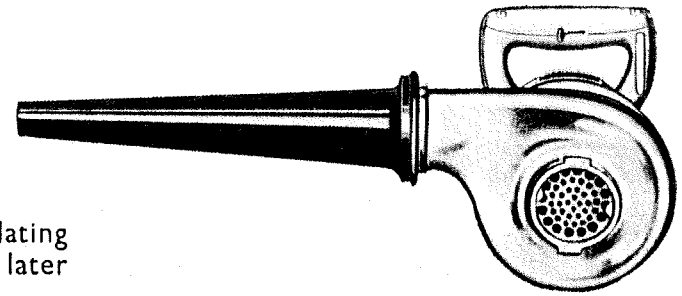
WADKIN LTD.
LEICESTER.

DIAGRAM OF CONNECTIONS. D.191/3A.



DONT LEAVE ELECTRIC MOTORS TO LOOK AFTER THEMSELVES . . .

. . . blow away harmful dust, chips and dirt with a Wadkin Electric Blower



No motor can run at its maximum efficiency with its ventilating duct or control gear covered with dust and dirt. Sooner or later the resultant overheating will cause serious trouble.

Similarly, accumulations of chips and dust, in the mechanical parts of the machine can interfere with its efficiency. A few minutes a week for blowing down all Woodworking Machinery will be amply repaid in better and easier running, in increased life, and freedom from breakdown.

Blowers can be supplied for single phase A.C. or Direct Current for any voltage up to 250.

Please state voltage when ordering.

SPECIFICATION

Horse-power of motor	1rd
Net weight...	7 lbs.
Speed	11,400 r.p.m.
Velocity of air in feet per minute	... 14,800
Fully guaranteed for one year	

Wadkin

SPARE PARTS BOOKLET

CC1 & CC2

CROSS CUTTING & TRENCHING

MACHINE

Wadkin Ltd. GREEN LANE WORKS, LEICESTER, LE5 4PF, ENGLAND Telephone: 0533 769111
TELEGRAMS: } WOODWORKER, LEICESTER, TELEX. TELEX: 34646 (WADKIN, LEICSTER)
CABLES: }
and at YORK HOUSE, EMPIRE WAY, WEMBLEY, MIDDX., HA9 0PA. Telex: 262210. Tel: 01-902 7714 (3 lines)

SPARE PARTS BOOKLET

CONTENTS

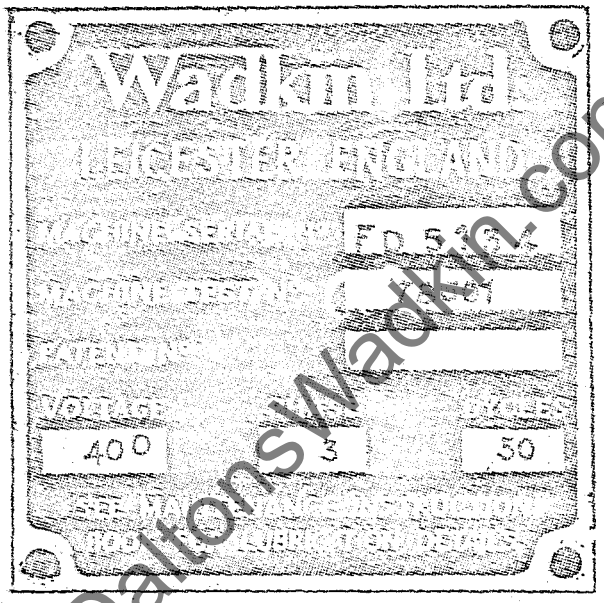
CC1 & CC2

CROSS CUTTING & TRENCHING

MACHINE

SPARE PARTS

Should spare parts be required due to breakage or wear full particulars including the machine and test number must be given. This information is on the nameplate attached to the machine and will be similar to the picture below.



Please see the next page for sample detail of how to order spare parts.

SAMPLE TYPE ORDER

MACHINE: CC1 AND CC2

MACHINE NO: 1407

TEST NO: 68975

PARTS REQUIRED

1	-	CC161/CC77	PLUNGER BRACKET
1	-	CC161/CC118	TENSION SPRING
1	-	CC161/CC121	FIXED STOP
1	-	CC161/AC51	LOCATING PIN
1	-	CC161/AC138	PIVOT BRACKET

CC1 AND CC2 MACHINE SPARE PARTS LIST

CC161/CC62	BUFFER SLEEVE
CC161/CC63	PISTON FOR BUFFER
CC161/CC68	FIXING PLATE FOR EXHAUST CONNECTION
CC161/CC69	HARDWOOD STRIP FOR EXHAUST CONNECTION
CC161/CC71/A	EXHAUST EXTENSION
CC161/CC72	EXHAUST CONNECTION
CC161/CC77	PLUNGER BRACKET
CC161/CC101/A	HORIZONTAL SLIDING ARM (CC1)
CC161/CC102	BASE FOR SLIDE ROLLERS
CC161/CC103	COVER FOR SLIDE ROLLERS L.H.
CC161/CC104A	COVER FOR SLIDE ROLLERS R.H.
CC161/CC105	INDEX PLATE
CC161/CC107	BOX FOR PUSH BUTTONS AND TERMINAL BOX
CC161/CC108	HORIZONTAL SLIDING ARM (CC2)
CC161/CC109	STOP BAR (CC1)
CC161/CC112	KEEP PLATE
CC161/CC114	LOCKING PAD FOR CANTING
CC161/CC115	STOP BUFFER SPRING
CC161/CC116	SCRAPER PLATE
CC161/CC117	FELT WIPER
CC161/CC118	TENSION SPRING
CC161/CC119	STRAP FOR TENSION SPRING
CC161/CC120	FILBOE FOR STOP BAR
CC161/CC121	FIXED STOP
CC161/CC122	ADJUSTABLE STOP
CC161/CC123	SLIDE ROD (CC1)
CC161/CC124	SLIDE ROD (CC2)
CC161/CC125	STOP BAR (CC2)
CC161/CC143	STUD FOR HANDLE
CC161/CC253	INDEX PLATE

CC161/AC1	MAIN FRAME
CC161/AC2	MITRE GEAR BRACKET
CC161/AC3	ELEVATING SLIDE
CC161/AC5	ELEVATING MITRE
CC161/AC6	LOCKING PAD
CC161/AC7	KEY FOR ELEVATING SLIDE
CC161/AC8	END BEARING PLATE FOR HANDWHEEL SHAFT
CC161/AC50	KEY FOR ELEVATING SCREW
CC161/AC51	LOCATING PIN
CC161/AC52	LCOKNUT FOR MITRE
CC161/AC53	ELEVATING SCREW
CC161/AC54	HANDWHEEL SHAFT
CC161/AC55	LOCKING SCREW
CC161/AC56	STRIP FOR ELEVATING SLIDE KEY
CC161/AC74	GUARD
CC161/AC98	COVER PLATE FOR BODY
CC161/AC131/A	STUD FOR ROLLER
CC161/AC132/A	ADJUSTING STUD FOR ROLLER
CC161/AC138	PIVOT BRACKET
CC161/AC139	EYEBOLT BRACKET
CC161/AC140	PIVOT PIN
CC161/AC151	18" SAW GUARD EXTENSION
CC161/AC419	18" SAW GUARD DOOR
CC161/AC422	HANDWHEEL SHAFT 3' - 10" LONG
CC161/AC423	LOCKING SCREW 3' - 5" LONG

CC161/ZE1	STATOR FRAME
CC161/ZE2	FRONT BEARING HOUSING
CC161/ZE3	REAR BEARING HOUSING
CC161/ZE4	ROTOR FAN
CC161/ZE5	BRAKE SHOE

CC161/ZE8	COWL FOR FAN
CC161/ZE9	18" SAW GUARD
CC161/ZE51	ROTOR SHAFT
CC161/ZE52	ROTOR SHAFT
CC161/ZE54	PACKING PLATE FOR STATOR FRAME
CC161/ZE58	SPACING COLLAR

CC161/1	COLLAR
CC161/1A	EYEBOLT
CC161/1A	PEG
CC161/2A	PLUNGER CAP
CC161/2A	PLUNGER LEVER
CC161/2C	BALL BEARING LOCKNUT
CC161/3	SPRING
CC161/3A	SAW COLLAR
CC161/3B	SAW COLLAR
CC161/4	PLUNGER
CC161/4A	TWO BALL HANDLE
CC161/4A	STAR HANDWHEEL
CC161/4C	TWO BALL HANDLE
CC161/7B	COLLAR
CC161/17B	HANDWHEEL

CC161/CD42	LOCKNUT FOR SAW SPINDLE
CC161/CD432	HANDLE
CC161/CF129	AIR BUMPER RETURN SPRING
CC161/FG933	FISCHER ROLLER BEARING
CC161/MK37	COLLAR FOR RAISING SCREW
CC161/PJ93	NUT FOR SAW SPINDLE
CC161/QE5	BLANK FOR MITRE WHEELS

CC161/QK1	MUSHROOM BUFFER
CC161/SKF0.8	SKEFCO BEARING
CC161/SKF014	SKEFCO BEARING
CC161/SKF1306	SKEFCO BEARING
CC161/SKF6210	SKEFCO BEARING
CC161/YM27	DISTANCE PIECE
CC161/ZEM3	RAM FOR MOTOR
CC161/ZEM51	ROTOR SHAFT

FOR REPLACEMENT PARTS, TOOLS AND ACCESSORIES

CONTACT SPARE PARTS DEPARTMENT

WADKIN GREEN LANE ROAD
LEICESTER
LE5 4PF

TEL NO : (44) 0116 2769111
FAX NO : (44) 0116 2461021

Wadkin

Cross Cutting and Trenching Machines

Types CC · CD

	CC1	CC2	CD1 For material 12½" × 5½"	CD2 For material 21" × 5½"	CD3 For material 16" × 7"	CD4 For material 44½" × 5½"	CD5 For material 40" × 7"
Standard diameter of saw	18"	18"	18"	18"	24"	18"	24"
Will cut off	21" × 5½" deep	27" × 5½" deep	12½" × 5½" deep	21" × 5½" deep	16" × 7" deep	44½" × 5½" deep	40" × 7" deep
Will cut off	23" × 5" deep	29" × 5" deep	14¼" × 5" deep	22¾" × 5" deep	19" × 6" deep	46¼" × 5" deep	40½" × 6" deep
Will cut off	25" × 4" deep	31" × 4" deep	16¼" × 4" deep	24¾" × 4" deep	20½" × 5" deep	48¼" × 4" deep	41½" × 5" deep
Will cut off	26" × 3" deep	32" × 3" deep	17½" × 3" deep	26" × 3" deep	21¾" × 4" deep	49½" × 3" deep	42" × 4" deep
Will cut off	26½" × 2" deep	32½" × 2" deep	18¼" × 2" deep	26¾" × 2" deep	—	50¼" × 2" deep	—
Will cut off	27½" × 1" deep	33" × 1" deep	18½" × 1" deep	27" × 1" deep	—	50½" × 1" deep	—
Will straight cut off when saw is canted 45° up to	22" × 1¾" deep	27" × 1¾" deep	—	—	13¼" × 7" deep	—	30" × 7" deep
Will straight cut off when saw is canted 30° up to	22" × 4" deep	27" × 4" deep	9" × 5½" deep	15" × 5½" deep	14⅞" × 6" deep	31½" × 5½" deep	31½" × 6" deep
Will cut off when saw is swivelled 45° up to	12" × 5½" deep	16½" × 5½" deep	10¼" × 5" deep	16¼" × 5" deep	15⅞" × 5" deep	32¾" × 5" deep	32½" × 5" deep
Will cut off when saw is swivelled 45° up to	13½" × 5" deep	17¾" × 5" deep	11½" × 4" deep	17¾" × 4" deep	16⅝" × 4" deep	34" × 4" deep	33¼" × 4" deep
Will cut off when saw is swivelled 45° up to	15" × 4" deep	19¼" × 4" deep	12½" × 3" deep	18½" × 3" deep	17⅜" × 3" deep	35" × 3" deep	34" × 3" deep
Will cut off when saw is swivelled 45° up to	15¾" × 3" deep	20" × 3" deep	13" × 2" deep	19" × 2" deep	17¾" × 2" deep	35½" × 2" deep	34⅜" × 2" deep
Will cut off when saw is swivelled 45° up to	16" × 2" deep	20¼" × 2" deep	13¼" × 1" deep	19¼" × 1" deep	18¼" × 1" deep	35¾" × 1" deep	37⅛" × 1" deep
Will cut off when saw is swivelled 45° up to	16¾" × 1" deep	20½" × 1" deep					
Will straight groove up to 2⅜" deep in material up to	20" wide	25¾" wide	10¾" wide	20" wide	Not available	Not available	Not available
Will groove when carriage is swivelled to 45° up to 2⅜" deep in material ..	13¼" wide	17¾" wide	10¾" wide	20" wide	Not available	Not available	Not available
Maximum rise and fall of saw ..	9½"	9½"	9½"	9½"	9½"	9½"	9½"
Speed of saw spindle in r.p.m. for 50 cycles electric supply	3,000	3,000	3,000	3,000	1,500	3,000	1,500
Diameter of saw spindle for saws ..	1¼"	1¼"	1¼"	1¼"	1¼"	1¼"	1¼"
Horse-power of motor	5	5	5	5	6	5	6
Overall length of each section of all-metal table to cut off up to 8' 0" long using stop bar	8' 5"	8' 5"	8' 5"	8' 5"	8' 5"	8' 5"	8' 5"
Approximate nett weight of machine	1,150 lbs.	1,240 lbs.	980 lbs.	1,040 lbs.	1,060 lbs.	1,100 lbs.	1,100 lbs.

INSTALLATION

The machines are despatched from the Works with all bright surfaces greased to prevent rusting. This must be removed by applying a cloth damped in paraffin or turpentine.

FOUNDATIONS

$\frac{5}{8}$" diameter foundation bolts should be used to bolt the machine down to the floor. If the mill floor consists of 6" solid concrete, no special foundation is necessary. Rag type foundation bolts may be used in the position shown on the foundation plan. 6" to 8" square holes should be cut in the concrete and the machine carefully levelled. It is essential that the table be fixed absolutedly parallel with the saw carriage. This should be tested in the full travel of the slide before finally bolting down the machine. Fences must be at right angles to the saw. Finally the machine should be grouted in with liquid cement.

DUST EXTRACTION EQUIPMENT

All machines are fitted with a $4\frac{1}{2}$" outside diameter exhaust connection. On CC and CD machines it is necessary to provide for raising, lowering, and angular movement of the saw when attaching dust extraction piping.

WIRING

It is necessary to fit a triple pole isolating switch adjacent to the machine to enable the electrical gear to be readily isolated for inspection purposes. If desired, it can be obtained from Wadkin Ltd. to special order. The mains entry is shown in the general view of the machine and the three mains wires should be connected to the terminals L1, L2, L3, as shown on the wiring diagram, Page 15, and connect the machine to earth.

LUBRICATION (APPLICABLE TO ALL MACHINES)

POINTS A

on the general views of the machines are grease lubrication points to the saw motor, 4 to 6 depressions of the greasegun every 3 to 6 months is sufficient to keep the motor bearings well lubricated. Too much lubricant will cause the bearings to run hot. Use WADKIN Ball Bearing Grease, Grade L6.

POINTS B

on the general views of the machines are oil lubrication points. Oil all moving parts once per day using WADKIN Oil, Grade L4.

The oil well for the raising and lowering gears should be filled with oil before putting the machine to use, and the oil level checked each week.

NOTE:

The carriage rollers are packed with grease on assembly and no further lubrication is necessary.

Oil round the top of the raising and lowering column on CC and CD machines each day.

The circular steel carriage tracks and rollers must be thoroughly cleaned periodically free from corrosion with petrol or paraffin.

If it is desired to use lubricants other than WADKIN, the equivalents are listed below:

WADKIN BALL BEARING GREASE L6.	EQUIVALENT:	SHELL MEX AND B.P. LTD. ALVANIA GREASE NO. 3 MOBIL OIL CO. MOBILUX GREASE NO. 2 CASTROL. SPHEEROL S.
WADKIN OIL, GRADE L4.	EQUIVALENT:	SHELL MEX AND B.P. LTD. VITREA OIL 33 MOBIL OIL CO. VACTRA OIL (HEAVY MEDIUM) CASTROL. PERFECTO NN.

CD MACHINE SAW CARRIAGE

The saw carriage moves on four ball bearing rollers on circular steel tracks. These rollers are correctly positioned on assembly, but should any further adjustment be necessary, it should be noted that only the two rollers on the saw guard side of the carriage are adjustable. Fig. 3 shows the roller eccentric screwed spindle. Release the grubscrew, slacken the nut and adjust the eccentric screwed spindle with the square shank. Firmly relock the grubscrew and hexagon nut before putting the machine into use. Long tension springs fitted to assist the return stroke of the saw are adjusted by the hexagon nuts.

The forward stroke of the carriage is controlled by a spring fitted on a stop rod. This rod is fitted along the top of the saw carriage arm at the opposite end to the saw motor. The spring is adjusted by a sliding stop fitted on the rod; by releasing the screw the stop can be moved along the bar to the required position and clamped with the screw.

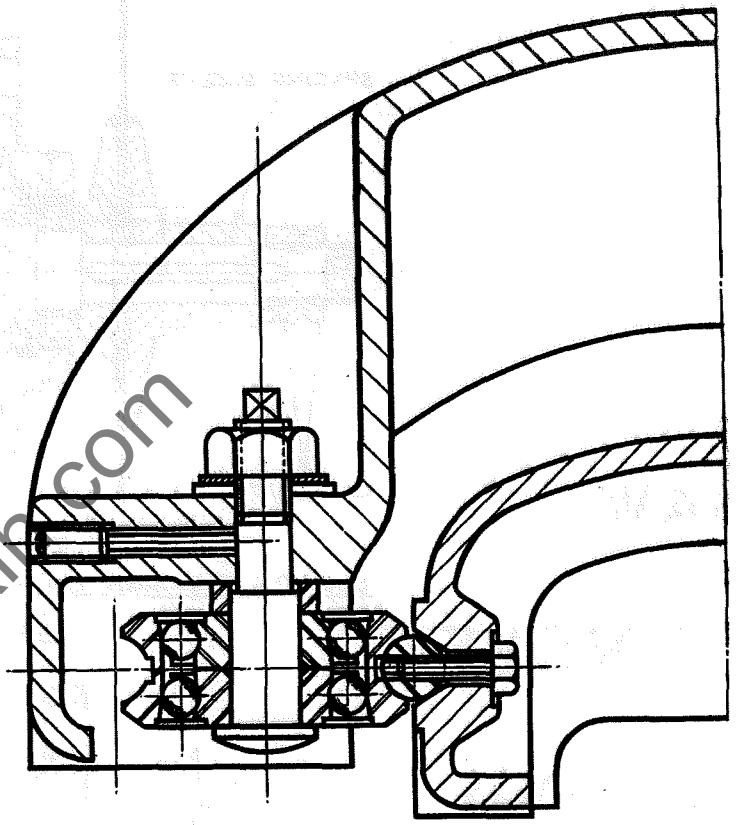
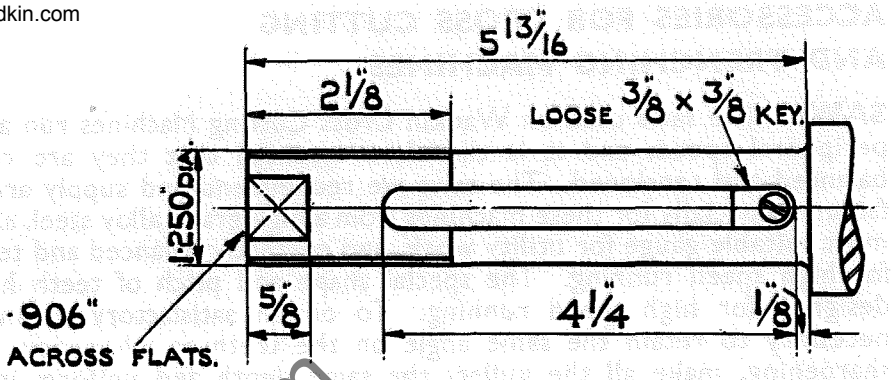


FIG. 3. DIAGRAM SHOWING CARRIAGE ROLLER MOUNTING.

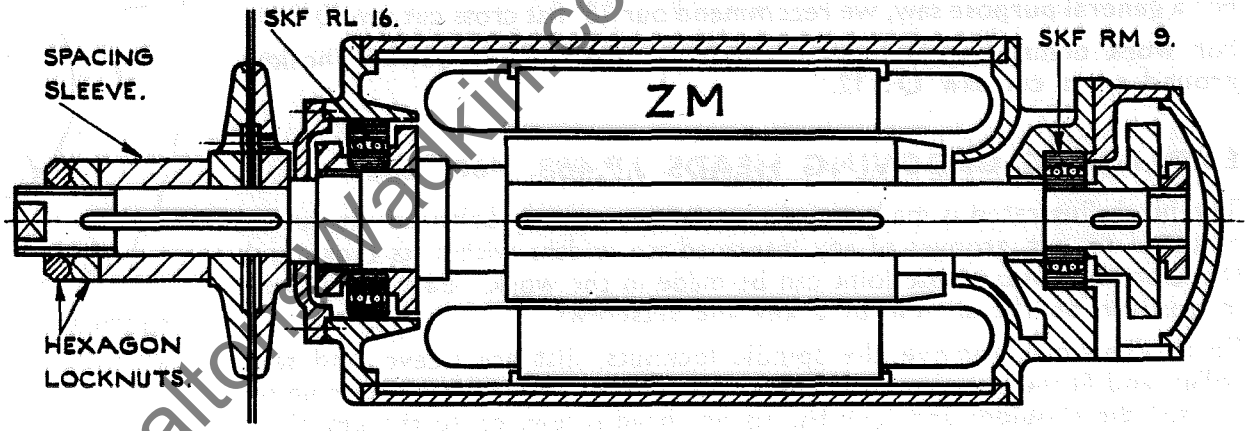
PNEUMATIC BUMPER

A similar type bumper to that described on Page 4 is fitted. Adjustment is by means of a large hexagon head screw, fitted with a locknut. It should be noted that the screw head must be adjusted sufficient only to engage with the buffer.

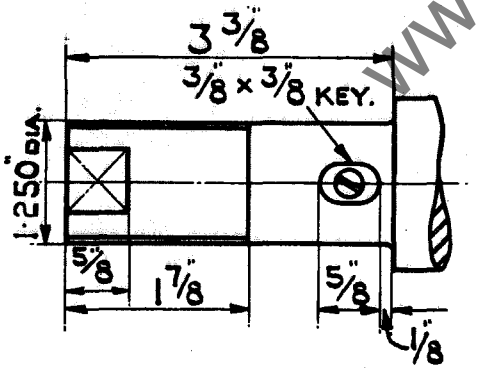
SAW SPINDLE MOTORS



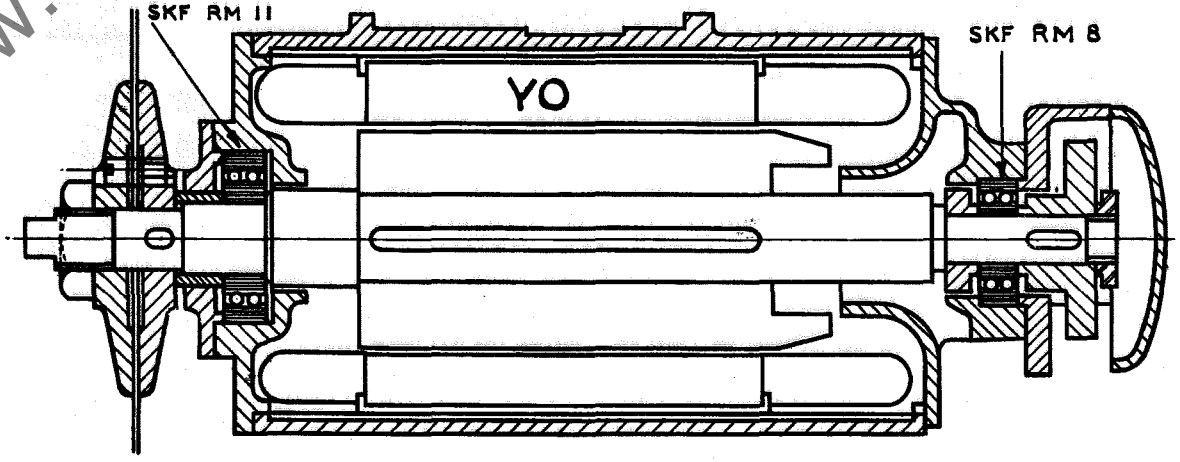
SPINDLE END, 5 H.P. MOTOR, USED ON CC1-CC2, CD1-CD2-CD4.



SECTION THROUGH 5 H.P. MOTOR TYPE ZM USED ON CC1-CC2, CD1-CD2-CD4.



SPINDLE END, 6 H.P. MOTOR, USED ON CD3-CD5,



SECTION THROUGH 6 H.P. SAW MOTOR TYPE YO USED ON CD3-CD5.

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. The cutting circle is 11″ diameter and will cut grooves ½″ to 2″ wide by using varying width cutters. The Head will groove to a maximum depth of 1¼″. Remove the spindle locknuts, distance sleeve, and saw collars, and fit the Head close up to the spindle shoulder. Replace the distance sleeve and lock up the whole assembly with the spindle locknuts.

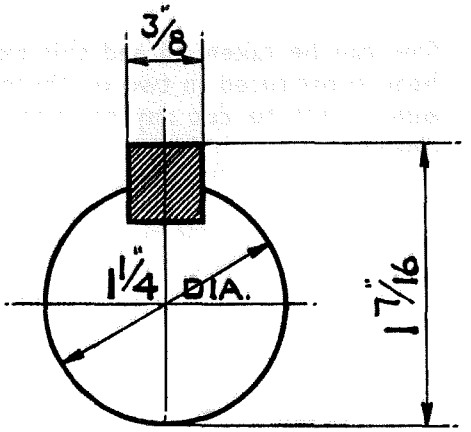
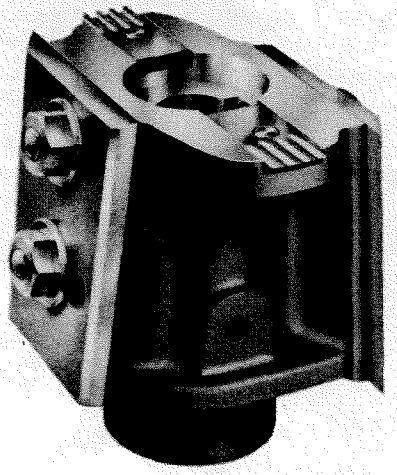


DIAGRAM OF SPINDLE END FOR GROOVING HEADS.

HALF LAPPING AND BEVELLING HEAD J.P.502

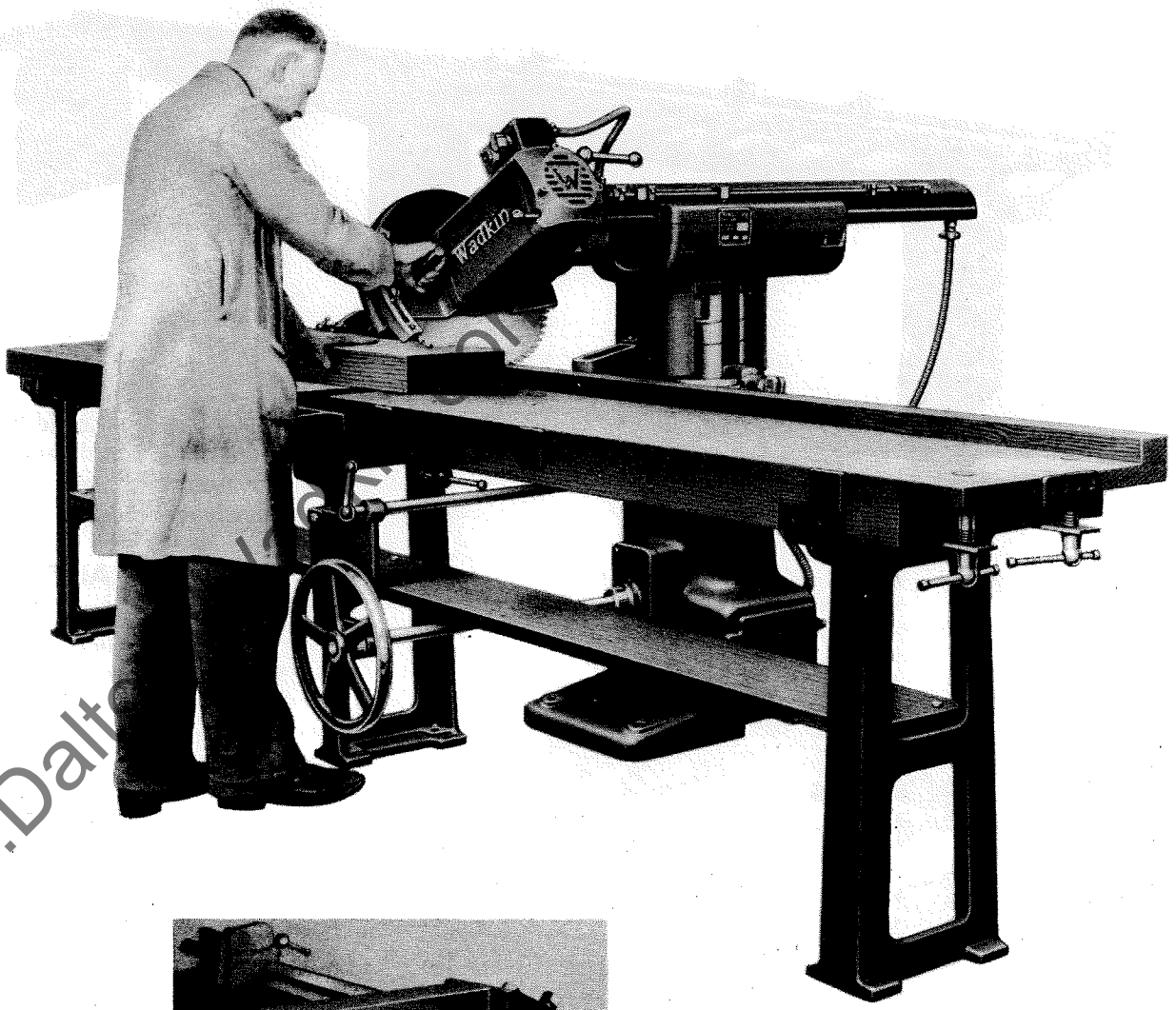
This Head is supplied for use where a wide cut is required at the end of the timber as in half lapping. It can also be used for heavy birdsmouthing. The Head has a cutting circle of 6½″ diameter and the cutters have a maximum width of 4½″. Note a special saw guard is necessary for machines using this type of head. Remove the spindle locknuts, distance sleeve, and saw collars, and *fit the loose key* supplied in the keyway. Fit the Head up to the spindle shoulder and lock in position with the hexagon locknut which fits inside the recess in the Head. A special box spanner is supplied for this locknut.



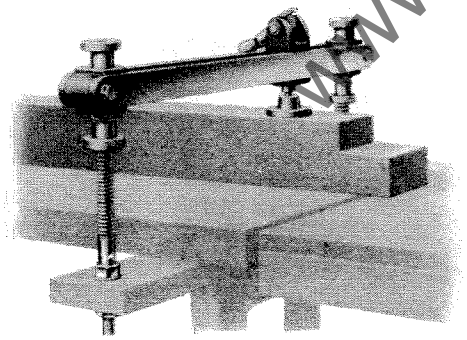
J.P.502.

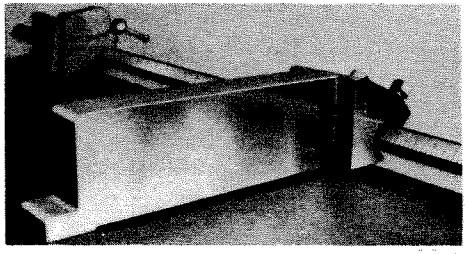
As an alternative to the all metal table type XT, we can supply drawings to enable the customer to build his own wood table, using legs supplied by WADKIN Ltd. A view of such a table is shown on this page.

Drawing No. CC31 gives particulars of construction for a wood table suitable for machines CC1-CD1-CD2-CD3. Drawing No. CC31/A gives particulars of construction for a wood table suitable for machining type CC2.

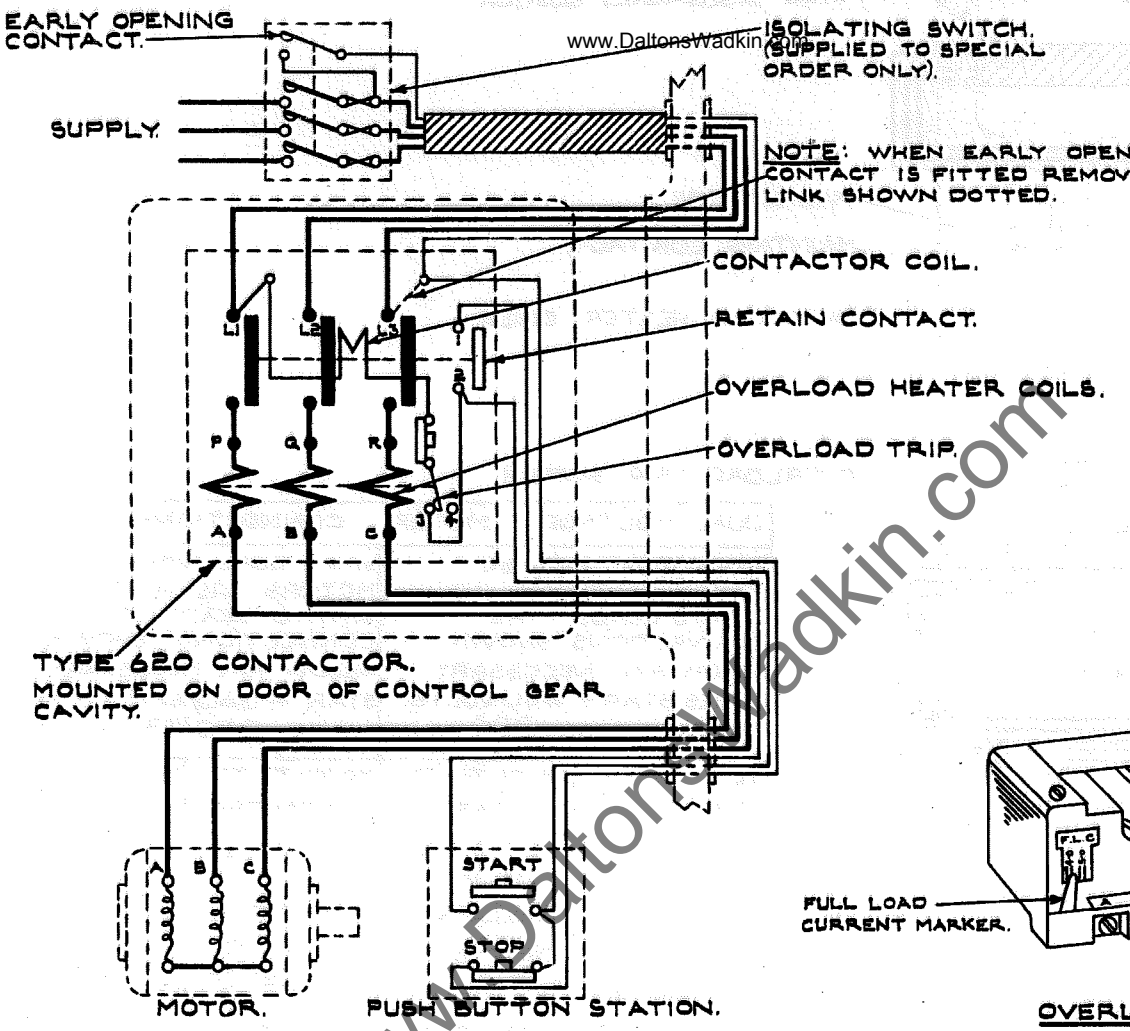


LEVER CRAMP SUITABLE FOR MOUNTING ON WOOD TABLE.





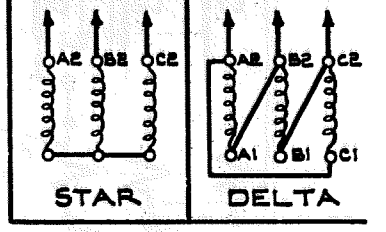
ADJUSTABLE FENCE FOR MULTIPLE CUTTING. SUITABLE FOR MOUNTING ON WOOD TABLE.



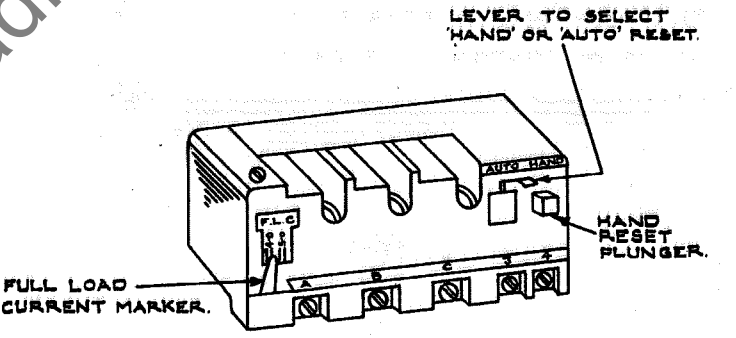
DUAL VOLTAGE CONNECTIONS.

WHEN DUAL VOLTAGE MOTORS ARE SUPPLIED THE CONNECTIONS SHOWN BELOW ARE NECESSARY:

STAR - 340/440 VOLTS.
DELTA - 200/250 VOLTS.



D.863



OVERLOAD PROTECTION.

INSTALLATION INSTRUCTIONS.

FIT ISOLATING SWITCH NEAR MACHINE SO THAT THE ELECTRICAL GEAR MAY READILY BE ISOLATED FOR INSPECTION PURPOSES. BRING SUPPLY CABLES TO ISOLATING SWITCH AND TO L1-L2-L3 AT CONTACTOR THROUGH CONDUIT WHICH SHOULD BE SCREWED INTO THE MACHINE AND SECURED BY MEANS OF LOCKNUTS. ENSURE THAT THE DIRECTION OF ROTATION IS CORRECT BEFORE PUTTING THE MACHINE INTO SERVICE, TO REVERSE ROTATION INTERCHANGE L1 AND L3 AT CONTACTOR.

OPERATING INSTRUCTIONS.

TO START MACHINE: CLOSE ISOLATING SWITCH AND PRESS 'START' BUTTON. TO STOP MACHINE: PRESS 'STOP' BUTTON. TO LOCK OFF MACHINE: PRESS AND TURN 'STOP' BUTTON, THIS MUST BE RELEASED BEFORE A START CAN BE MADE.

OVERLOAD.

SHOULD THE MACHINE STOP DUE TO OVERLOAD, WAIT FOR A SHORT TIME TO ALLOW THE HEATER COILS TO COOL THEN START IN THE USUAL MANNER. THE OVERLOADS ARE SET AT THESE WORKS AT 'AUTO' FOR AUTOMATIC RESET AFTER TRIPPING. IF SET AT 'HAND' THE PLUNGER ON THE OVERLOAD ASSEMBLY SHOULD BE DEPRESSED TO RESET.

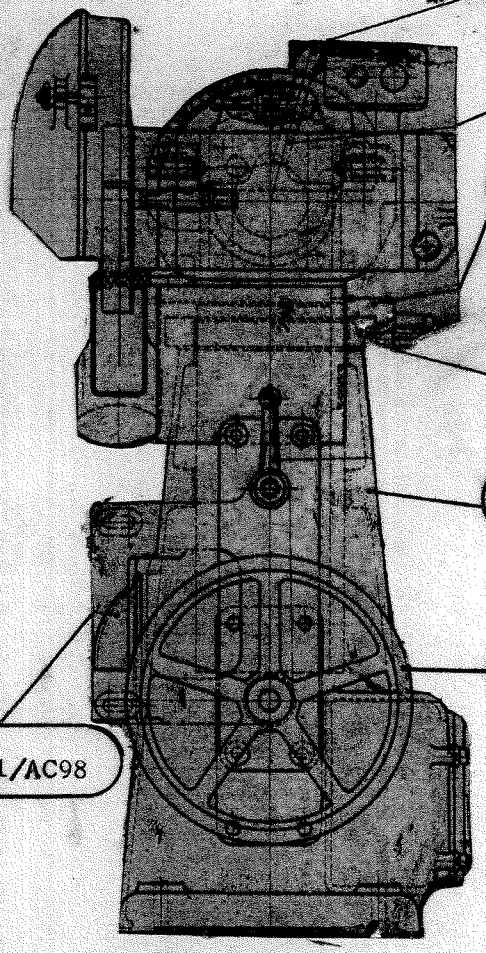
. . . blow away harmful dust, chips and dirt with a Wadkin Electric Blower

No motor can run at its maximum efficiency with its ventilating duct or control gear covered with dust and dirt. Sooner or later the resultant overheating will cause serious trouble.

Similarly, accumulations of chips and dust, in the mechanical parts of the machine can interfere with its efficiency. A few minutes a week for blowing down all Woodworking Machinery will be amply repaid in better and easier running, in increased life, and freedom from breakdown.

Blowers can be supplied for single phase A.C. or Direct Current for any voltage up to 250.

Please state voltage when ordering.



CC161/ 4A

CC161/CC114

CC161/AC7

CC161/AC56

CC161/AC1

CC161/ 17B

CC161/AC98

FRONT VIEW OF MACHINE

CC161/CC105

CC161/ 3

CC161/CC77

CC161/ 2A

CC161/ 2A LEVER

CC161/ 4 PLUNGER

CC161/ZEM3

CC2 M/C CC161/CC108
CC1 M/C CC161/CC101/A

1¼" INTERNAL CIRCLIP

CC161/QK1

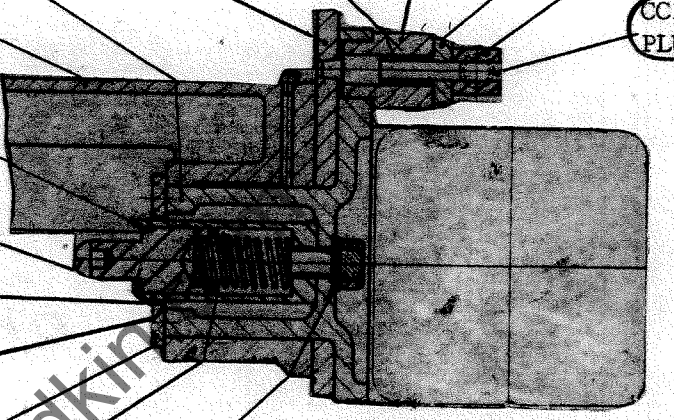
CC161/CC62

CC161/CC63

CC161/CC112

CC161/CF129

¾" SHAKEPROOF WASHER



SECTION THROUGH PNEUMATIC BUFFER

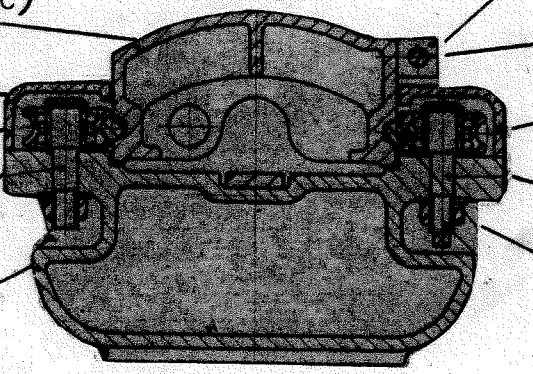
CC161/CC108 CC2 M/C
CC161/CC101/A CC1 M/C

CC161/FG933

CC161/CC103

CC161/AC131/A

CC161/CC102



CC161/CC120

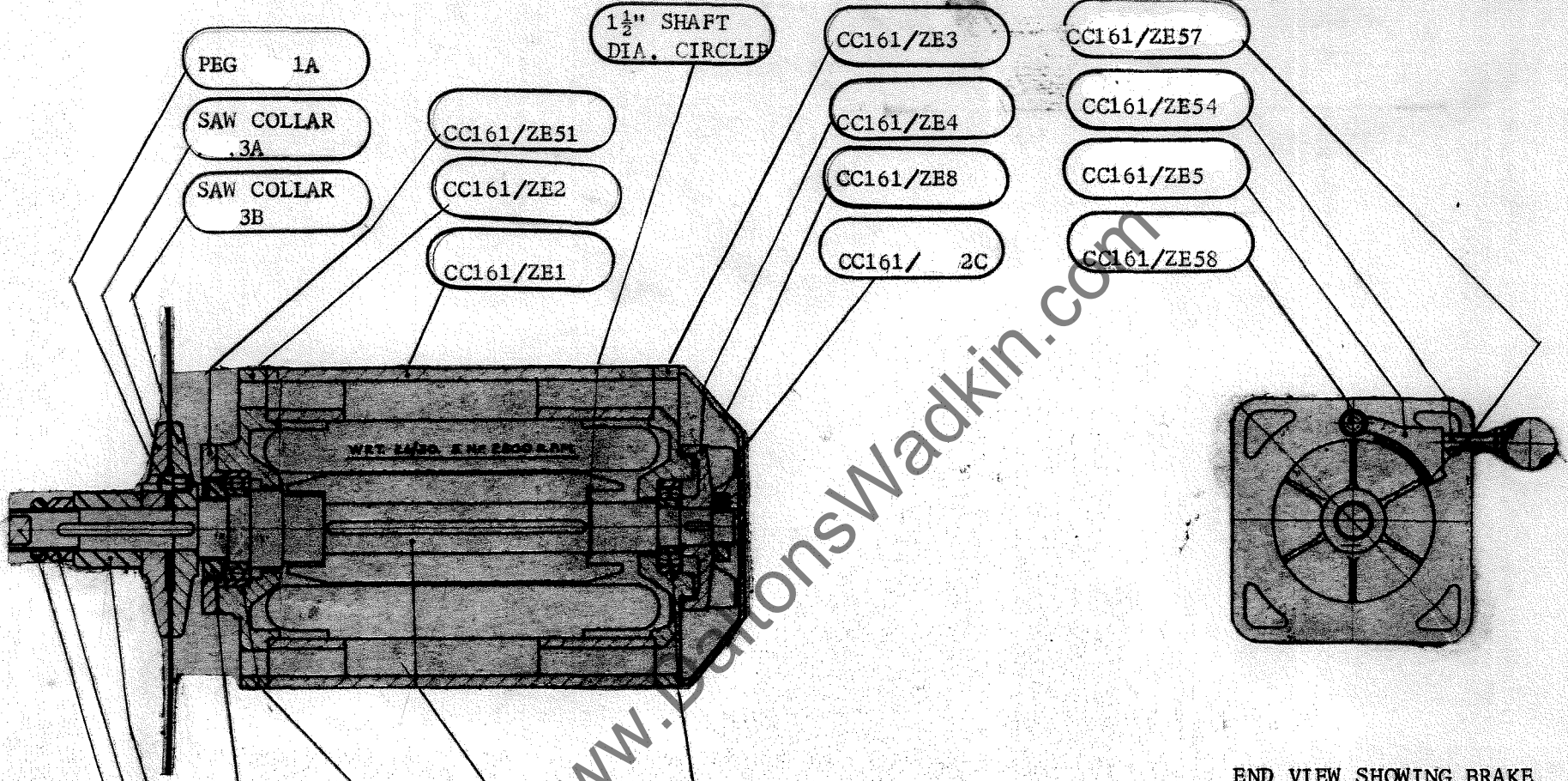
CC161/CC108
CC161/CC125

CC161/CC104/A

CC161/AC132/A

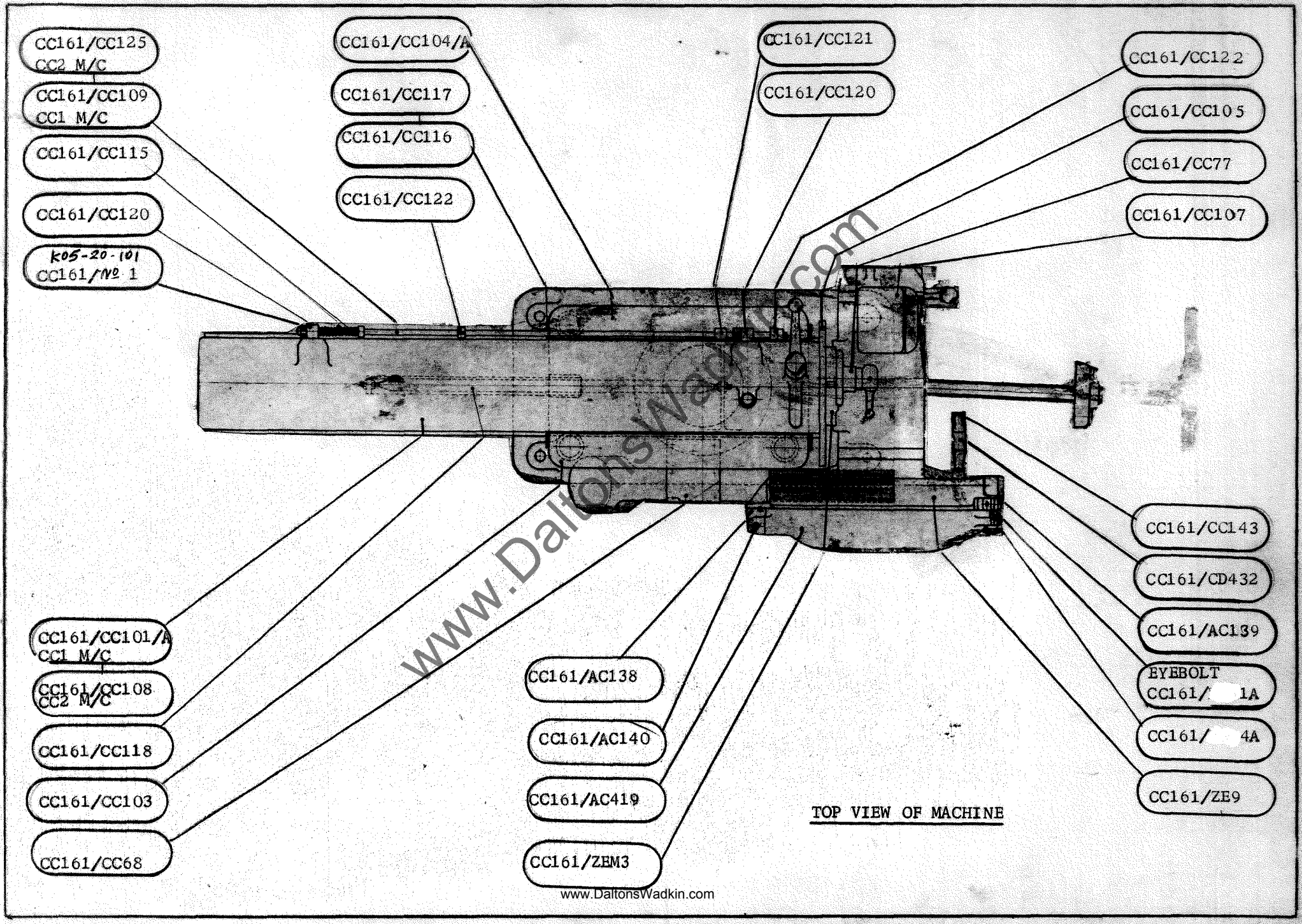
CC161/CC123
CC161/CC124

SECTION THROUGH SLIDE ROLLERS

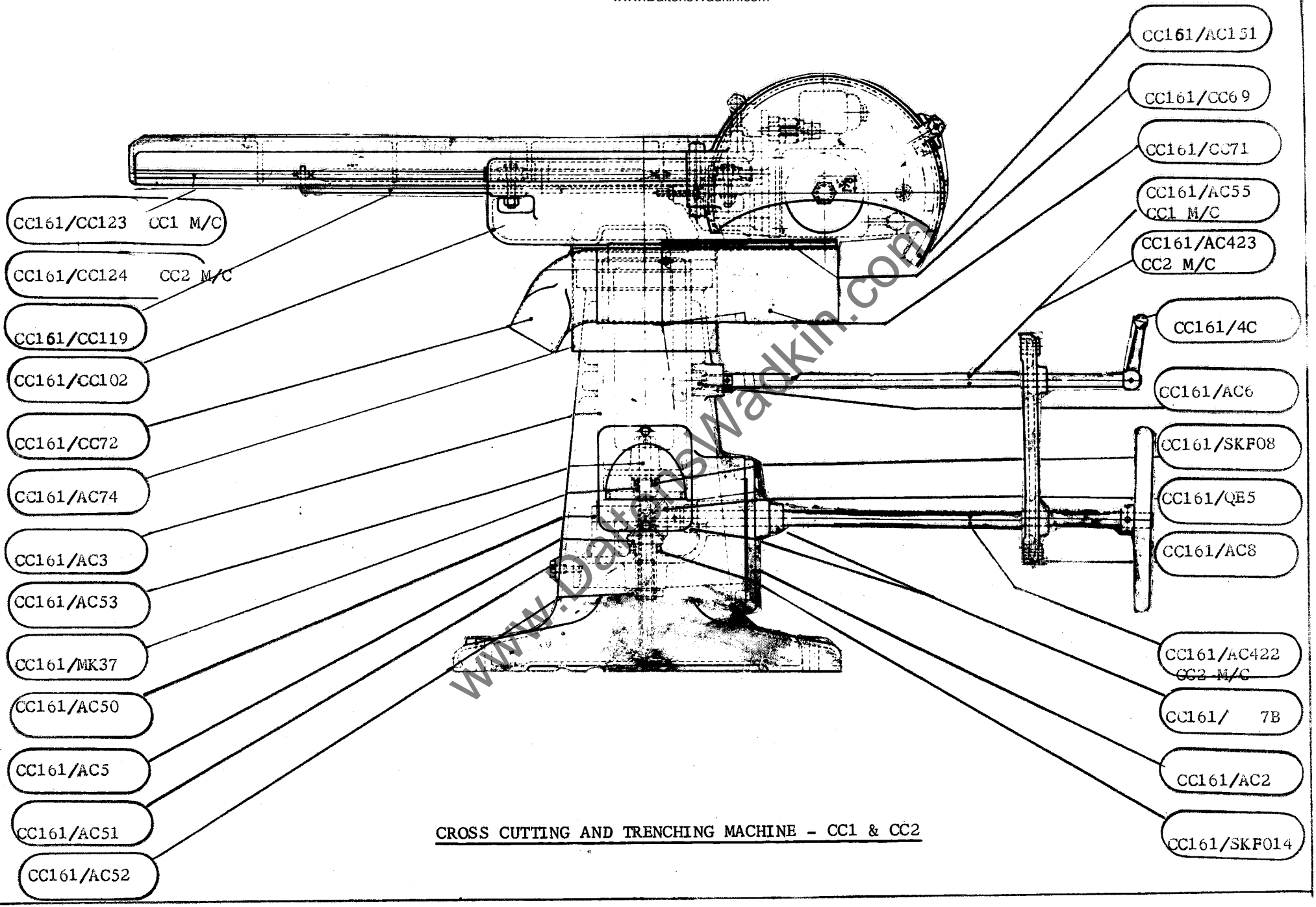


END VIEW SHOWING BRAKE

SECTION THROUGH TEFC. MOTOR



TOP VIEW OF MACHINE



CROSS CUTTING AND TRENCHING MACHINE - CC1 & CC2