

DEALER MASTER

OPERATING INSTRUCTIONS

and

PARTS LIST

15 CLAUSING

15-inch DRILL PRESSES

**STEP PULLEY DRIVE
MODELS:**

1620 thru 1785

CURRENT PRODUCTION

IMPORTANT: This manual applies to drills from serial No. 116200 — Do not use for drills with lower serial number.

CLAUSING

DIVISION OF ATLAS PRESS COMPANY

1915-2023 N. PITCHER ST., KALAMAZOO, MICHIGAN — U. S. A.



DIVISION, ATLAS PRESS COMPANY
KALAMAZOO, MICHIGAN 49001

After the Drill Press has been uncrated and while head is in the low position it may be more convenient to mount the motor before head is raised to the operating position.

STEP PULLEY DRILL PRESS MOTOR MOUNTING INSTRUCTIONS

A 1/2 or 3/4 HP, 1725 ball bearing motor is recommended to operate drill press.

1. Remove belt guard by loosening and removing the two hex head screws from front guard and the two from top of head casting .
2. Free cable clamp inside of head by loosening the screw on left side of head. Remove two machine screws from switch and pull switch out until wire is exposed.
3. Push power supply cord through back of drill press head, through cable clamp and out the switch opening. Wire switch according to diagram — see Fig. (1).

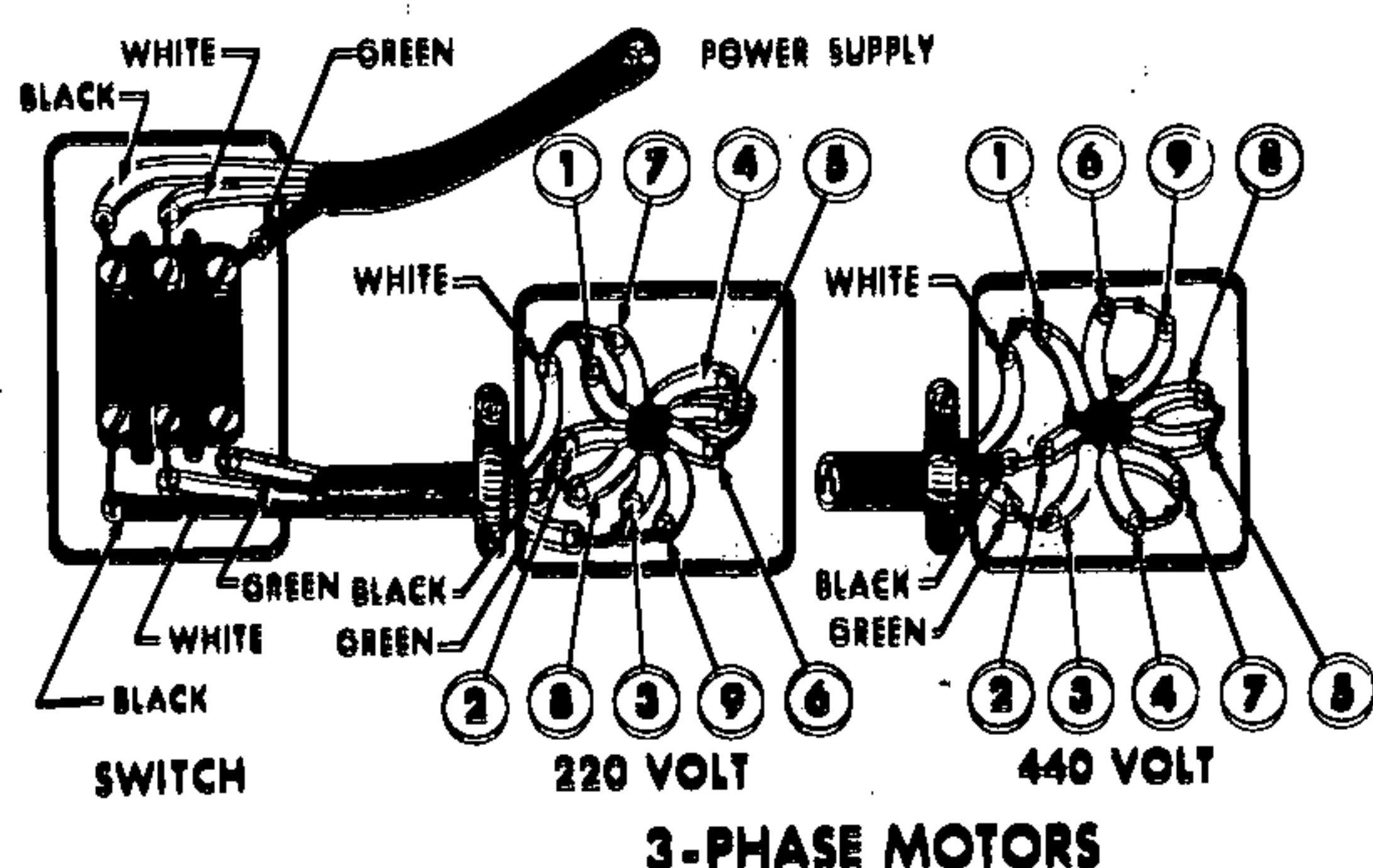
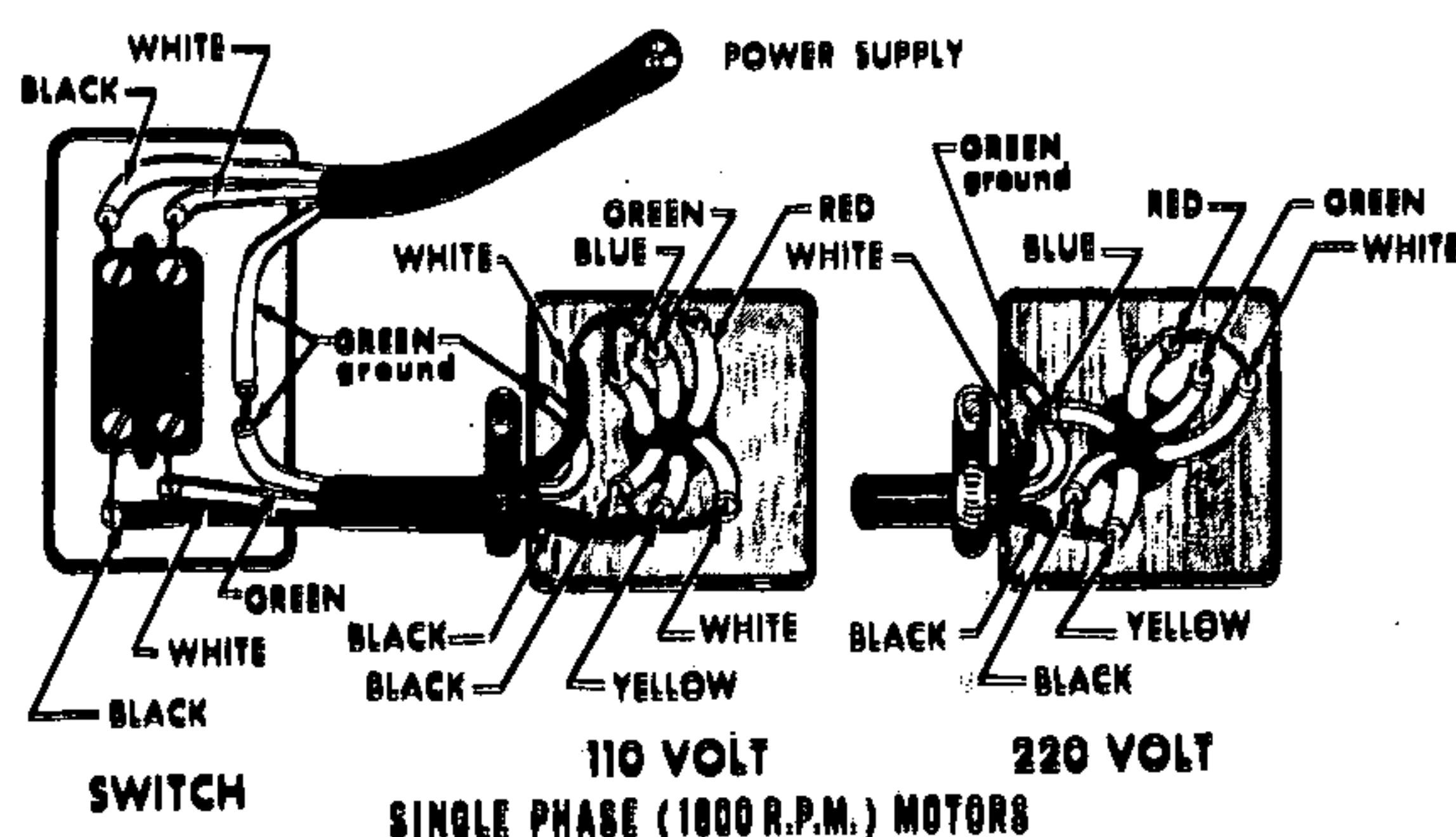
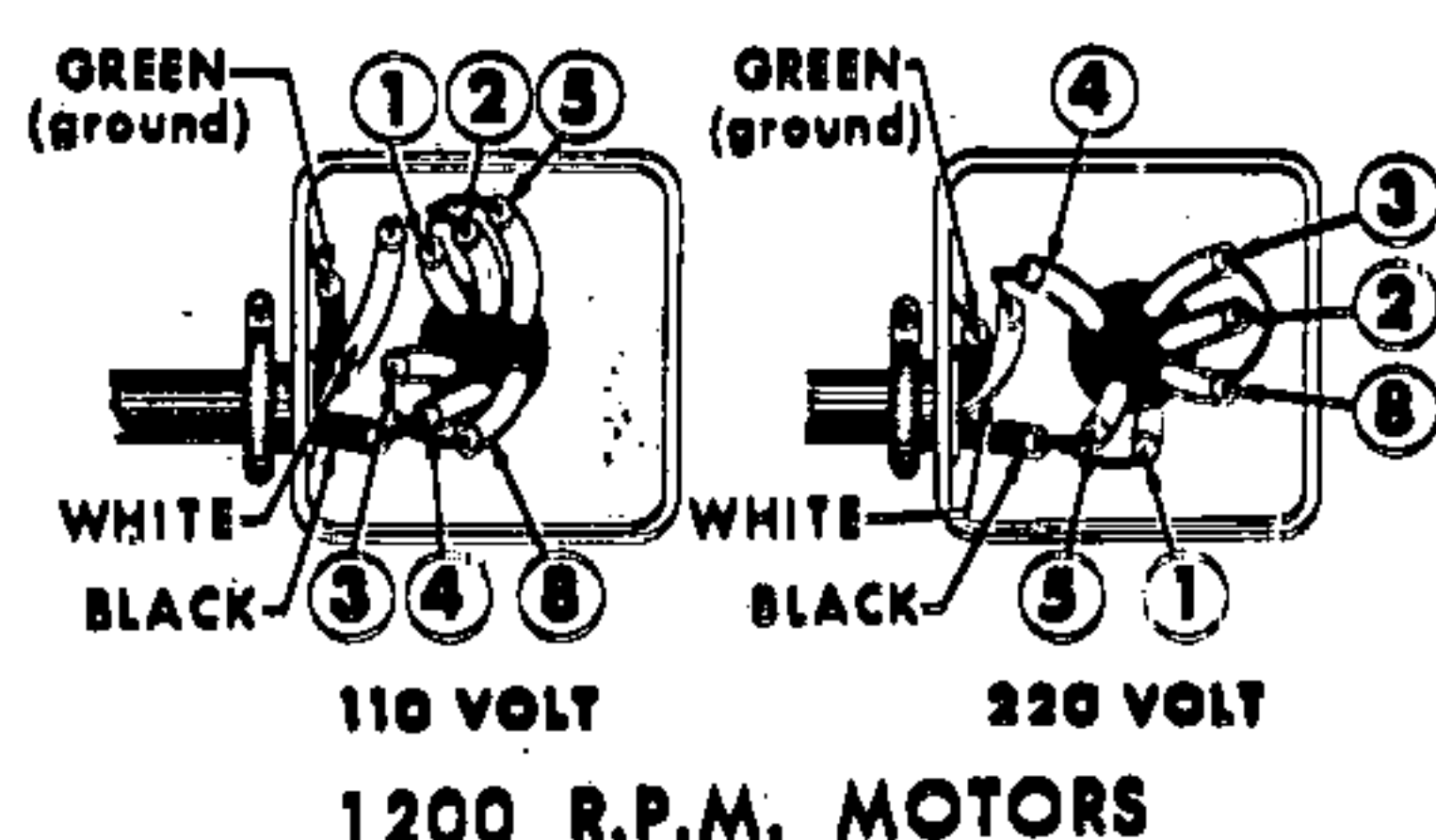


Figure 1

15" DRILL PRESSES

STEP PULLEY DRIVE

MODELS 1620 THROUGH 1785

SERIES — 16SC — 16ST

FROM SERIAL No. 116200 TO

JULY, 1968

FILE NO. 1621-3

4. Replace switch in head casting — tighten screws. While tightening cable clamp screw, lightly pull cords to remove slack. *The clamp holds cords away from quill and possible damage.*
5. Slide motor pulley on shaft with small step next to motor, and lock securely with set screw.
6. Fasten motor to motor support bracket with bolts furnished — position so top mounting bolts are in center of motor support bracket slots.
7. Place belt over pulleys and shift motor, or motor pulley, until pulleys are in line. Push motor base lock handle until belt is tight, then lock in place. Center motor so belt will not rub on column.
8. The motor should rotate clockwise viewed from pulley end — wire according to instructions shown in Fig. (1).
9. Replace belt guard and tighten screws.

LEVELING THE DRILL PRESS

Drill press should be level and rest solidly on floor; place shims underneath the three foundation holes to level the drill press. Equal pressure should be applied to foundation bolts to prevent distorting the base.

RAISING HEAD AND TABLE TO OPERATING POSITION

1. To position drill head, loosen clamp handle on left side of drill press.
2. Slide head up column to desired height and tighten clamp handle.
3. Loosen set screw in safety collar and slide it up column until it touches bottom of head, then tighten set screws.
4. To position table, loosen clamp handle on right side of table.
5. Slide table up column to desired height, and tighten clamp handle.

Generally, the normal and most convenient position for the head is about 8" to 10" from top of column.

IMPORTANT: Always keep safety collar locked under head.

LUBRICATION

Keep QUILL (A) and COLUMN (C) covered with a light film of oil — see Fig. (2). FEED SHAFT (B) grease weekly with No. 1 bearing grease — fittings under head.

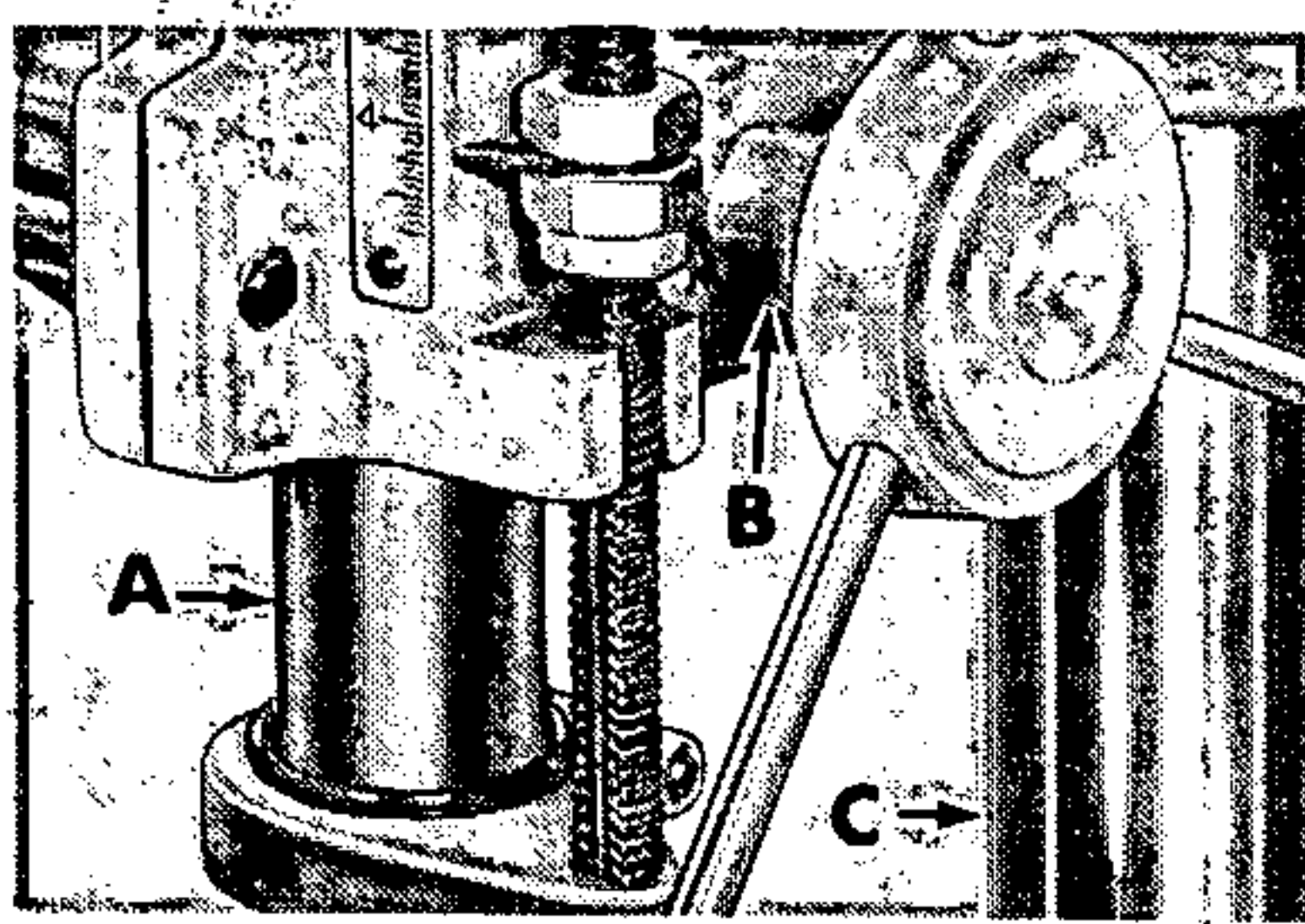


Figure 2

All bearings in the head and lower quill are sealed-for-life ball bearings and do not require lubrication. Occasionally grease spindle splines.

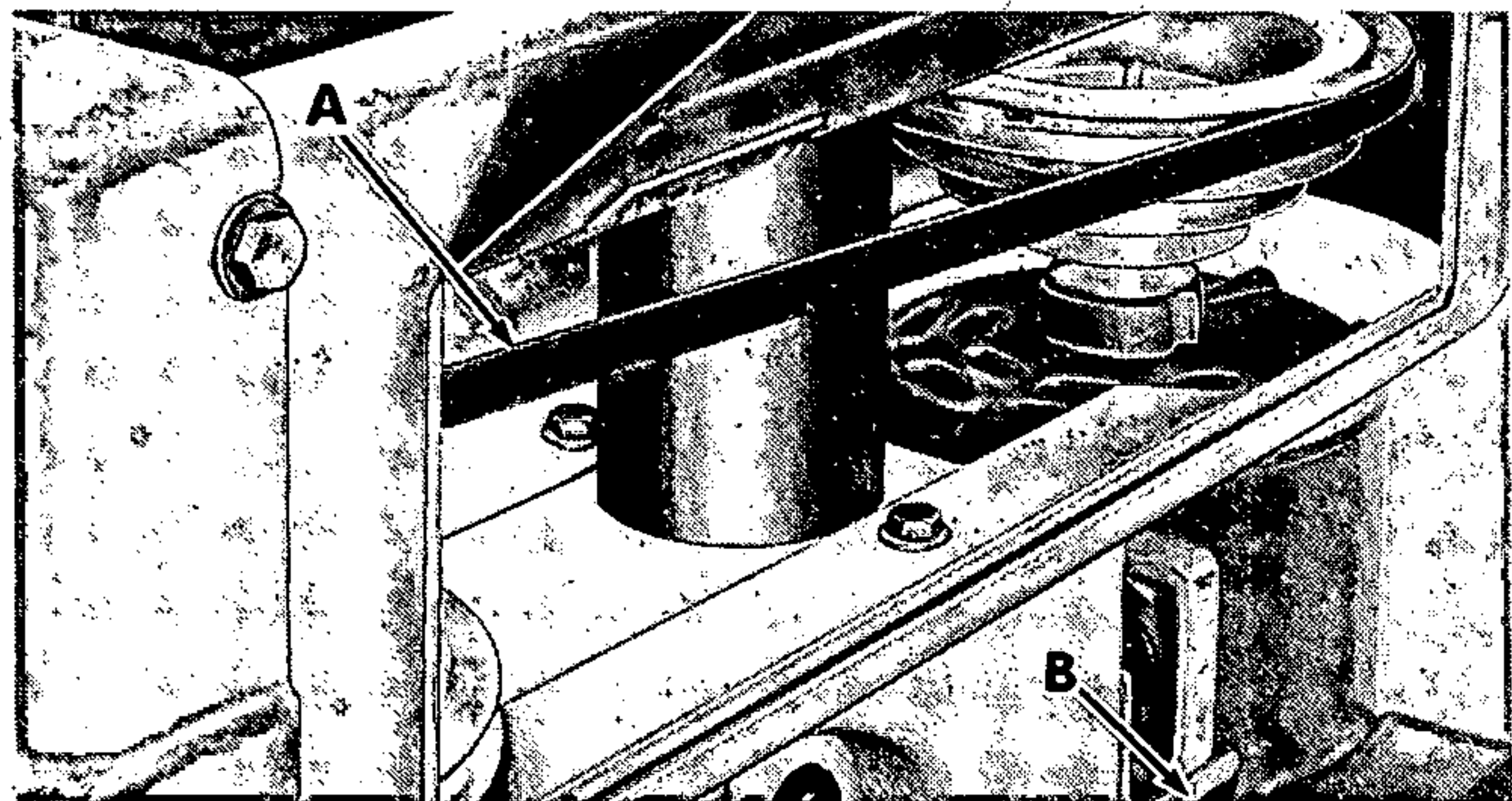


Figure 3

CHANGING SPINDLE SPEEDS

1. Raise door on guard. Loosen lock handle (B, fig. 3) on motor base, to release belt tension.
2. Shift belt (A) to step desired.
3. Push motor base lock handle until belt is tight and lock in place.

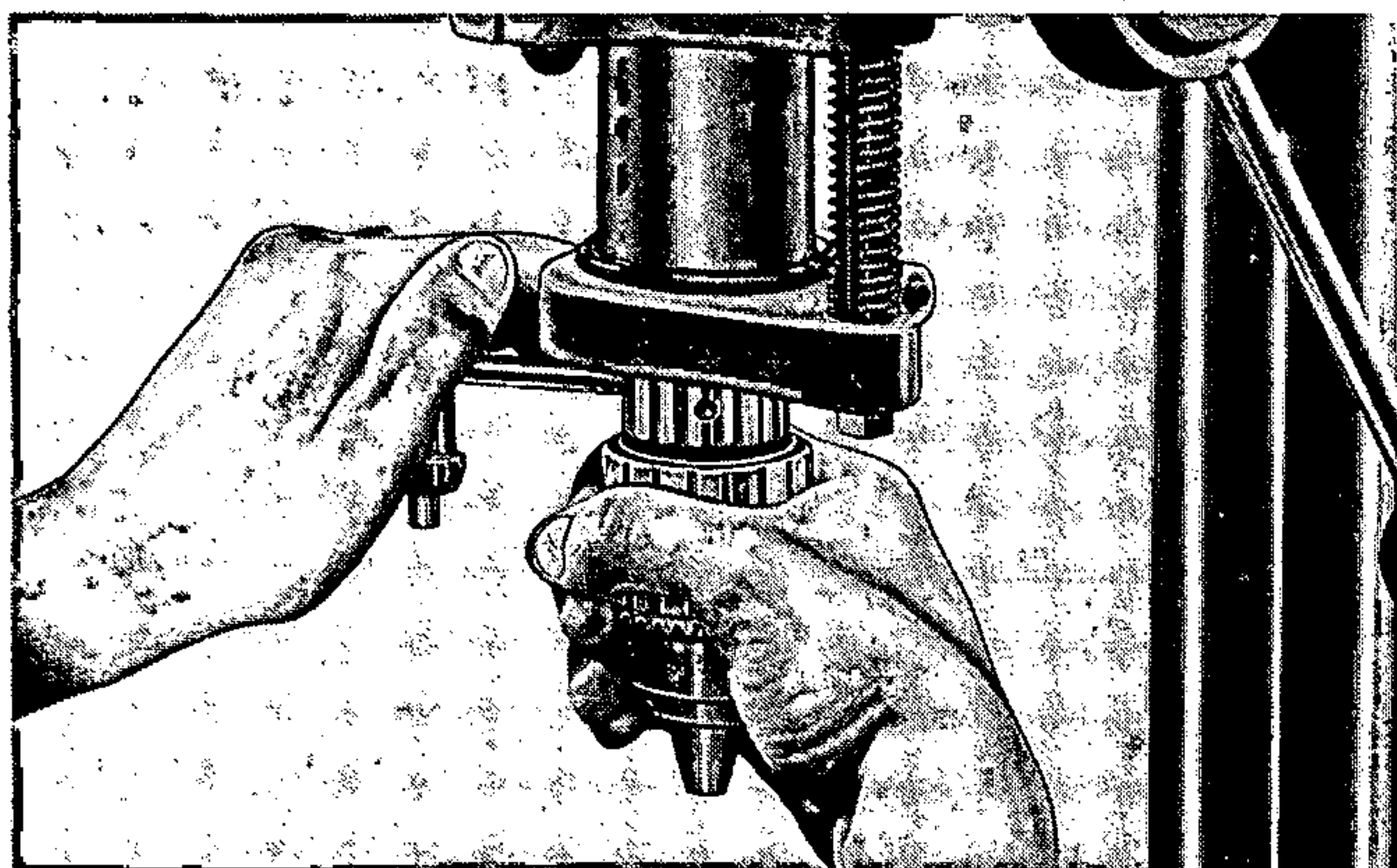


Figure 4

REMOVING CHUCK

Insert chuck wrench handle in hole in chuck collar. While holding chuck in right hand, strike wrench handle with heel of left hand in a clockwise direction — see Fig. (4). Continue turning collar to remove chuck from spindle.

Important — Always clean spindle taper and chuck taper bore before replacing chuck. Chips or dirt score the spindle and cause chuck to slip and run out of true.

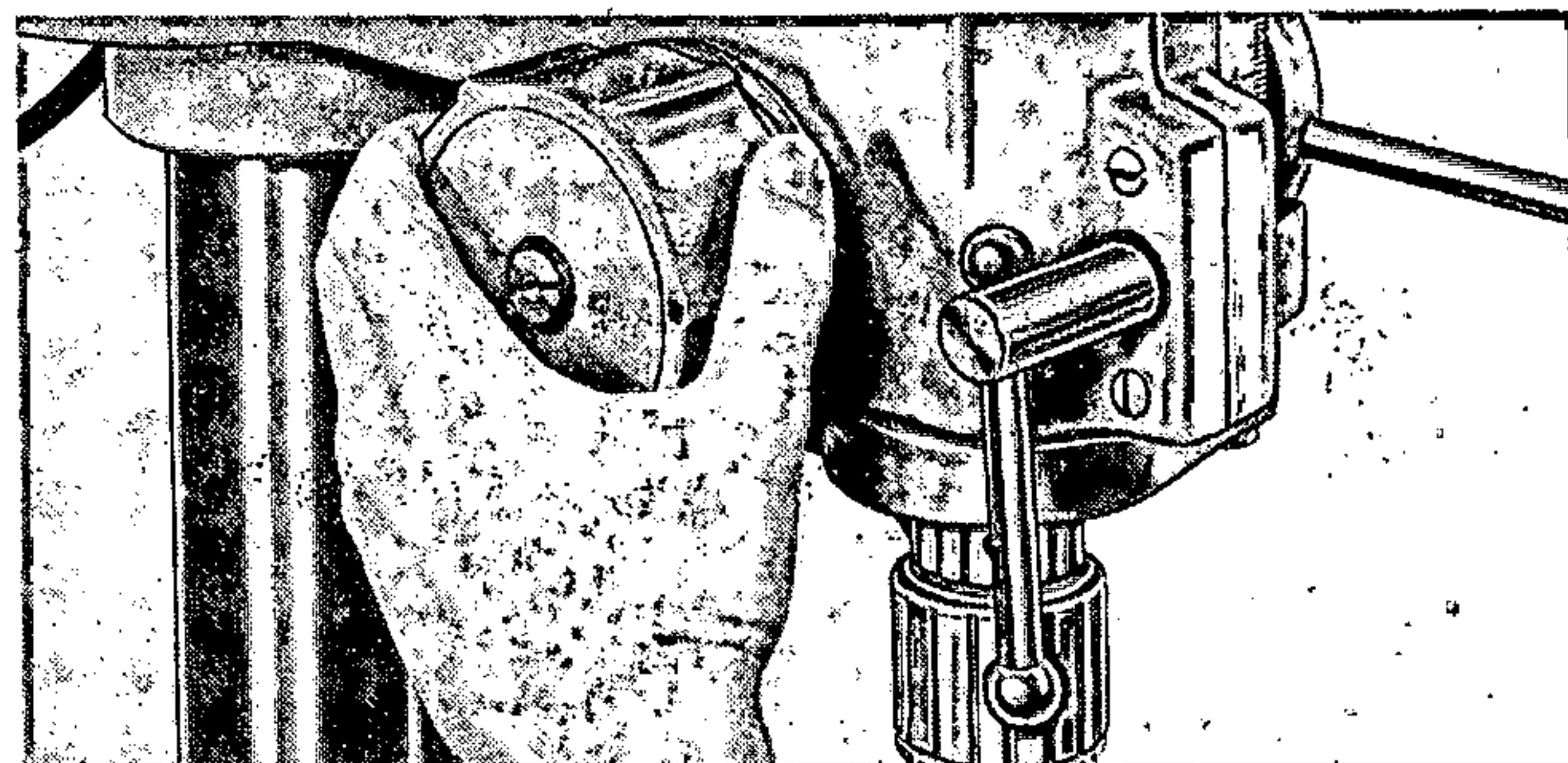


Figure 5

ADJUSTING SPINDLE RETURN SPRING

To increase tension, lower quill to bottom of stroke, turn the spring cap counter-clockwise. To release tension, pull out spring cap (fig. 5) and turn clockwise.

ADJUSTING DEPTH STOP

1. When setting drill depth, position pointer at depth required and tighten nuts.
2. Loosen screws and with quill at maximum travel, position scale so pointer is at $4\frac{3}{4}$ ", then tighten screws (B, fig. 6).

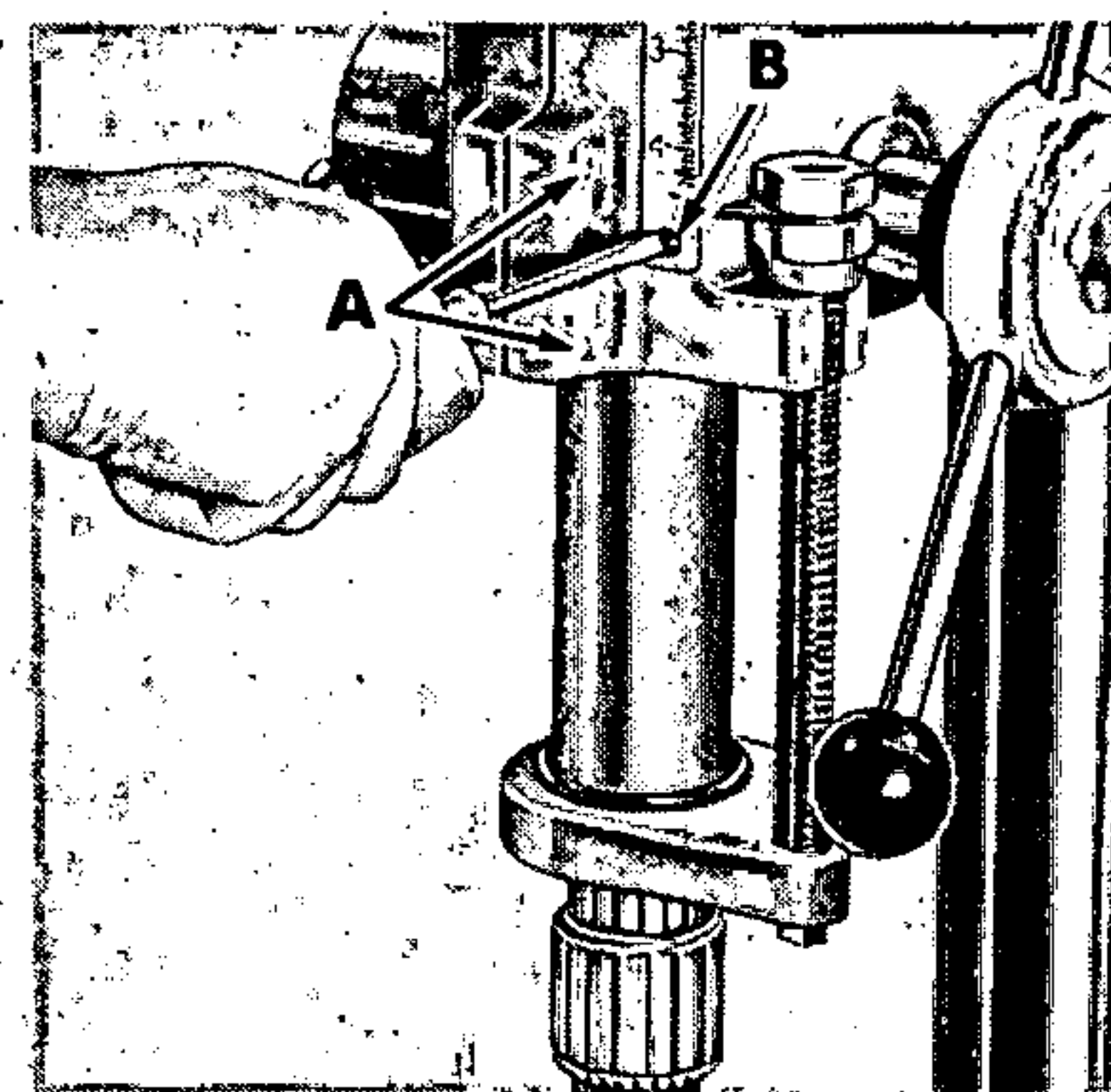


Figure 6

ADJUSTING SPINDLE END PLAY

1. Release spindle return spring tension (fig. 5).
2. While holding spindle to prevent its falling, remove hex nut on bottom of depth stop rod. Remove spindle and quill assembly from head.
3. Loosen set screw in collar directly above quill.
4. Push spindle firmly against bottom of quill. Force collar against top of quill and lock collar in this position.
5. Rotate spindle by hand to make sure it turns freely — **DO NOT** have adjustment too tight.
6. Replace spindle — quill assembly.

QUILL TAKE-UP

Front of drill press head is split — has two take-up screws set at factory to provide accurate fit between head and quill. This setting should not be disturbed unless play develops between quill and head. To eliminate play, tighten screws (A, fig. 6) — using correct size screw driver — until play has been removed. Move quill up and down in head to make sure it slides freely.

PARTS INDEX

for

15" CLAUSING DRILL PRESSES STEP PULLEY DRIVE

MODELS 1620 THROUGH 1785

16SC - JACOBS CHUCK - SERIES

16ST - MORSE TAPER - SERIES

FROM SERIAL NO. 116200 TO _____

BENCH AND FLOOR DRILLS

Column, Table and Base	4.1
Head Parts	5.2
Step Pulley Drive Parts	6.2

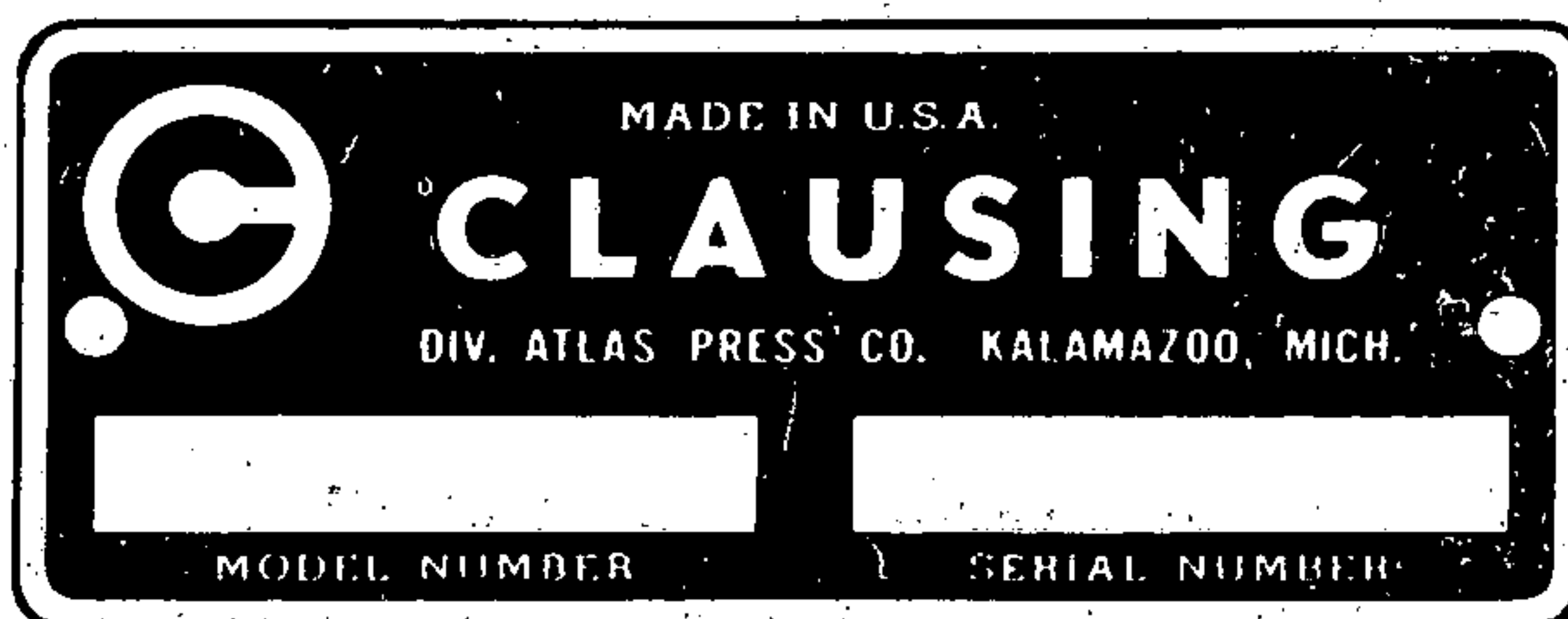
MULTIPLE SPINDLE DRILLS

Table and Leg Parts	7.1
1613 Head Positioning Assy Parts	8.1
1695 Column Bracket Assy Parts	8.1
1961 Head Positioning & Bracket Assy Parts	8.2

INSTRUCTIONS FOR ORDERING REPAIR PARTS

It is important to furnish the following information in addition to QUANTITY required:

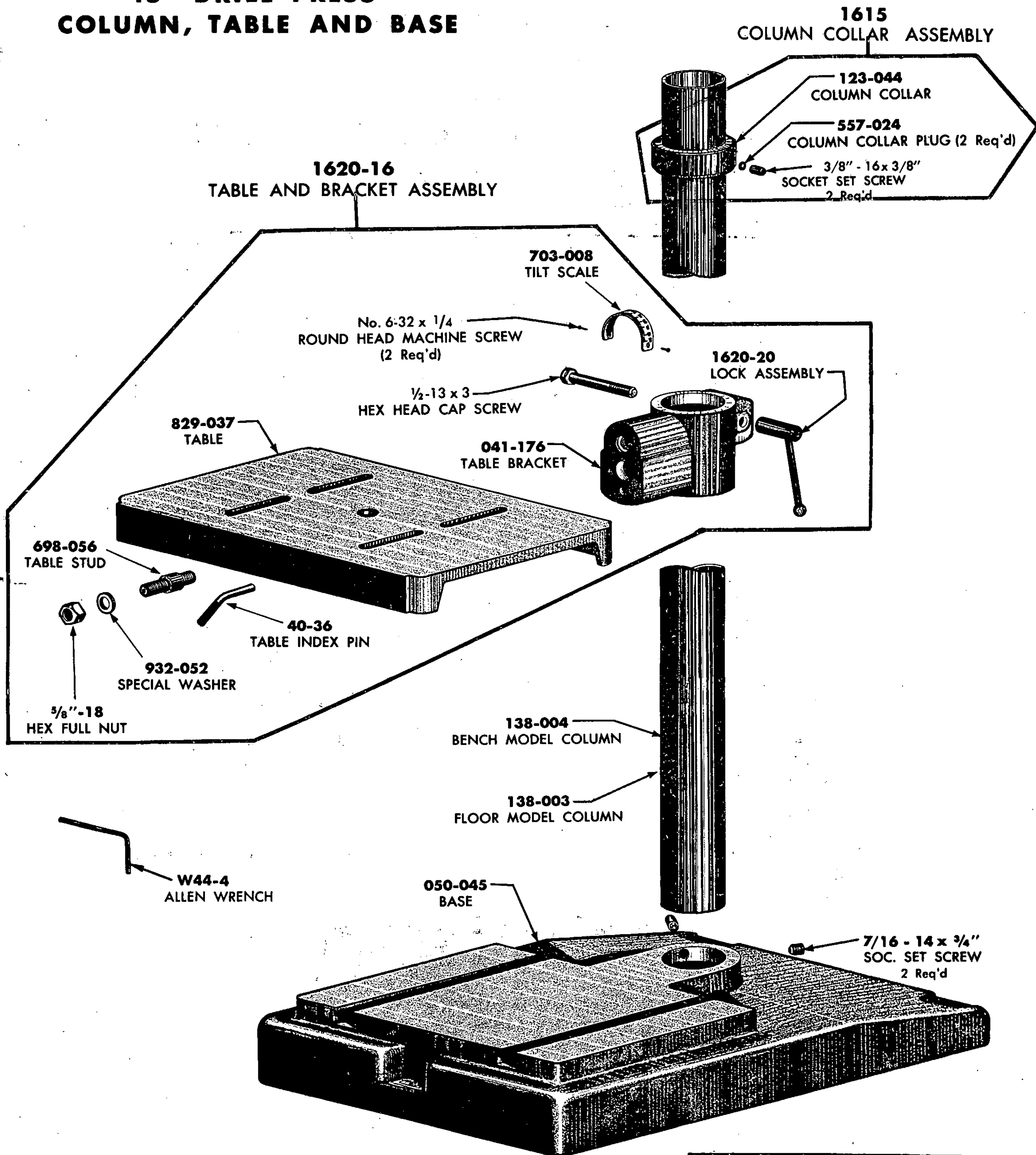
1. PART NUMBER
2. PART NAME
3. MODEL and SERIAL NUMBER of machine tool — you'll find both on the metal plate attached to machine -- note illustration below.



Be sure to give Model and Serial Number on this plate.

NOTE: Screws and nuts shown without part numbers should be purchased locally.
We reserve the right to make changes in design and specifications without notice.

15" DRILL PRESS COLUMN, TABLE AND BASE



IMPORTANT

PARTS ILLUSTRATED ON THIS
PAGE ARE FOR DRILL PRESSES
SERIAL NUMBERS FROM
000200 TO

No. 2 x 3/16 Rd. Hd.
P.K. DRIVE SCREW
(2 Req'd)

556-076
MODEL NUMBER PLATE

1620-20
LOCK ASSEMBLY

454-001
COORDINATE LOCK

15" DRILL PRESS HEAD PARTS

#10
WASHER

No. 10-24 x 5/8
ROUND HEAD
MACHINE SCREW

126-037
CABLE CLAMP

710-033
SWITCH
(Single Phase)
710-034
SWITCH
(3 Phase)

1620-17
SPRING AND HOUSING
ASSEMBLY

641-005
SNAP RING
RETAINER
(2 Req'd)

932-051
WAVE TYPE
WASHER

556-202
PLATE

696-033
LOCK SCREW
(2 Req'd)

296-106
GREASE
FITTING

932-081
WASHER

556-111
SPRING HOUSING
PLATE

697-045
QUILL RETURN
SPRING

386-086
SPRING HOUSING

1/8 x 1
ROLL PIN

3/16 x 1/2
ROLL PIN
(2 Req'd)

1/4-20 x 1/2
FIL. HD. MACH. SCREW
(2 Req'd)

556-112
SPRING HOUSING
INDEX PLATE

1620-21
QUILL LOCK

537-058
INSERT NUT

454-007
COORDINATE
LOCK

1/2-13 x 4 1/2
HEX HEAD
CAP SCREW

387-005
DRILL PRESS HEAD

No. 8-32 x 1/4
ROUND HEAD
MACHINE SCREW
(2 Req'd)

703-007
DEPTH SCALE

1620-18
HAND FEED ASSEMBLY

700-090
PINION SHAFT

382-016
HANDWHEEL HUB

1/4 x 2
ROLL PIN

51-56
FEED HANDLE BALL
(3 Req'd)

51-52
FEED HANDLE
(3 Req'd)

IMPORTANT

PARTS ILLUSTRATED ON THIS
PAGE ARE FOR DRILL PRESSES
SERIAL NUMBERS FROM
116200 TO

1/4-20 x 1/4
SOCKET SET SCREW
(2 Req'd)

123-091
SPINDLE
BEARING COLLAR

044-042
BEARING

631-008
QUILL

701-059
SPINDLE
(No. 2 M.T.)

044-042
BEARING

124-002
CHUCK
(With Key)

701-058
SPINDLE
(Jacobs No. 33)

1625-12
SPINDLE AND
QUILL ASSEMBLY
(No. 2 M.T.)

1620-12
SPINDLE AND
QUILL ASSEMBLY
(Jacobs No. 33 Taper)

1620-13
DRILL STOP
ASSEMBLY

510F-19
UPPER DEPTH
STOP NUT

424-003
DEPTH STOP
INDICATOR

537-059
LOWER DEPTH
STOP NUT

698-054
DEPTH STOP
STUD

1/8 x 1/2
ROLL PIN

567-013
RUBBER BUMPER

5/16-24 x 2
HEX HEAD
CAP SCREW

3/8-24
HEX FULL NUT

5/16 x 24
HEX FULL NUT

041-175
DEPTH BRACKET

15" DRILL PRESS STEP PULLEY DRIVE PARTS

5/16-18 x 5/8
HEX HEAD CAP SCREW
(2 Req'd)

5/16 PLAIN
WASHERS
(2 Req'd)

342-051
SPINDLE PULLEY
GUARD

696-075
SCREW

130-017
SPEED CHART



CLAUSING

536-018
NAMEPLATE

No. 2 x 3/16 Rd. Hd.
P.K. DRIVE SCREW
(2 Req'd)

3/8-16 x 3/4
HEX HEAD CAP SCREW

1620-24
SPINDLE PULLEY ASSEMBLY

442-039
PULLEY DRIVE KEY

1/4-20 x 1/2
SOCKET SET SCREW

560-063
SPINDLE PULLEY

702-102
SLEEVE

702-026
BEARING SPACER
SLEEVE

5/16-18 x 3/4
SOCKET SET SCREW
(Full Dg. Pt.)

944-001
WASHER
(TEFLON)

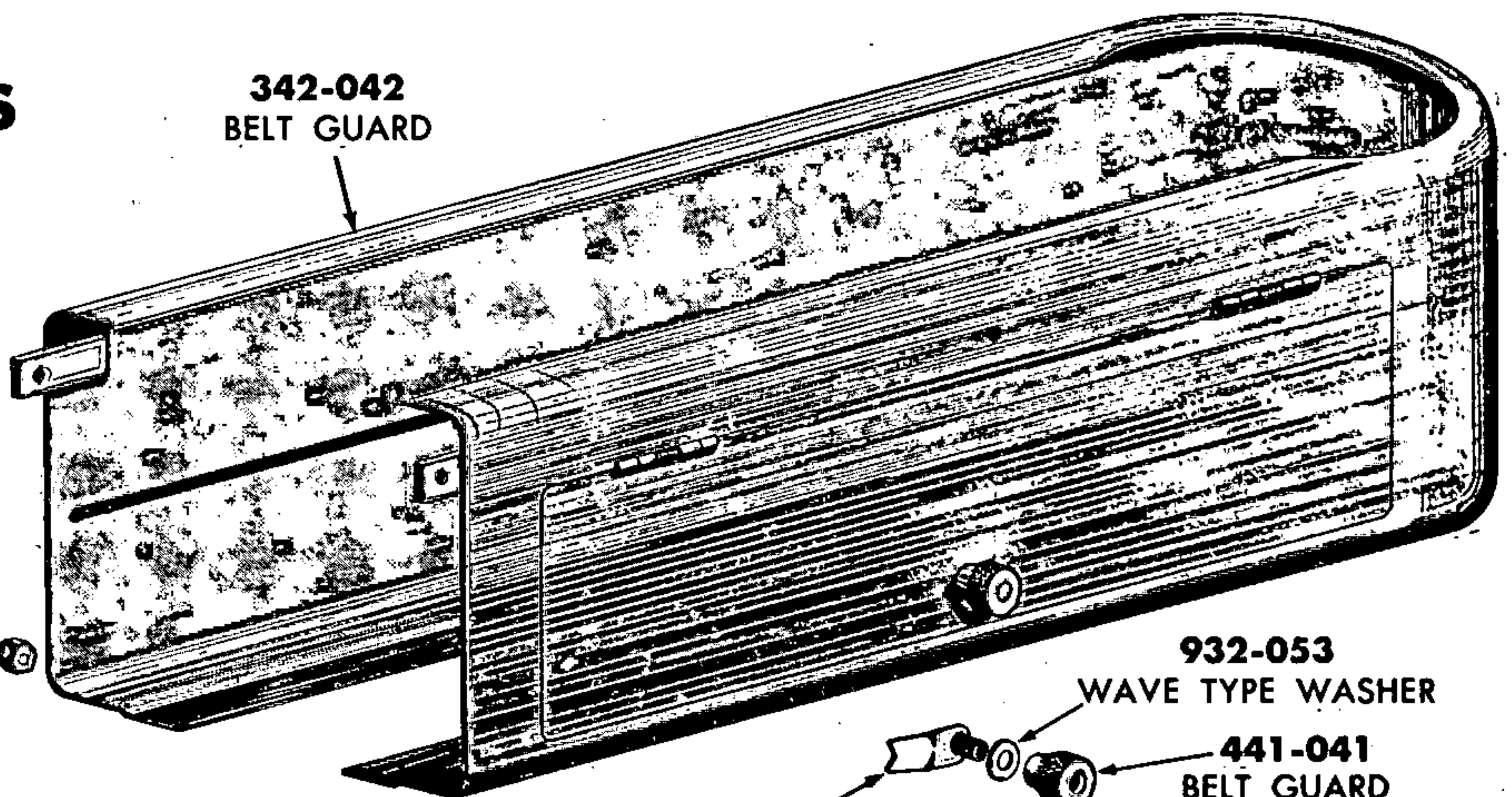
702-106
SPINDLE DRIVE SLEEVE

641-066
RETAINER RING
(Ext.)

641-066
RETAINER RING
(Ext.)

044-017
BEARING

342-042
BELT GUARD



932-053
WAVE TYPE WASHER

441-041
BELT GUARD
KNOB

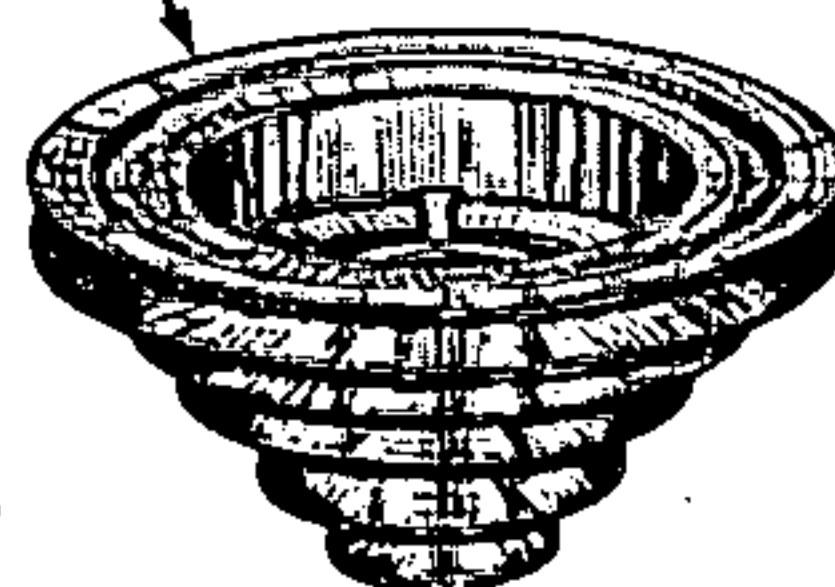
1/8 x 3/4
ROLL PIN

1620-22
LATCH STUD

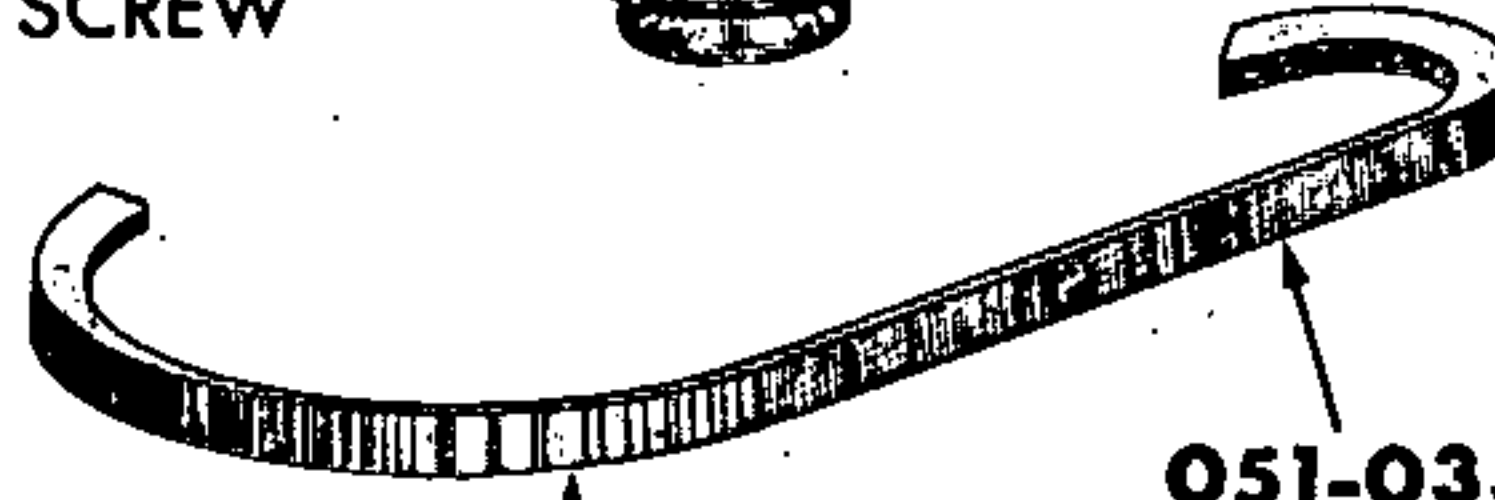
5/16-18 x 1/2
HEX HEAD CAP SCREW
(2 Req'd)

5/16 PLAIN
WASHERS
(2 Req'd)

560-064
MOTOR PULLEY



1/4-20 x 1/2
SOCKET SET SCREW



051-026
47" V-BELT

051-033
S.S. V-BELT 48 1/2"

IMPORTANT

PARTS ILLUSTRATED ON THIS
PAGE ARE FOR DRILL PRESSES
SERIAL NUMBERS FROM
111586 TO

1620-23
MOTOR BASE ASSEMBLY

5/16-18 x 1 1/4
HEX HEAD CAP SCREW
(2 Req'd)

5/16-18 x 1 1/4
HEX HEAD CAP SCREW
(4 Req'd)

7/16-14
HEX JAM NUT
(2 Req'd)

050-073
MOTOR BASE

5/16 x 18
HEX JAM NUT
(4 Req'd)

5/16 PLAIN
WASHERS
(8 Req'd)

1/8 x 1/2
ROLL PIN

698-055
MOTOR BASE
STUD

384-011
MOTOR BASE
HINGE

441-040
ANCHOR KNOB

5/16 PLAIN
WASHER

7/16-14 x 1 1/4
HDLESS SET SCREW
(2 req'd.)

041-174
MOTOR BRACKET
WASHERS
(2 Req'd)

5/16-18 x 5/8
HEX HEAD CAP SCREW
(2 Req'd)

15" MULTIPLE SPINDLE TABLE PARTS

OIL TROUGH TABLES AND LEGS

No. 1692 TABLE. 20" x 30" working surface. Takes two 15" heads.

No. 1696 TABLE. 20" x 60" working surface. Takes four 15" heads.

No. 1697 END SECTION. Two sections provide 20" x 90" working surface. Two take six 15" heads.

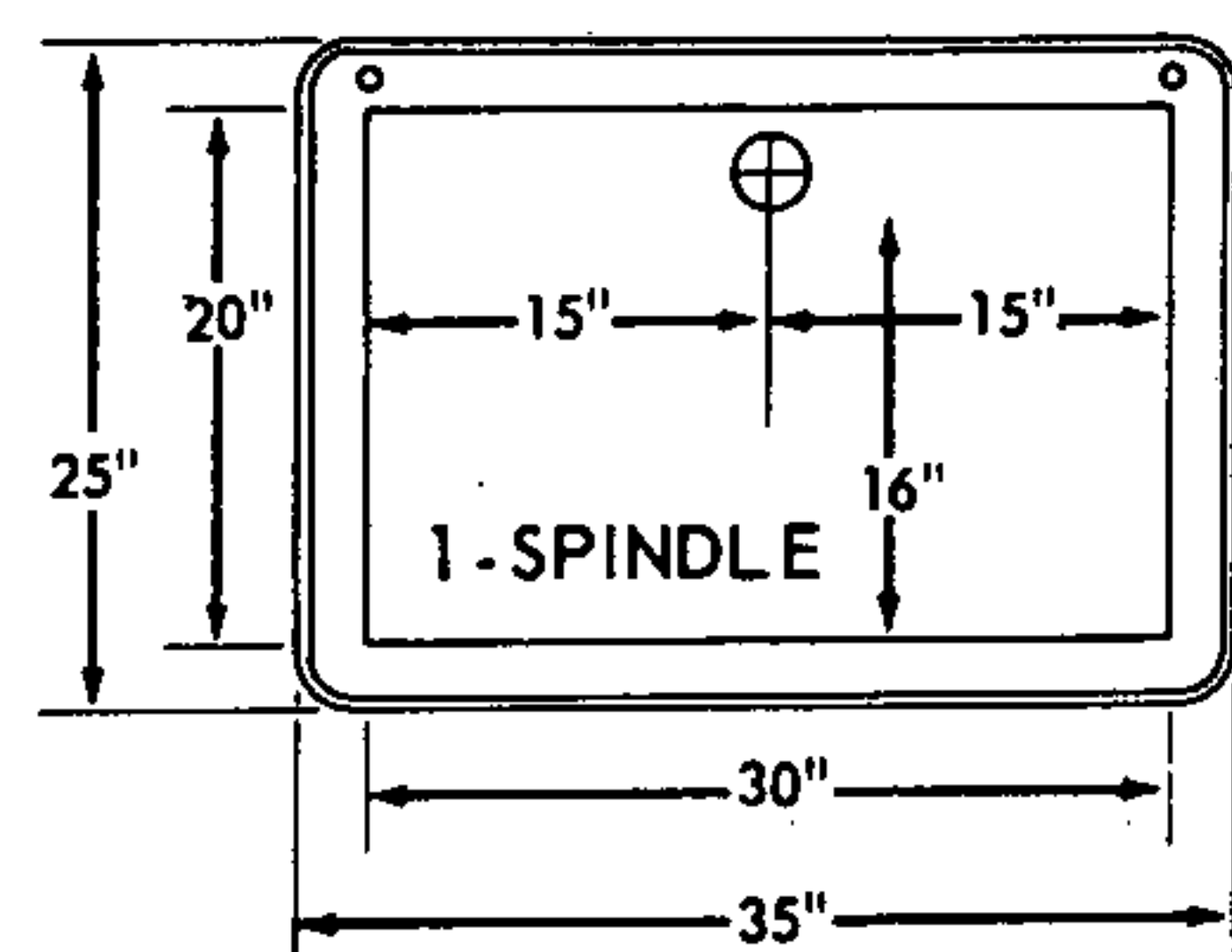
No. 1698 MID SECTION. 20" x 30" working surface. Takes two 15" heads. Use with two No. 1697 End Sections.

No. 1699 TABLE LEG. Two required for Nos. 1692 and 1696, three required for two No. 1697, and three for two No. 1697 with one No. 1698.

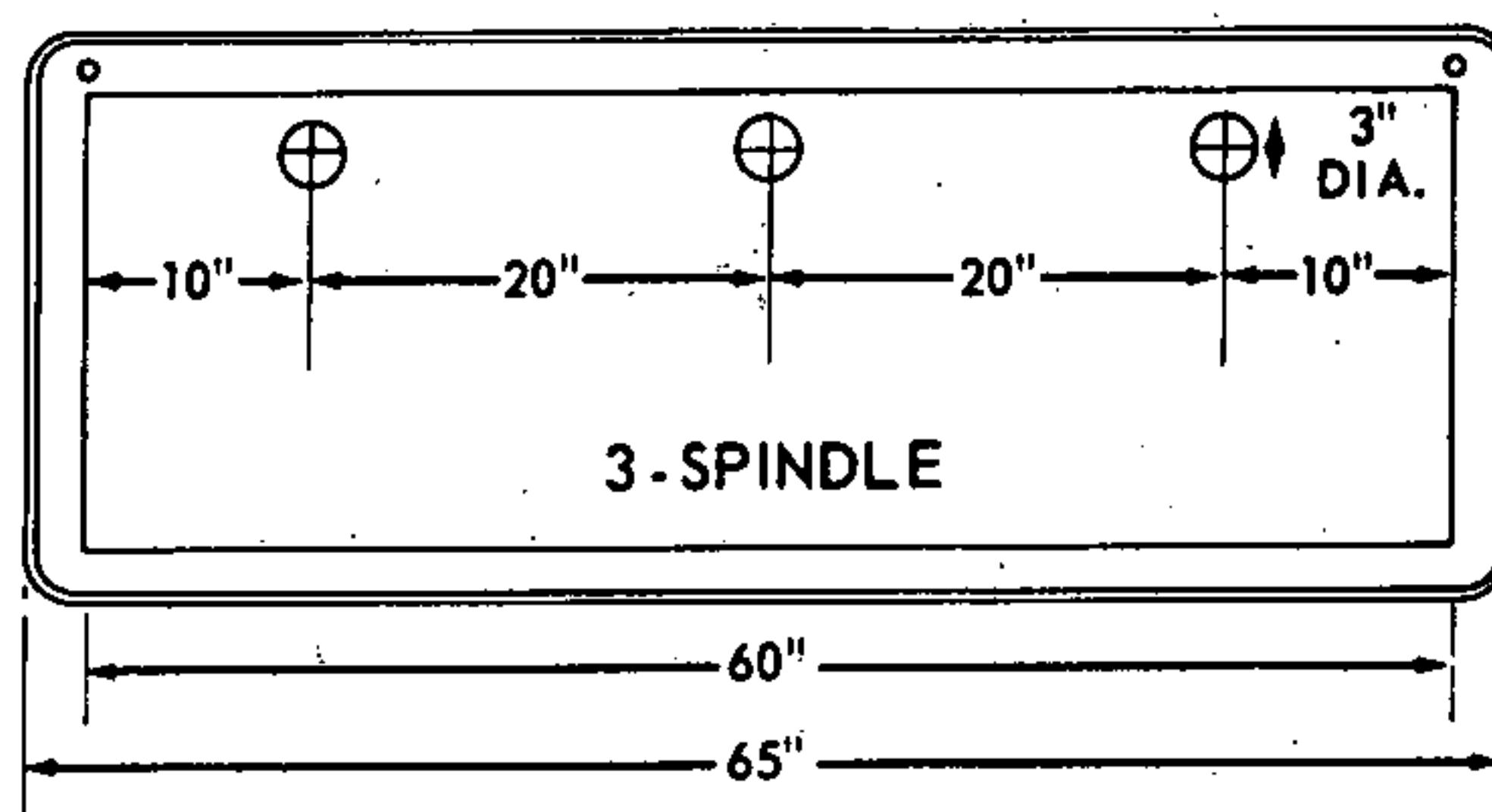
Tables are drilled for legs. Holes for column mounting brackets drilled on order to customer's specifications.

HEAD AND COMPONENT PARTS ARE ILLUSTRATED ON PARTS PAGES IN THE FRONT OF THIS SECTION.

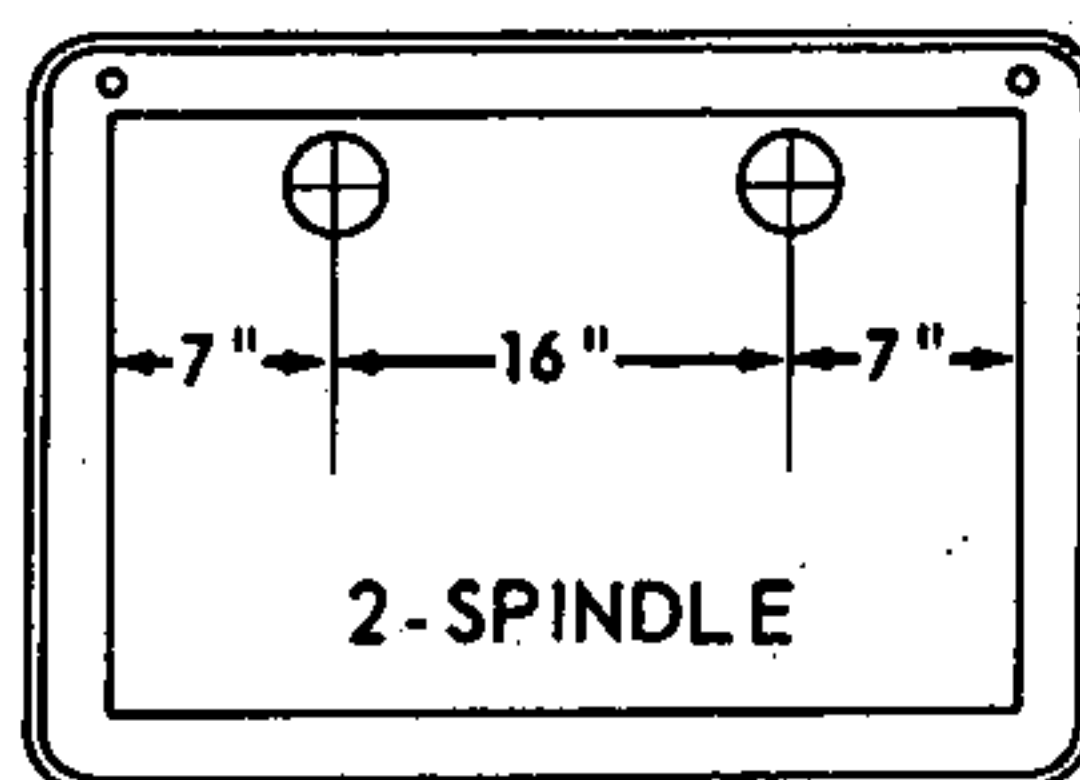
NOTE: FASTENERS ARE INCLUDED WITH TABLE LEGS



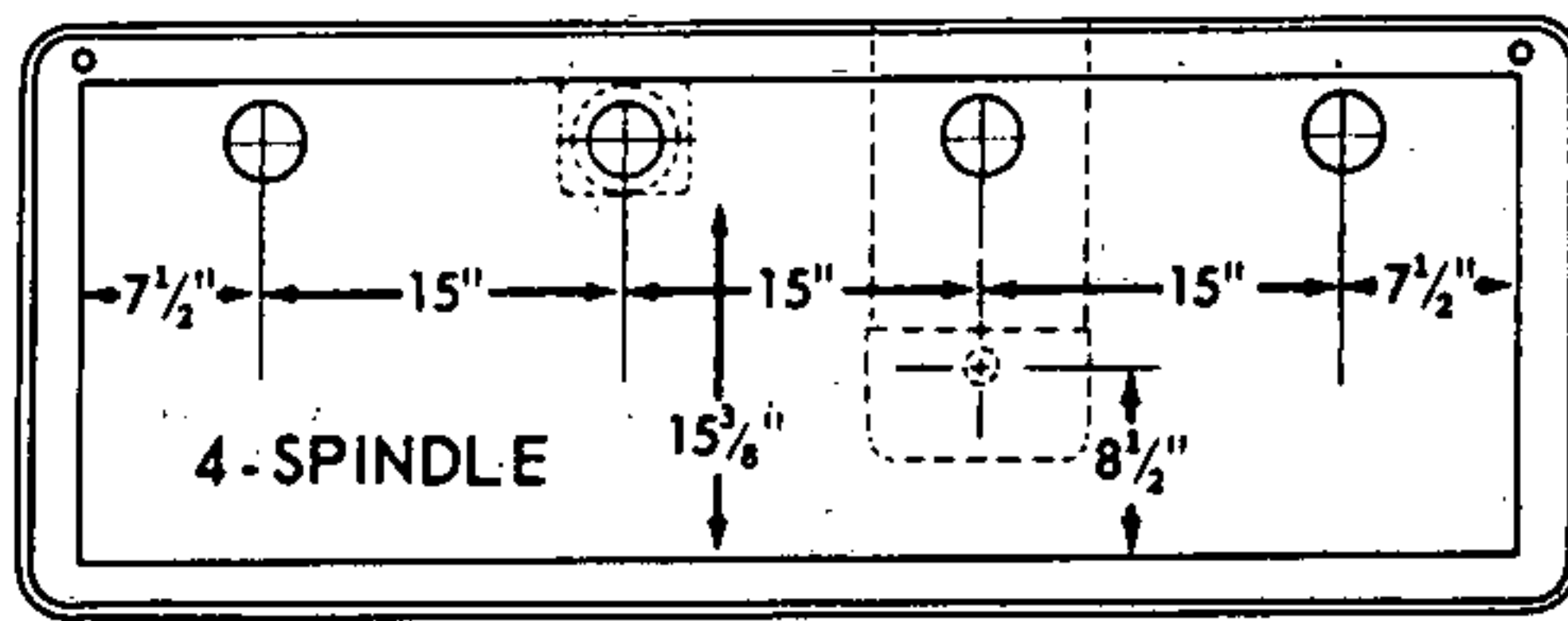
One piece table, two legs required



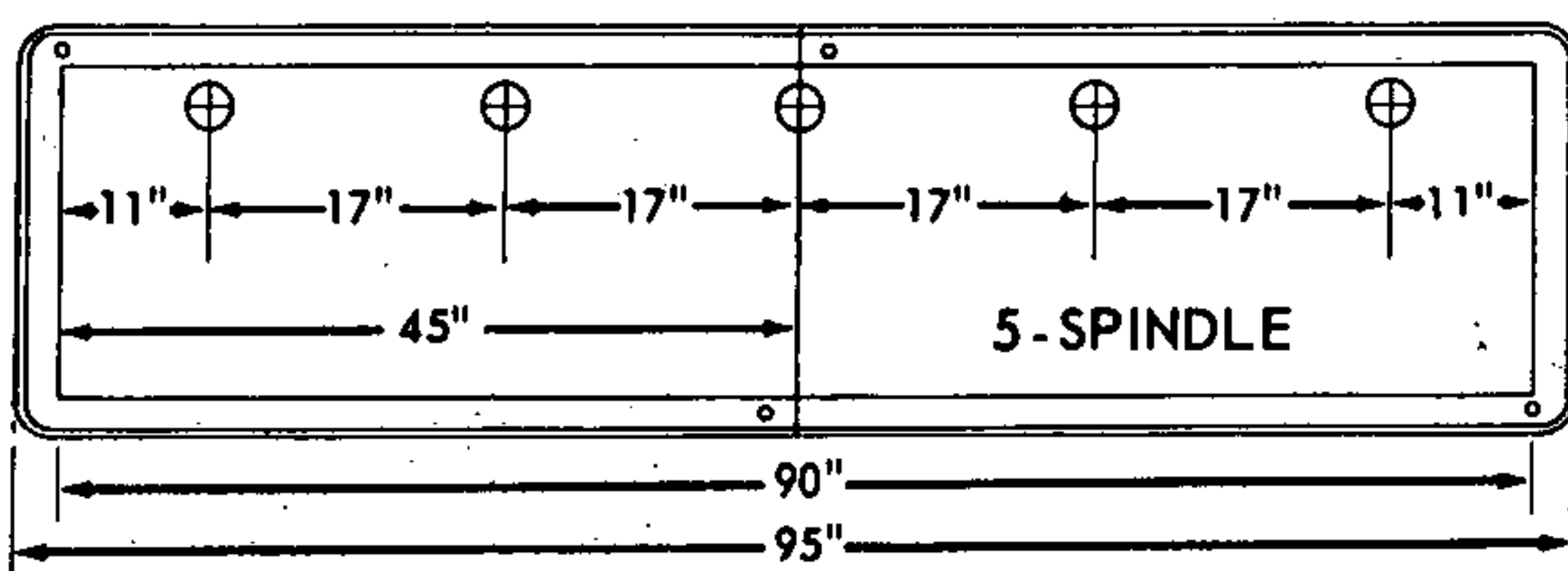
One piece table, two legs required



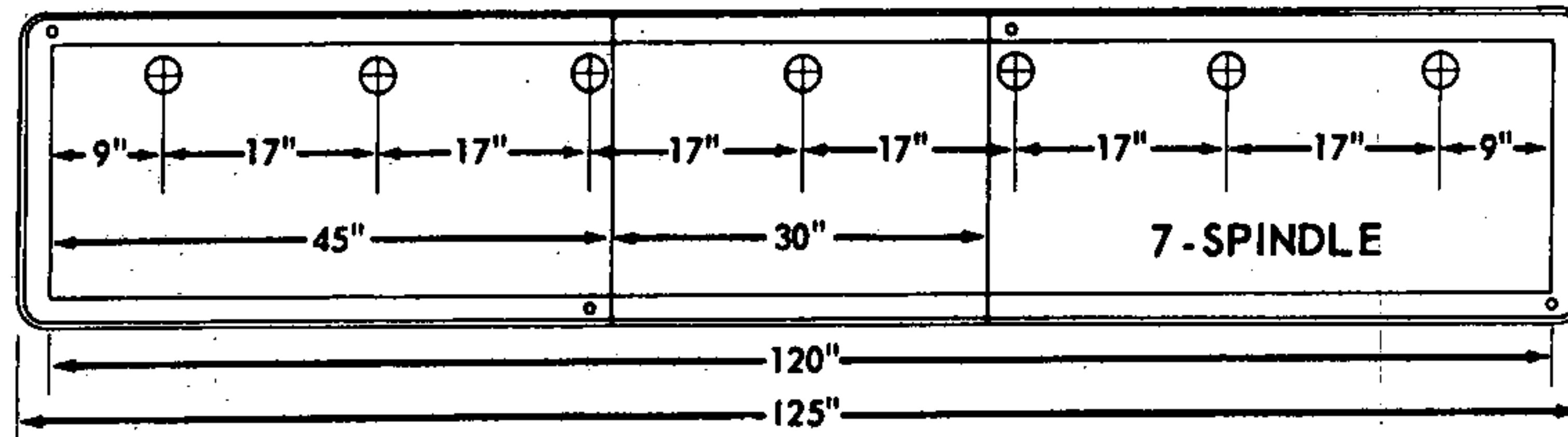
One piece table, two legs required



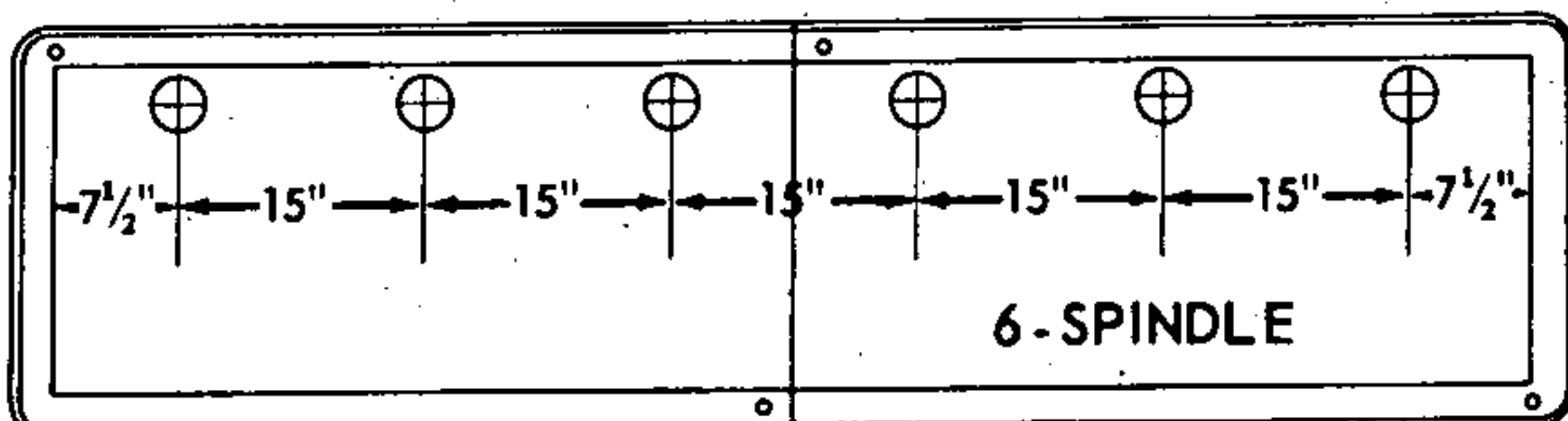
One piece table, two legs required



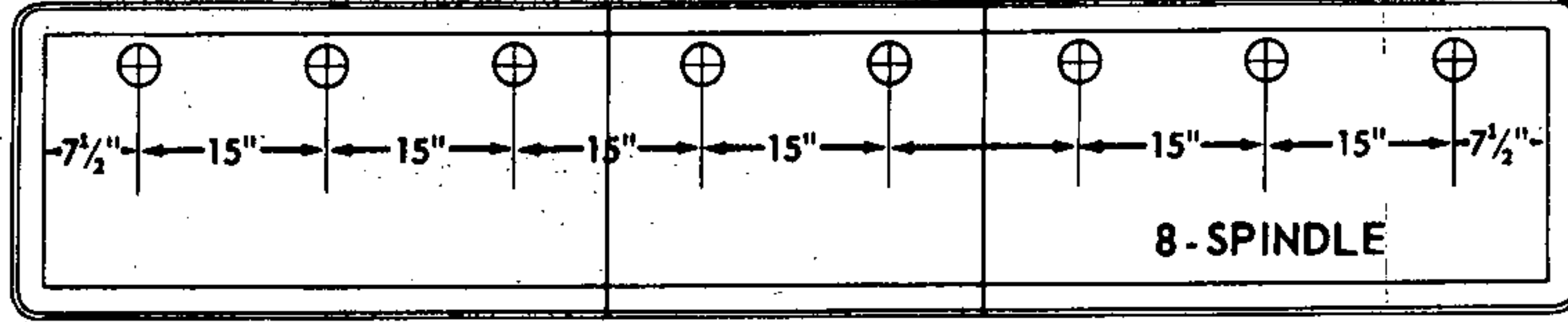
Two piece table, three legs required



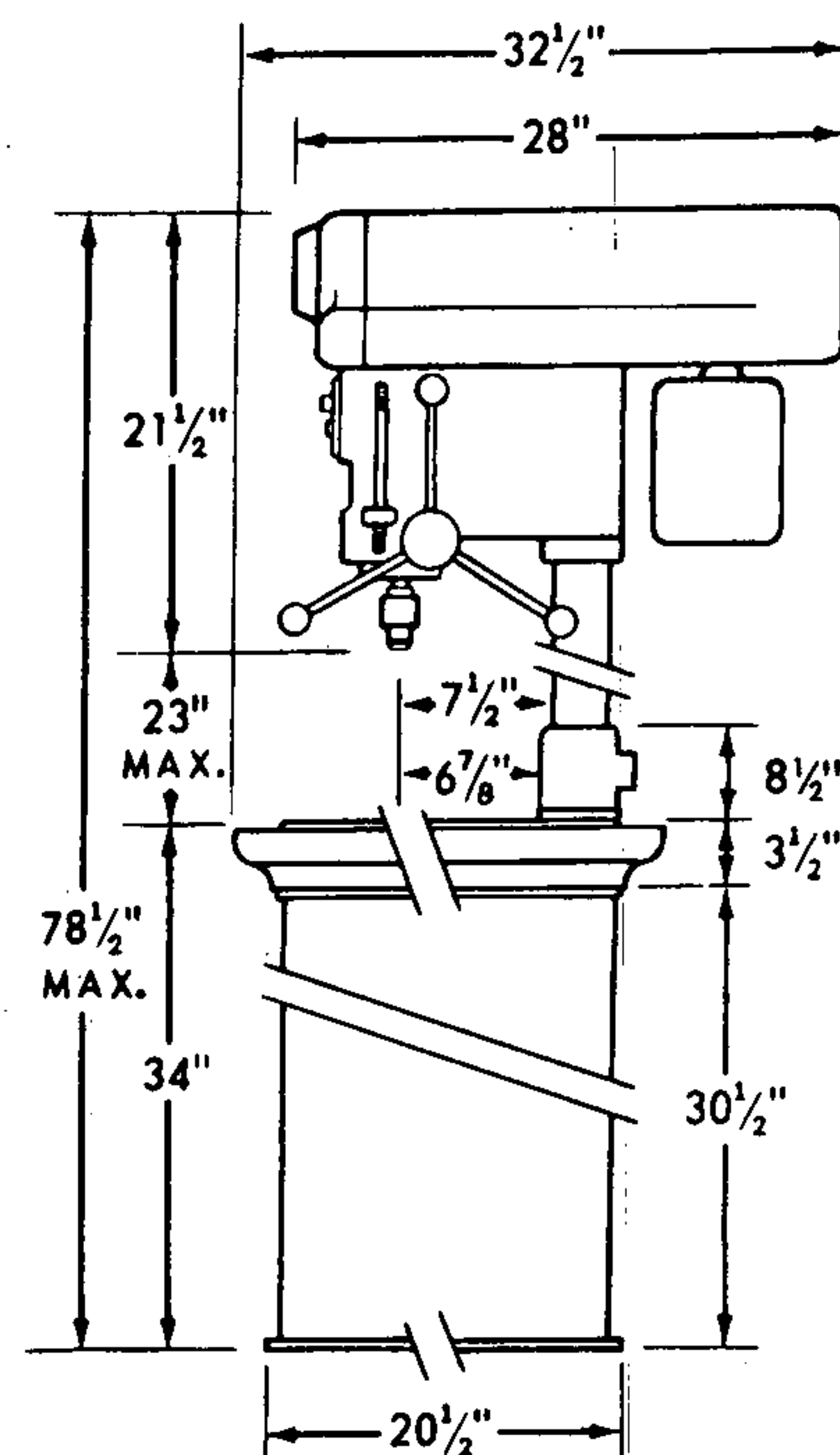
Three piece table, three legs required



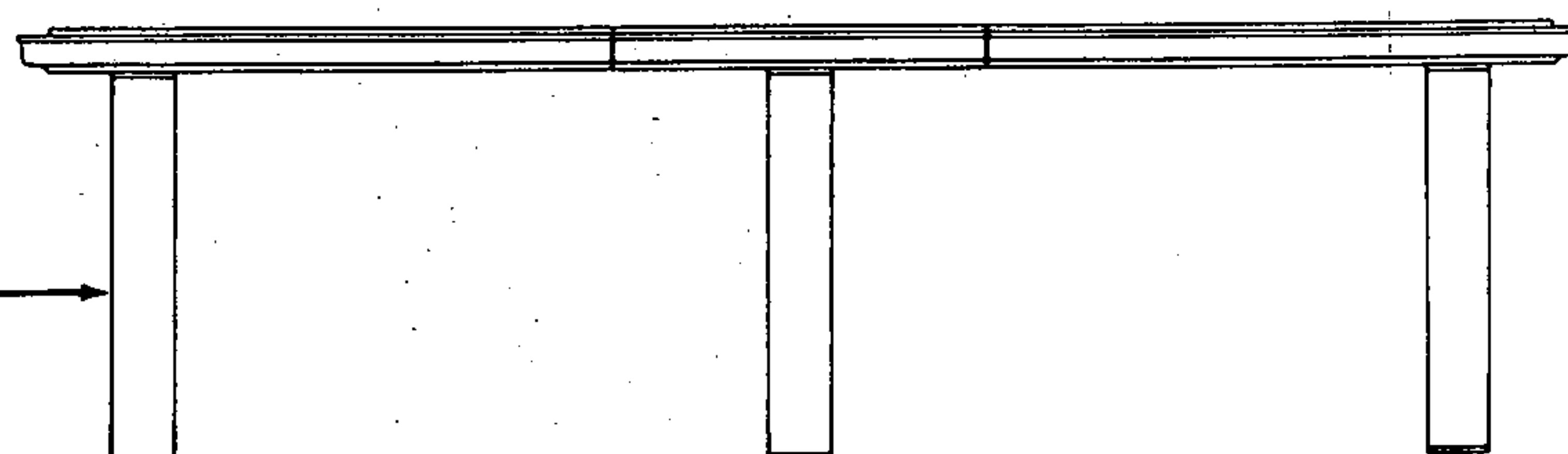
Two piece table, three legs required



Three piece table, three legs required

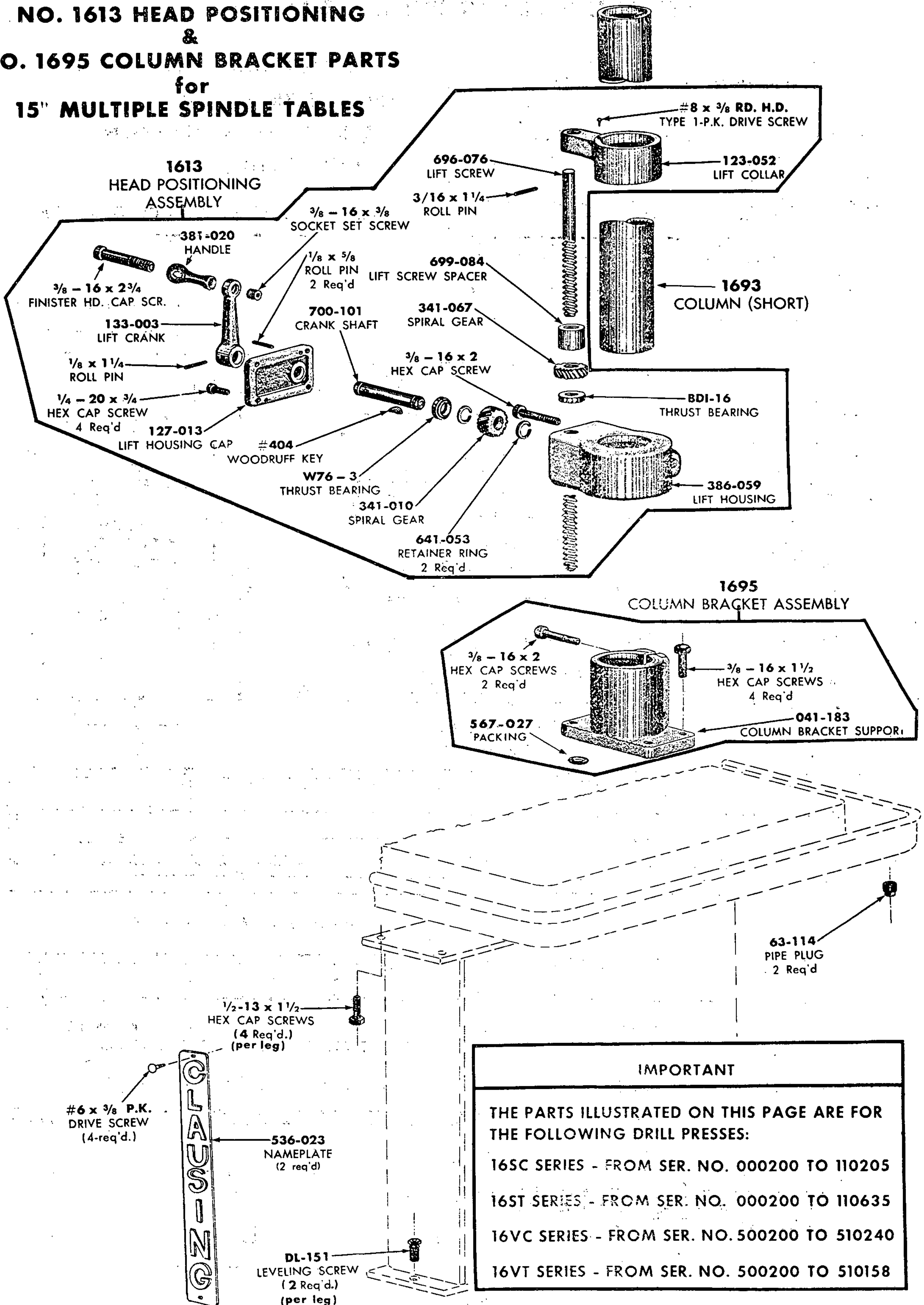


NOTE: ORDER SPECIAL LEFT LEG 453-016 FOR TWO, THREE, FIVE AND SEVEN MULTIPLE SPINDLE DRILL PRESS TABLES.



No. 1699 TABLE LEG

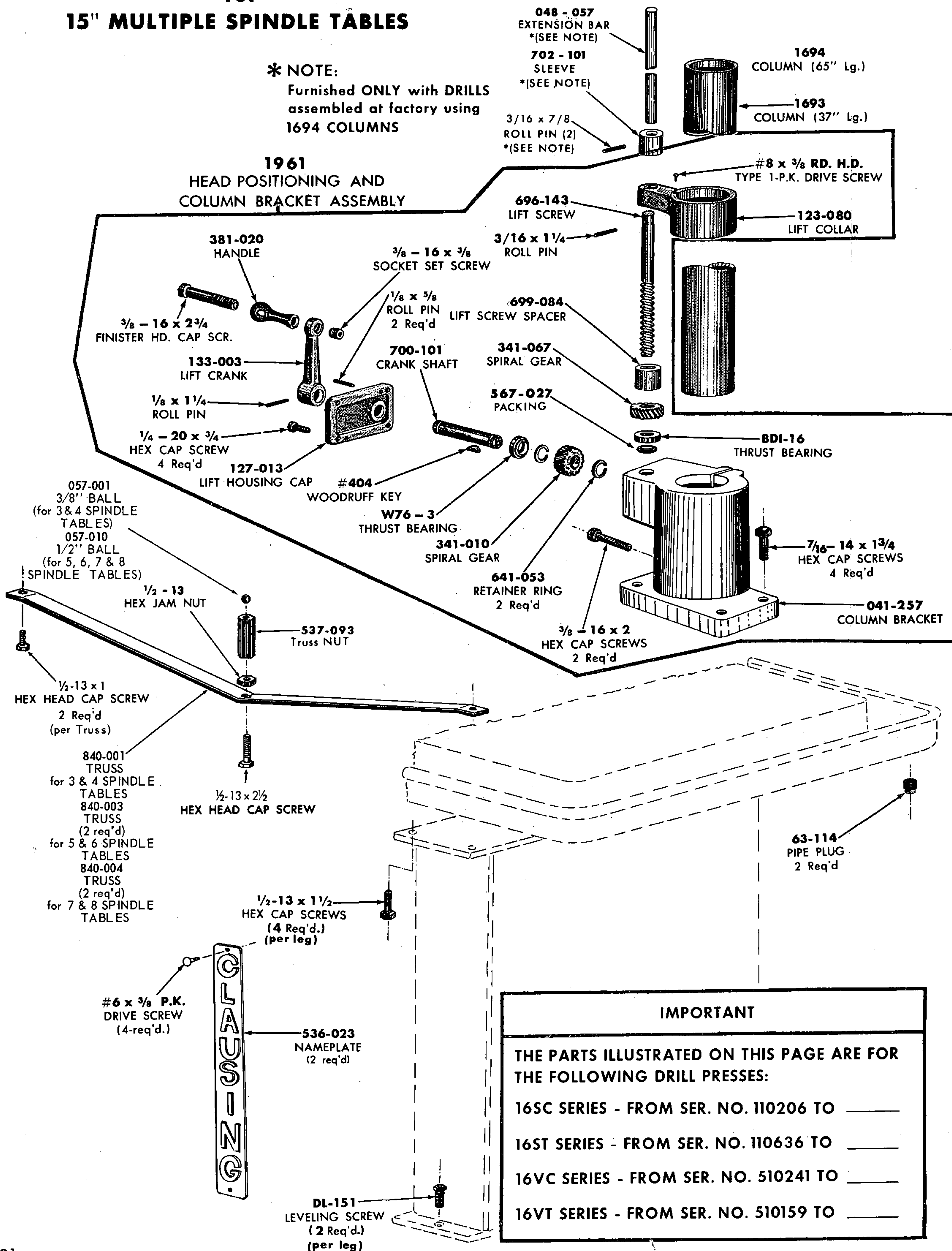
NO. 1613 HEAD POSITIONING & NO. 1695 COLUMN BRACKET PARTS for 15" MULTIPLE SPINDLE TABLES



NO. 1961 HEAD POSITIONING AND COLUMN BRACKET PARTS for 15" MULTIPLE SPINDLE TABLES

*** NOTE:**
Furnished ONLY with DRILLS
assembled at factory using
1694 COLUMNS

1961 HEAD POSITIONING AND COLUMN BRACKET ASSEMBLY



IMPORTANT

THE PARTS ILLUSTRATED ON THIS PAGE ARE FOR
THE FOLLOWING DRILL PRESSES:

16SC SERIES - FROM SER. NO. 110206 TO _____

16ST SERIES - FROM SER. NO. 110636 TO _____

16VC SERIES - FROM SER. NO. 510241 TO _____

16VT SERIES - FROM SER. NO. 510159 TO _____