

OPERATING INSTRUCTIONS
and

PARTS LIST

CLAUSING

20-inch DRILL PRESSES

VARIABLE SPEED DRIVE
MODELS

S/N 511001 & up



CLAUSING CORPORATION

2019 N. PITCHER ST., KALAMAZOO, MI 49007

CLAUSING CORPORATION

SAFETY RULES FOR POWER TOOLS

1. KNOW YOUR POWER TOOL

Read the owner's manual carefully. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

2. GROUND ALL TOOLS

If tool is equipped with three-prong plug, it should be plugged into a three-hole receptacle. If adapter is used to accommodate two-prong receptacle, the adapter wire must be attached to a known ground. Never remove third prong.

3. KEEP GUARDS IN PLACE

and in working order.

4. REMOVE ADJUSTING KEYS AND WRENCHES

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on tool.

5. KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents.

6. AVOID DANGEROUS ENVIRONMENT

Don't use power tools in damp or wet locations. Keep work area well illuminated.

7. KEEP CHILDREN AWAY

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP KID PROOF

— with padlocks, master switches, or by removing starter keys.

9. DON'T FORCE TOOL

It will do the job better and be safer at the rate for which it was designed.

10. USE RIGHT TOOL

Don't force tool or attachment to do a job it was not designed for.

11. WEAR PROPER APPAREL

No loose clothing or jewelry to get caught in moving parts.

12. USE SAFETY GLASSES

Also use face or dust mask if cutting operation is dusty.

13. SECURE WORK

Use clamps or a vise to hold work when practical. It's safer than using your hand, frees both hands to operate tool.

14. DON'T OVERREACH

Keep your proper footing and balance at all times.

15. MAINTAIN TOOLS IN TOP CONDITION

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. DISCONNECT TOOLS

before servicing and when changing accessories such as blades, bits, cutters.

17. AVOID ACCIDENTAL STARTING

Make sure switch is "OFF" before plugging in cord.

18. USE RECOMMENDED ACCESSORIES

Consult the owner's manual. Use of improper accessories may be hazardous.

The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before commencing power tool operation.



WARRANTY

The Clausing Corporation, Kalamazoo, Michigan, warrants that each Product will be free from defects in material and workmanship for one year from the date of delivery to the User.

Clausing will correct any defects without charge. Parts will be repaired or replaced at Clausing's option. Warranty work will normally be performed at the User's plant, but at the option and expense of Clausing, the Product, or any part thereof, may be returned to Clausing for the service. User shall provide access to the Product during regular business hours and shall provide such other assistance as determined necessary by Clausing.

Clausing shall not be responsible for expenditures made or incurred by the User for repairs of the Product. The warranty is void for any Product that has been subjected to neglect, misuse, accident, or improper operation, or that has been tampered with or altered in any way.

The foregoing warranty is exclusive and in lieu of all other warranties, express or implied, except as to title, including any implied warranty of MERCHANTABILITY or of FITNESS FOR A PARTICULAR PURPOSE.

The liability of Clausing under this warranty, or for any loss or damage to the equipment, whether the claim is based on contract or negligence, shall not in any case exceed the cost of correcting defects in the equipment as herein provided and upon the expiration of the warranty period all such liability shall terminate. The foregoing shall constitute the exclusive remedy of the User and the exclusive liability of Clausing.

In no event, whether as a result of breach of contract or warranty, or alleged negligence, shall Clausing be liable for special or consequential damages including, but not limited to, loss of profits or revenue, loss of use of the equipment or any associated equipment, cost of capital, cost of substitute equipment, facilities or services, down-time costs, or claims of customers of the User for such damages.

No one other than an officer of Clausing acting in writing is authorized to assume any liability on behalf of Clausing or impose any obligation upon it in connection with the sale of any product other than as stated above.

CLAUSING CORPORATION
KALAMAZOO, MICHIGAN 49007



DIVISION, ATLAS PRESS COMPANY
KALAMAZOO, MICHIGAN 49001

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 TO OPERATING POSITION WITH TABLE LIFT

1. Loosen table lock (D, fig. 1).
2. With lift crank (J), raise the table (E) to bottom of spindle (C). (*Place block of wood between spindle and table.*)
3. Lock table *securely* with handle (D).
4. Loosen two head lock nuts (A) and quill lock (K).
5. Lift head by turning feed handle (B) counter-clockwise. While holding handle, tighten head lock nuts (A).

6. Slide safety collar (M) up to bottom of head. Tighten screws (L) in collar.

REPEAT OPERATIONS 1-6 until table has reached top of rack.

RAISE RACK—steps 7-10.

7. Lock table with handle (D, fig. 1).
8. Loosen two screws (G) in rack collar (F).
9. Turn crank (J), raising rack (H) to bottom of collar (M).
10. Securely tighten two screws (G) in rack collar.

REPEAT OPERATIONS 1-10 until head is in position.

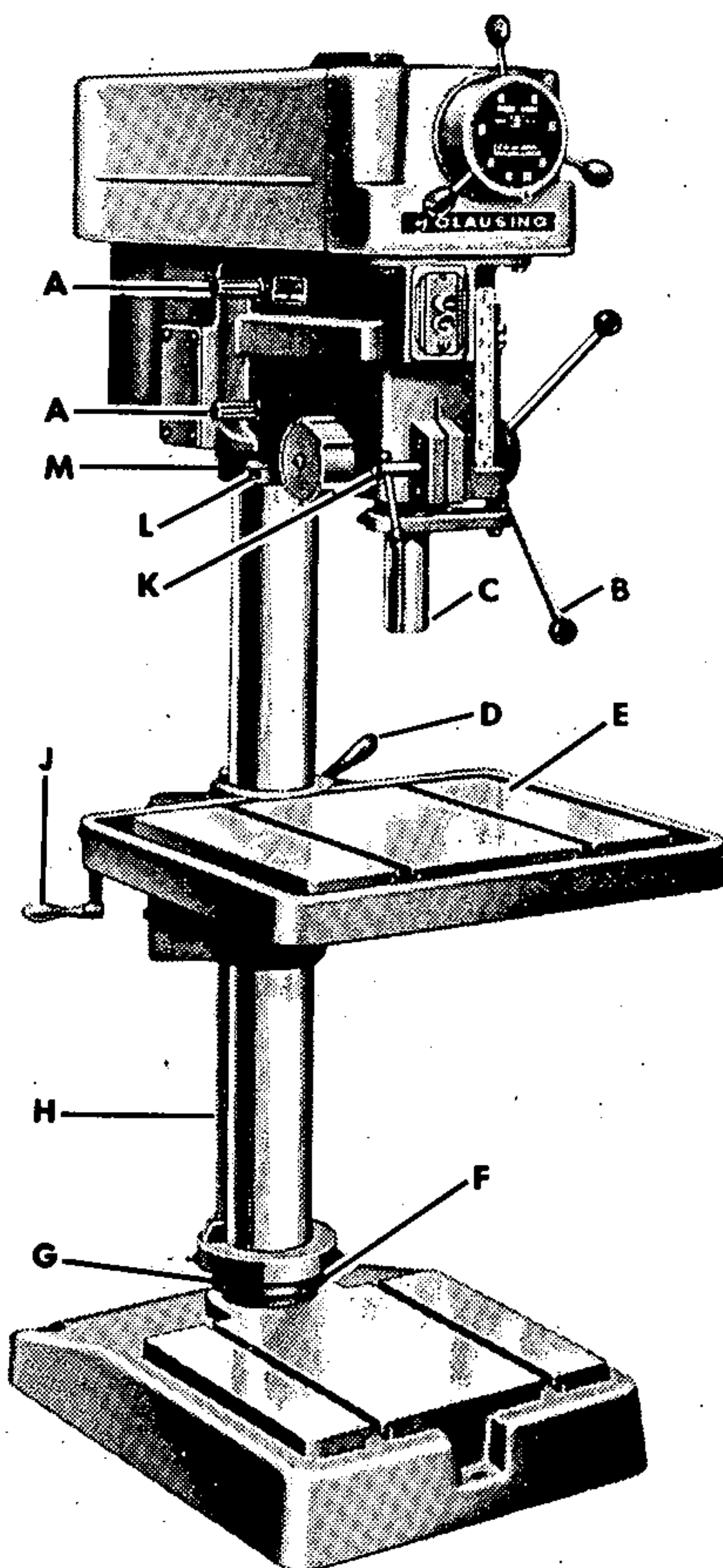


Figure 1

20" DRILL PRESSES

VARIABLE SPEED DRIVE

SERIES - 22V-1
FROM SERIAL NO. 511001 TO _____

MODELS 2251 THROUGH 2287

and

2251-300 THROUGH 2287-300

MAY, 1968

FILE NO. 2271-8

1.8
2.2
3.8
4.1
5.3
6.5
7.3
8.1

LUBRICATION

1. SPINDLE PULLEY DRIVE — use a light grease occasionally on spindle splines (A, fig. 2).
2. LOWER QUILL BEARING (C) — lubricate daily with a few drops of S.A.E. No. 20 oil. (All other ball bearings in head are lubricated-for-life.)
3. FEED SHAFT (B) grease weekly with No. 1 bearing grease — fittings under head.
4. Keep QUILL (H) and COLUMN (G) covered with a light film of oil.
5. TABLE LIFT SHAFT (E) — oil once a week with S.A.E. No. 20 oil.
6. LIFT RACK (F) — lubricate regularly with S.A.E. No. 20 oil. Before oiling, clean rack with kerosene.
7. TABLE LIFT GEARS (D) — once a year, clean and repack with gear grease.

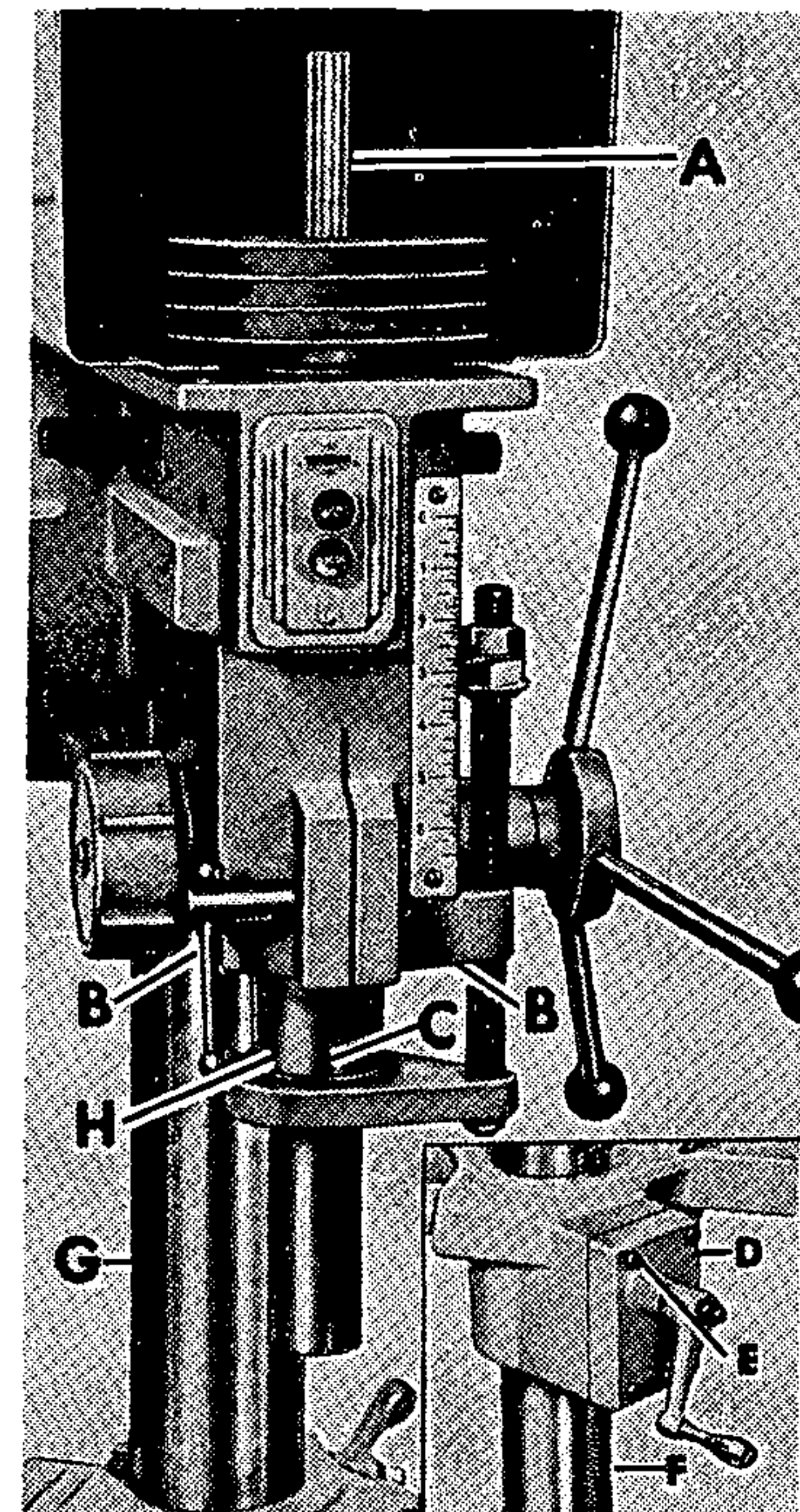


Figure 2

LUBRICATING VARIABLE DRIVE

1. Oil hole in fork (A, fig. 3) — oil once a week with S.A.E. No. 20 oil.
2. Oil post (B) and rod (D) occasionally with S.A.E. No. 20 oil.
3. Lubricate pulley bearing (C) once a month with ball bearing grease.
4. Once a year, clean and grease (medium cup grease) cam in handwheel (C, fig. 4). To disassemble — loosen screw (A) and remove plate (B); remove handwheel by taking out center bolt.

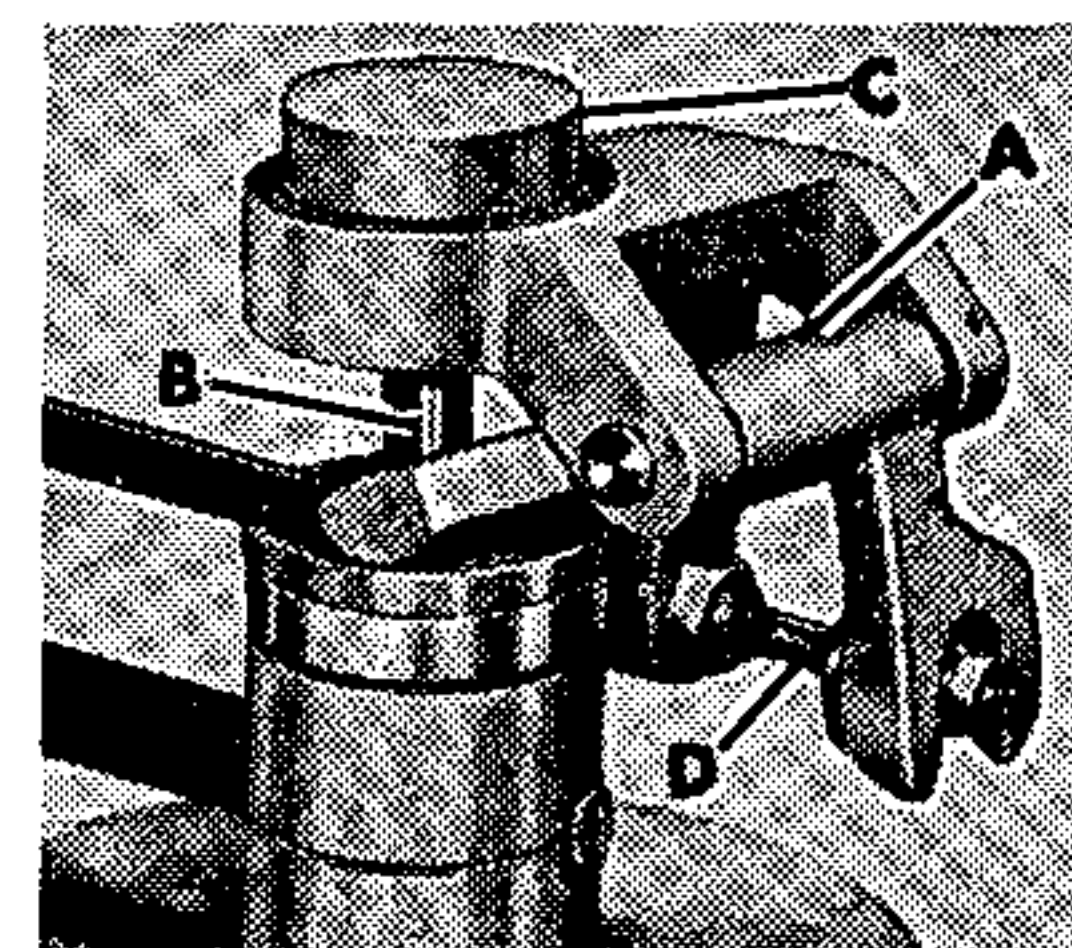


Figure 3

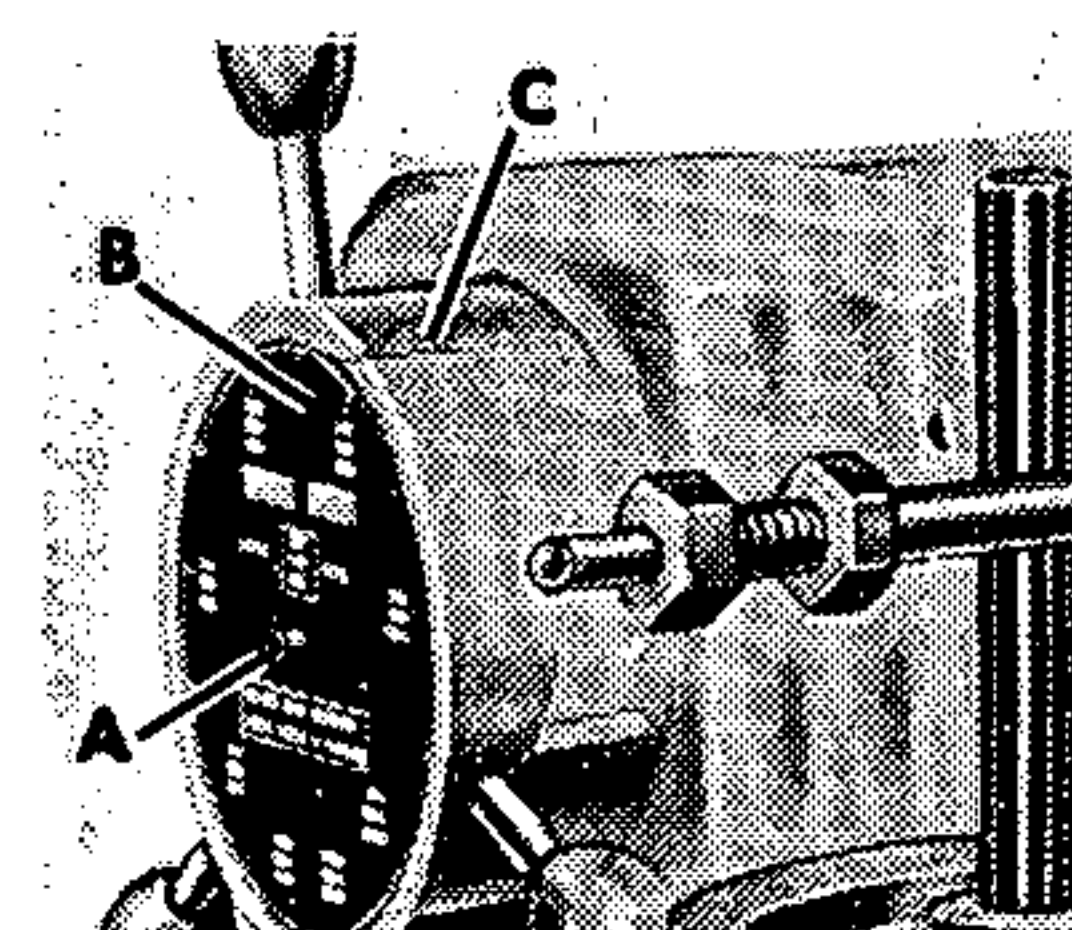


Figure 4

CHANGING SPINDLE SPEEDS

To change speeds on variable drive, turn handwheel control until pointer shows desired speed.

CAUTION: *Do not turn handwheel control unless motor is running.*

REPLACING BELTS

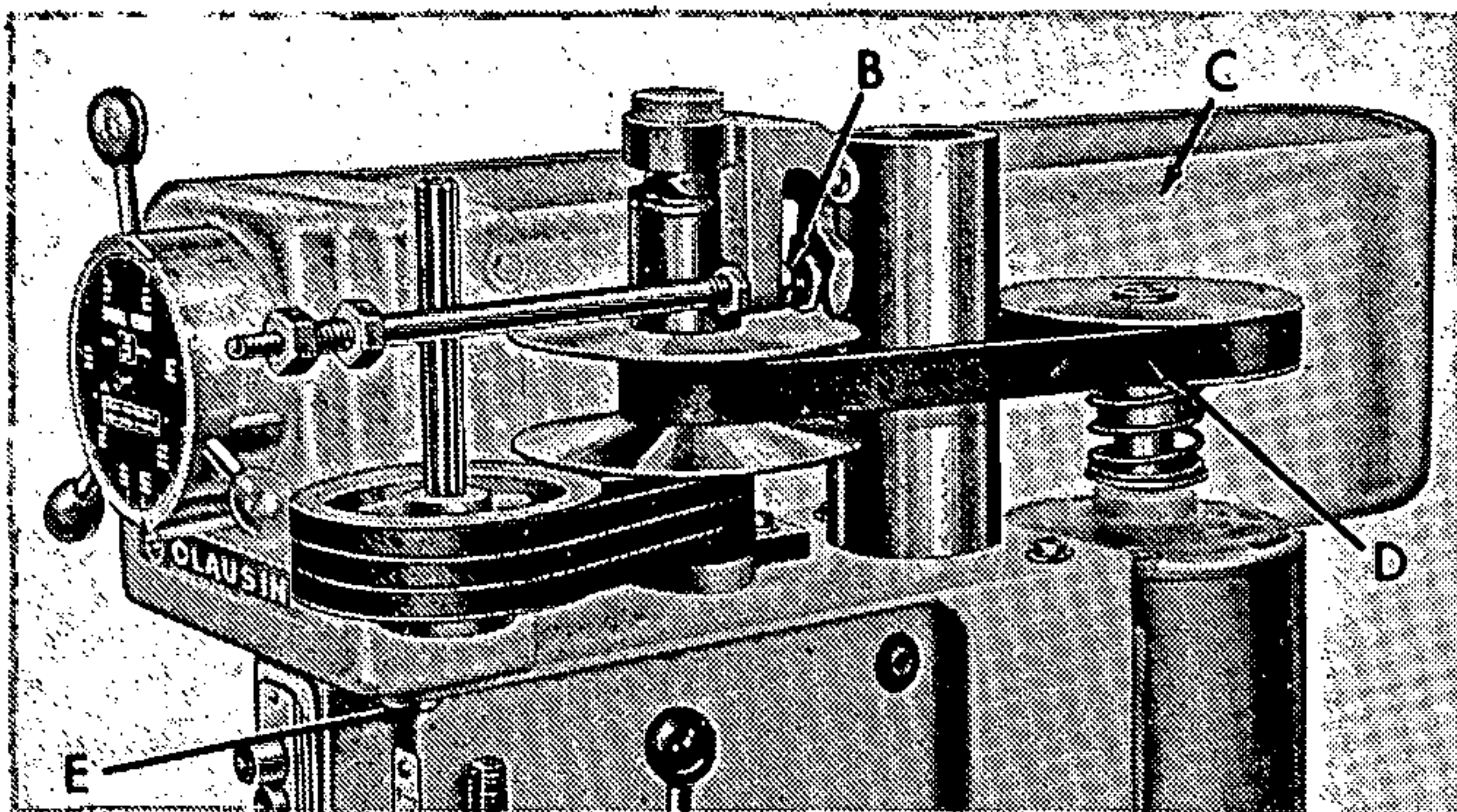


Figure 5

VARIABLE COG BELT

1. Remove belt guard (C, fig. 5).
2. Remove two screws (E). Loosen nut (B) and remove guard, handwheel and tube assembly.
3. Remove variable speed belt (D).
4. Replace belt and reassemble.

NOTE: *Belt is properly tensioned if outside is slightly convex where it contacts the pulley.*

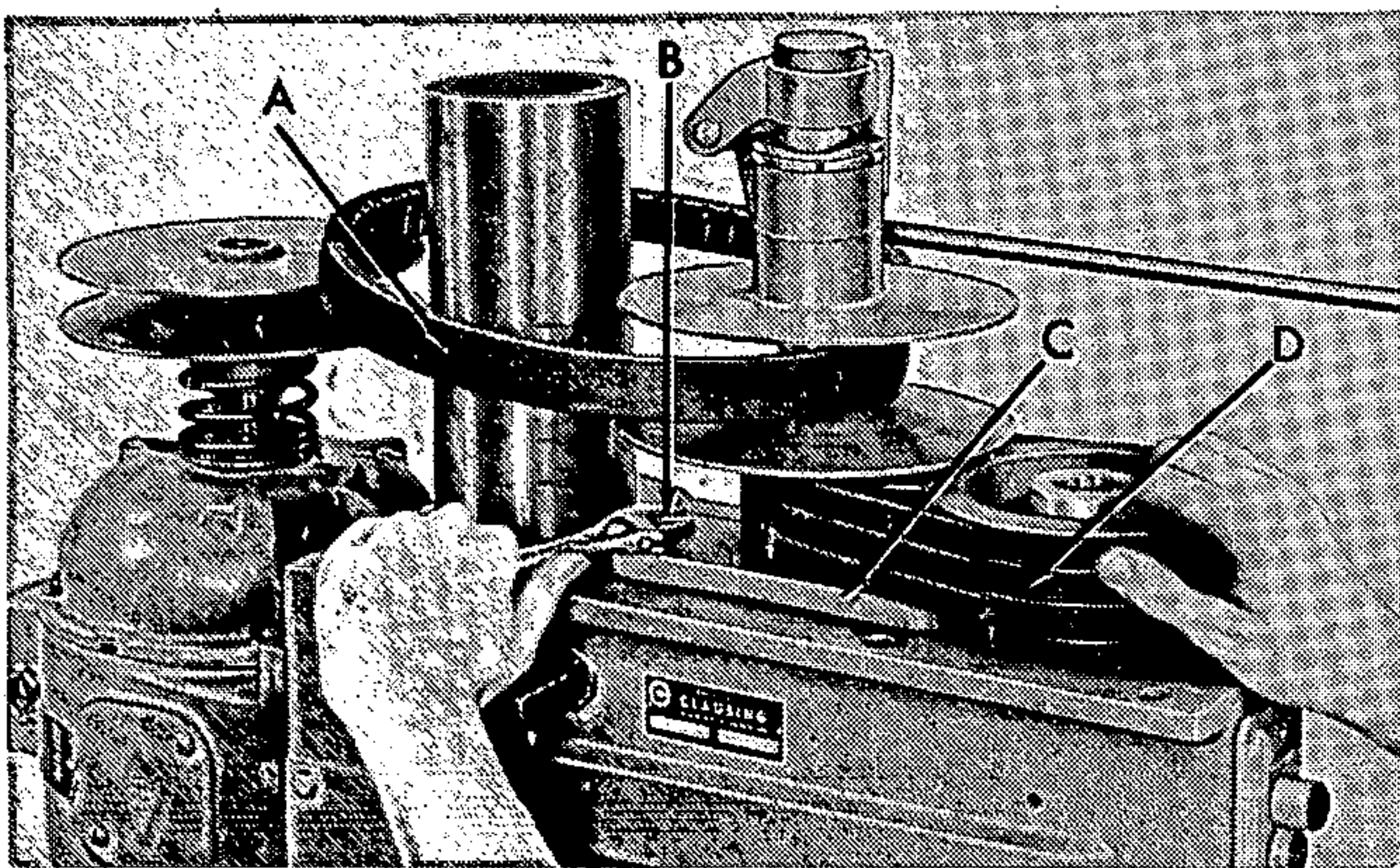


Figure 6

SPINDLE BELTS

1. Remove belt guard (C, fig. 5).
2. Remove two screws (E). Loosen nut (B) and remove guard, handwheel and tube assembly.
3. Remove variable speed belt (A, fig. 6).
4. Loosen two screws (B) in countershaft housing (C), slide housing towards front of head.
5. Remove the spindle belts (D).
6. Replace belts and reassemble.

NOTE: *For proper spindle belt tension, belts should depress $\frac{1}{8}$ " with light finger pressure.*

ADJUSTING DEPTH STOP

1. When setting drill depth, position pointer (B, fig. 7) at depth required and tighten nuts (C).
2. Loosen screws (A) and with quill at maximum travel, position scale so pointer is at $6\frac{3}{4}$ ", then tighten screws.

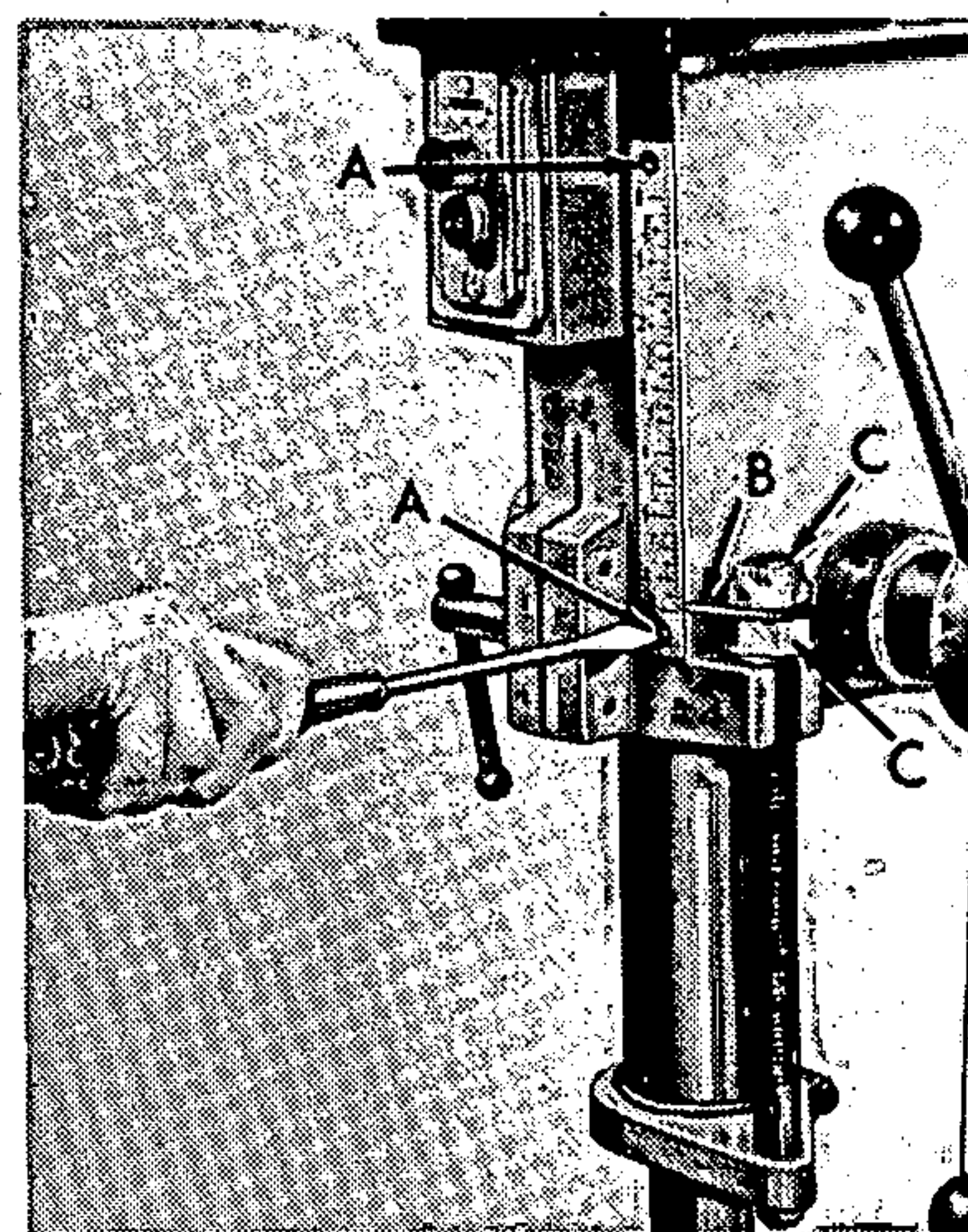


Figure 7

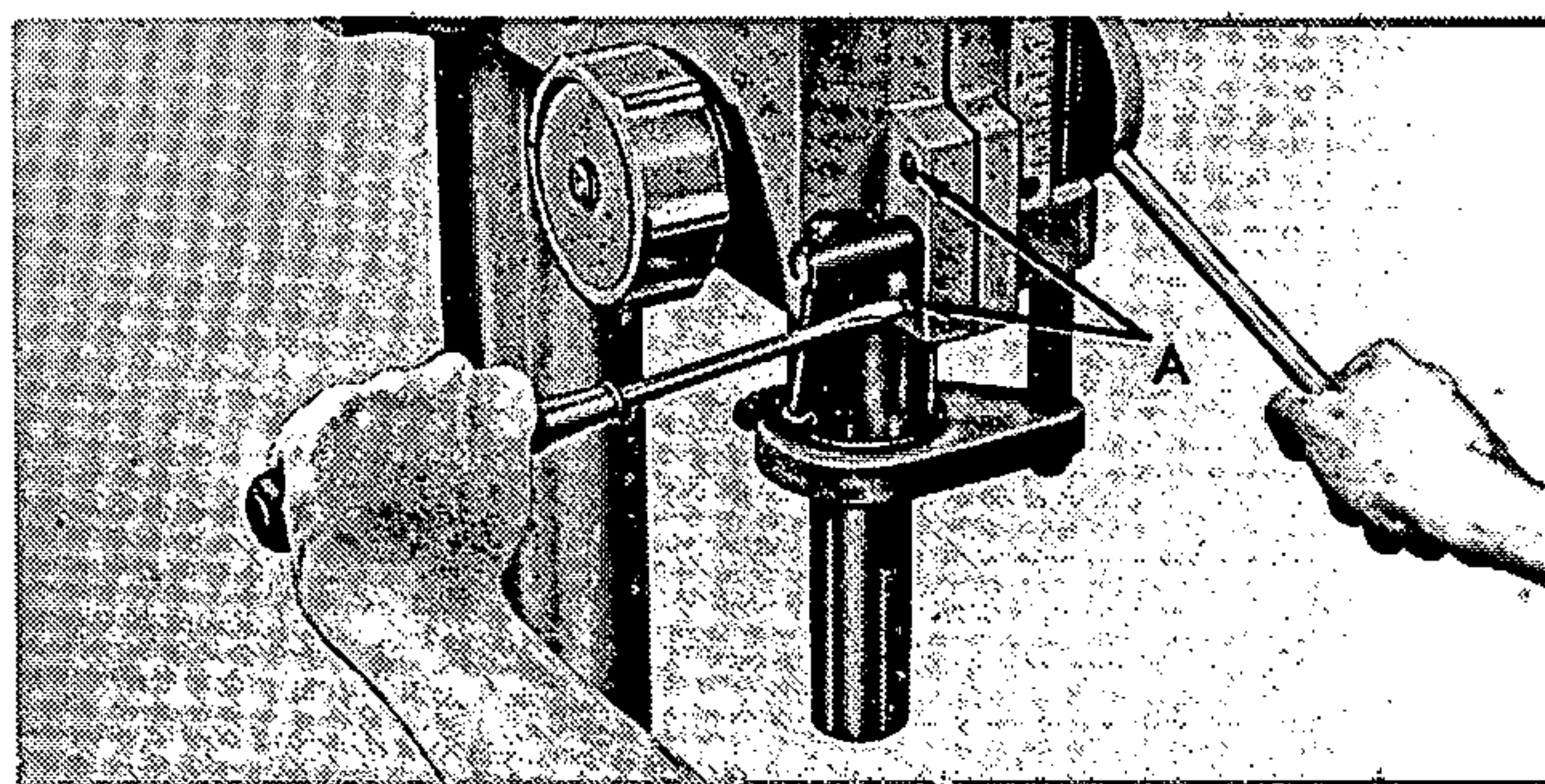


Figure 8

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. 8) — using correct size screw driver — until play has been removed. Move quill up and down in head to make sure it slides freely.

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. 8) and turn clockwise.

ADJUSTING SPINDLE END PLAY

1. Release spindle return spring tension (fig. 8).
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.

PARTS INDEX

8

for

20" CLAUSING DRILL PRESSES VARIABLE SPEED DRIVE MODELS 2251 THROUGH 2287 and 2281-300 THROUGH 2287-300 22V-1 - SERIES FROM SERIAL NO. 511001 TO _____

FLOOR DRILLS

Column, Table and Base	4.1
Head Parts	5.3
Pulley Parts	6.5
Guard & Push Rod Assy. Parts	7.3

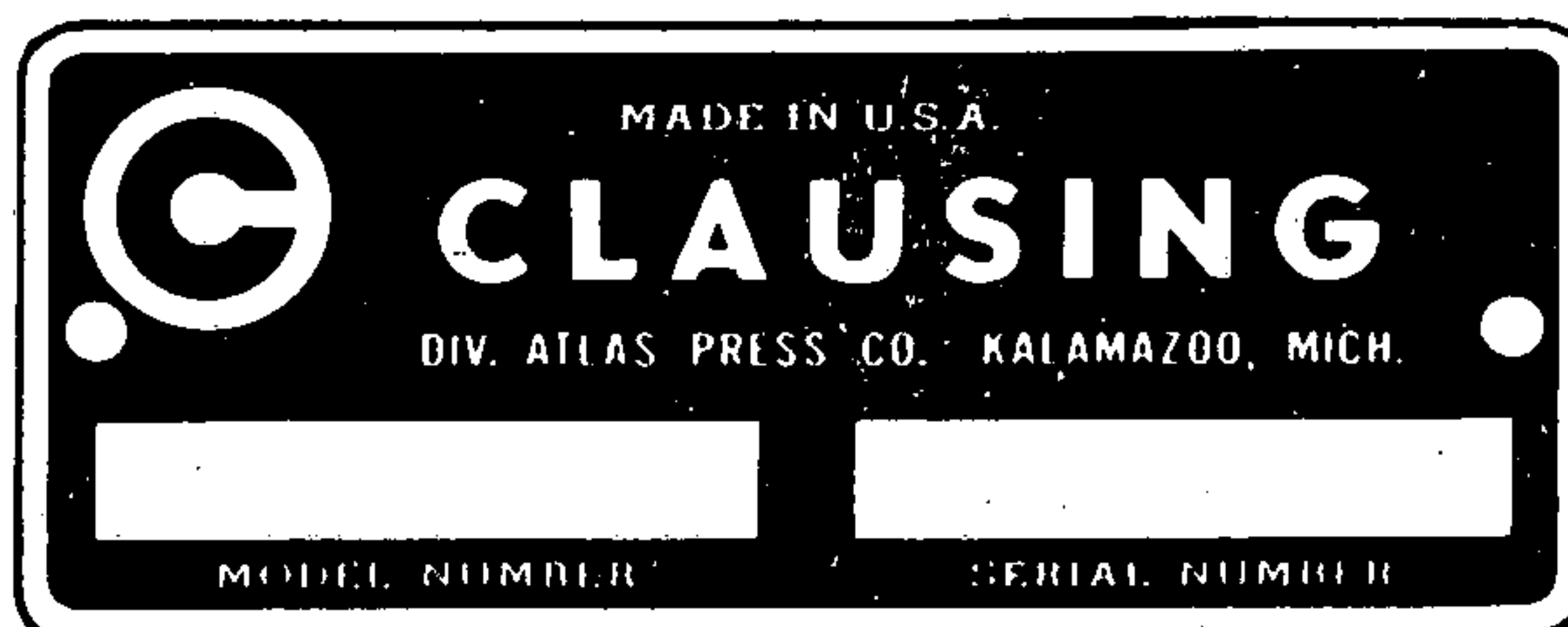
MULTIPLE SPINDLE DRILLS

Oil Table and Leg Parts	8.1
2216 Head Positioning Mechanism Parts	8.1
2295 Column Mounting Flange Parts	8.1

INSTRUCTIONS FOR ORDERING REPAIR PARTS

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

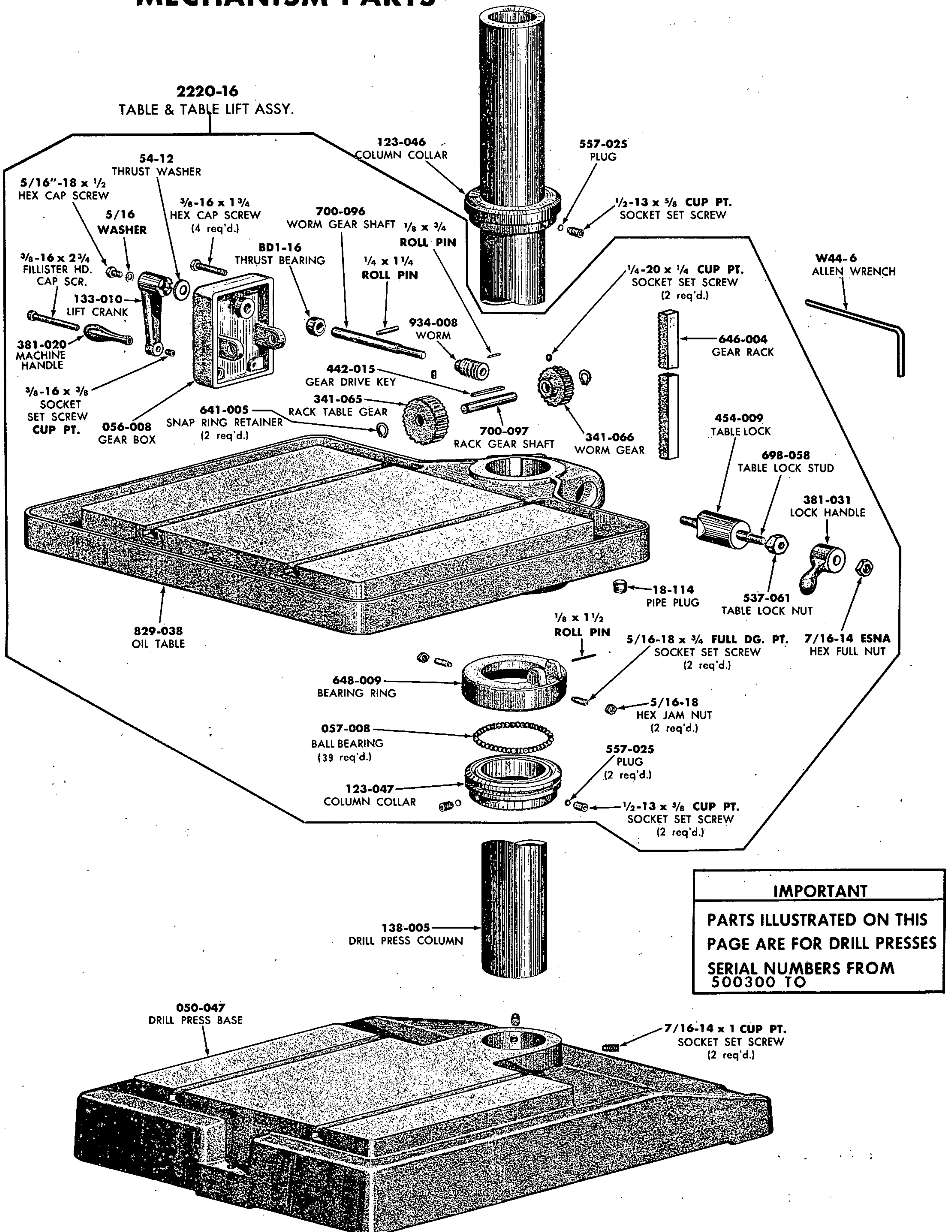
1. PART NUMBER
2. PART NAME
3. MODEL and SERIAL NUMBER of machine tool -- you'll find both on the metal plate attached to machine -- note illustration below.



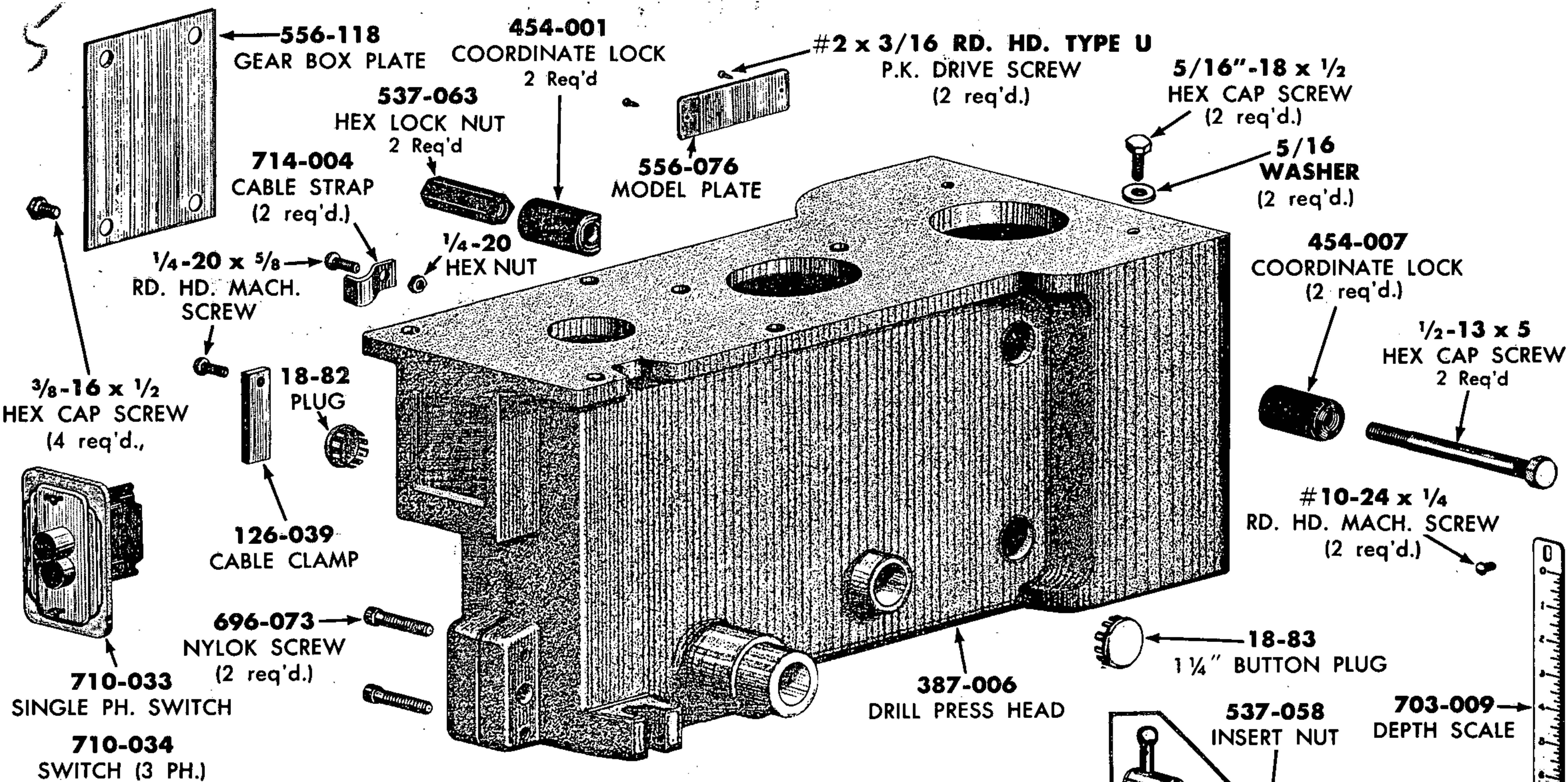
Be sure to give Model and Serial Number on this plate.

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.

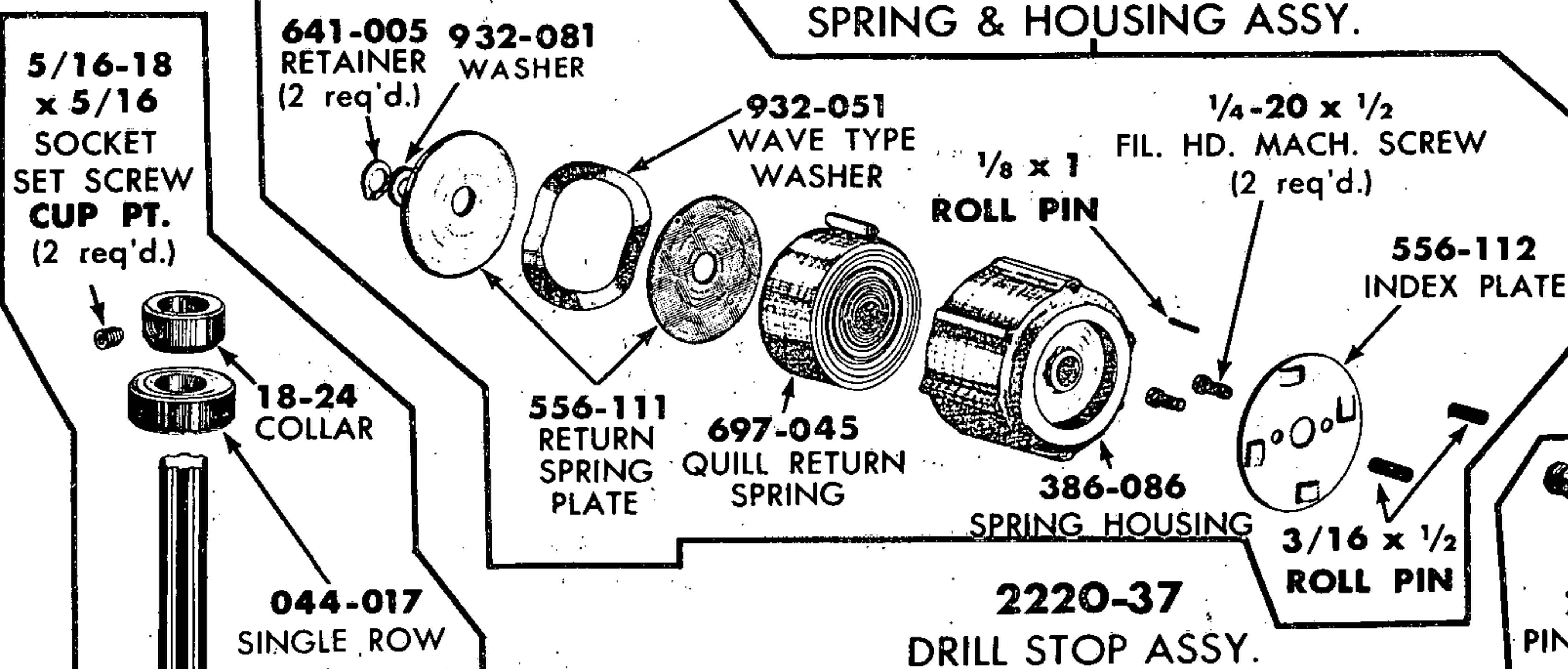
COLUMN, TABLE, BASE and TABLE POSITIONING MECHANISM PARTS



20" DRILL PRESS HEAD PARTS

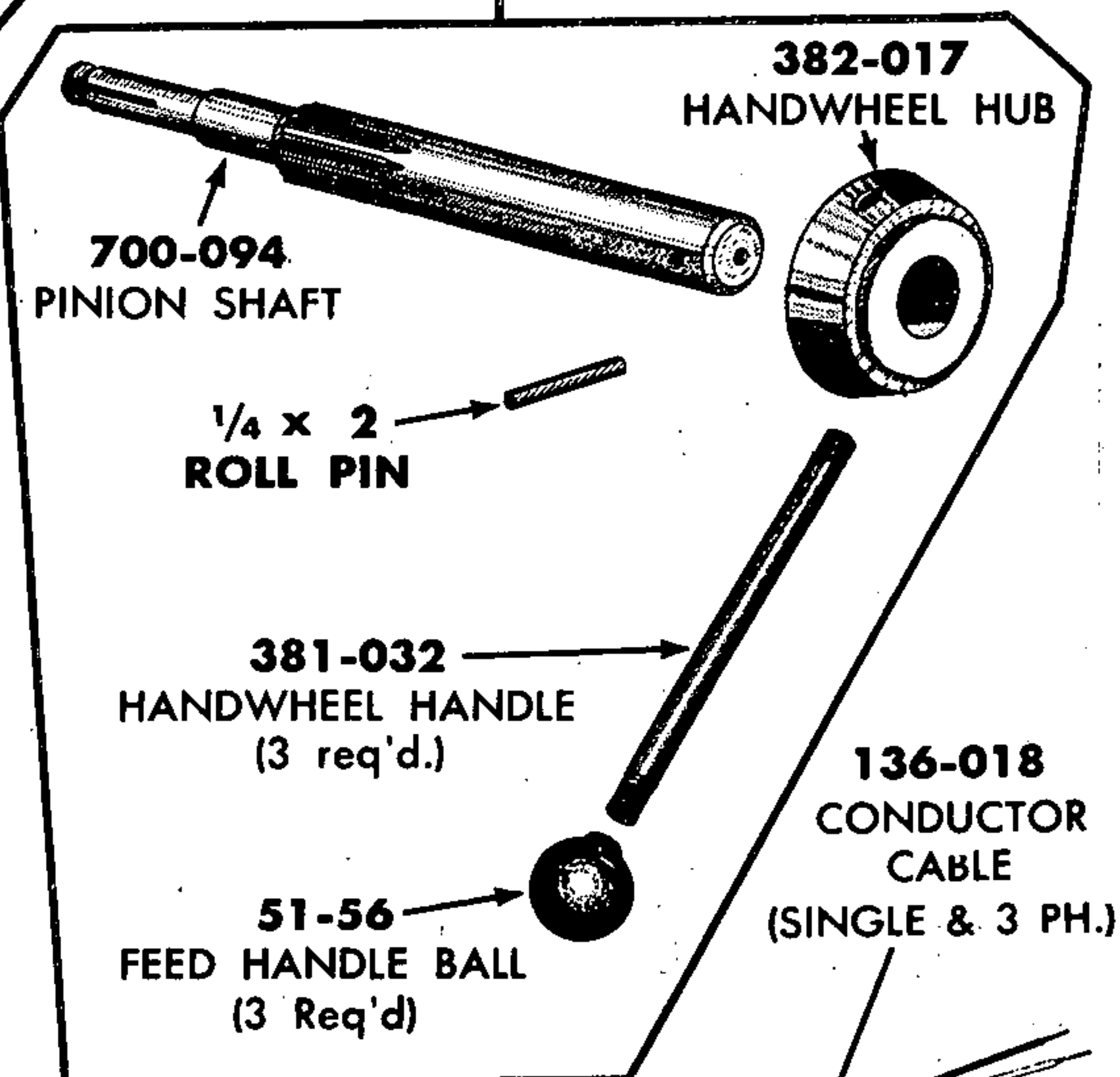


2220-36 SPRING & HOUSING ASSY.

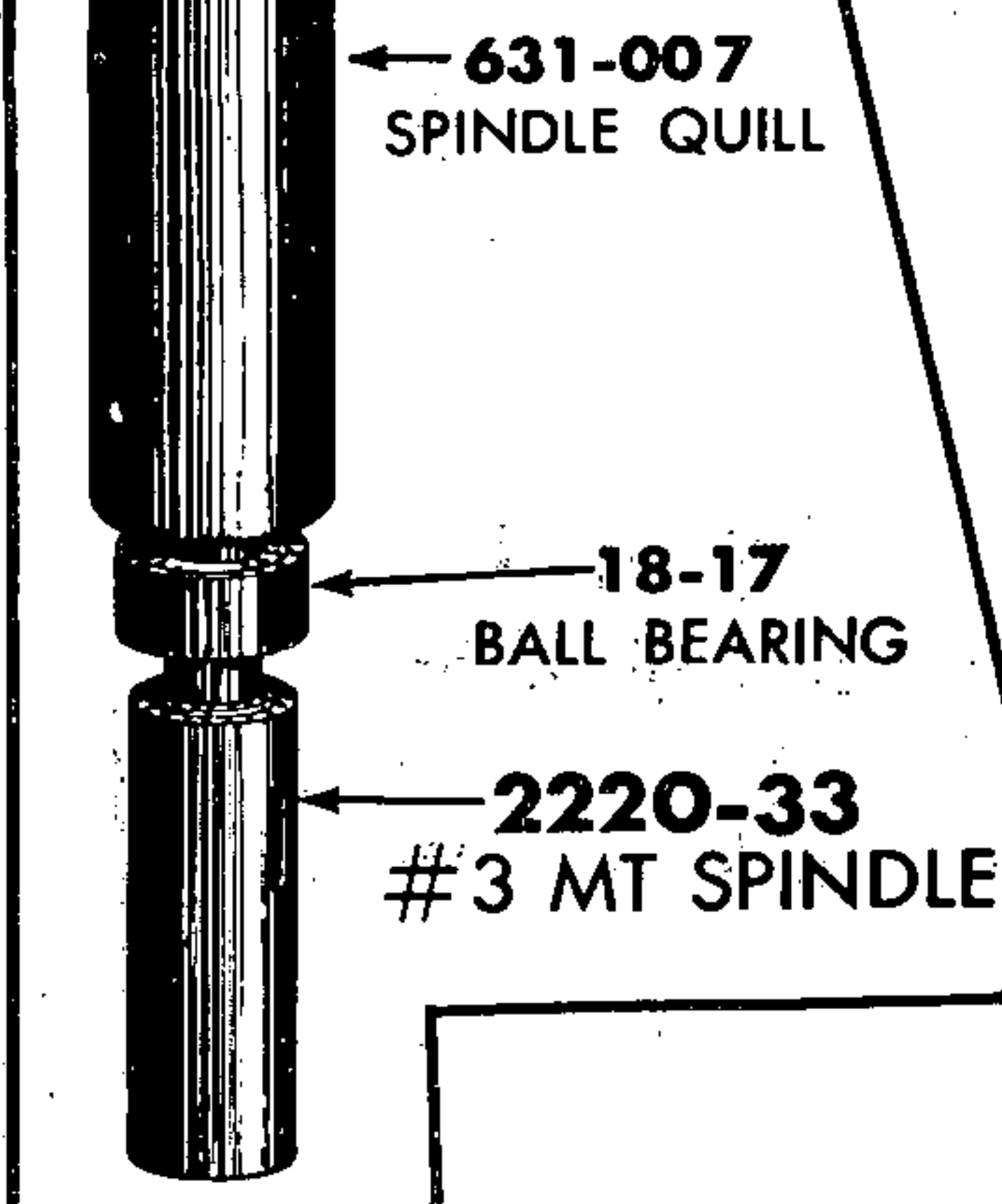


2220-21 QUILL LOCK HANDLE ASSY.

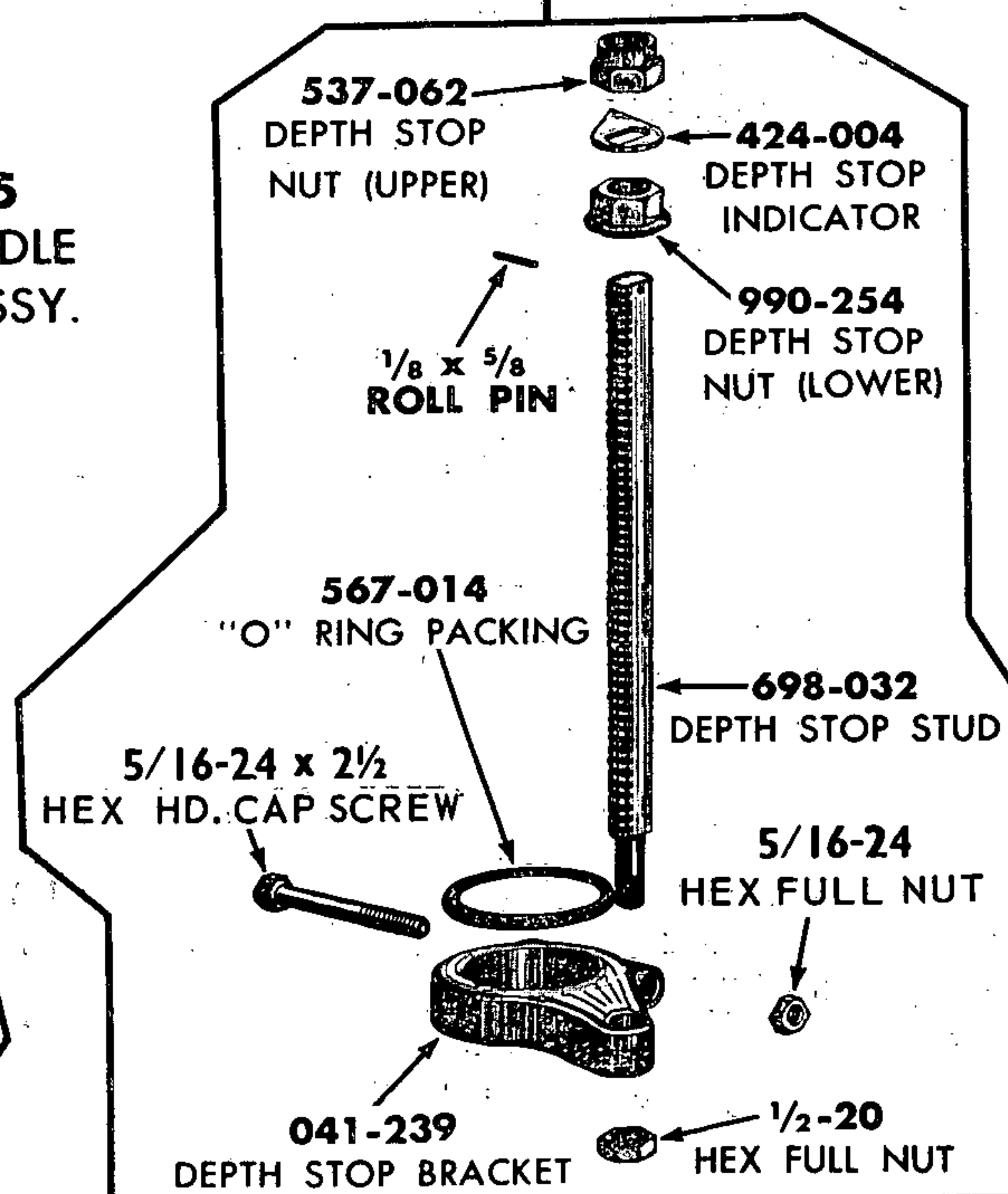
2220-18 HAND FEED ASSY.



2220-35 #3 MT SPINDLE & QUILL ASSY.



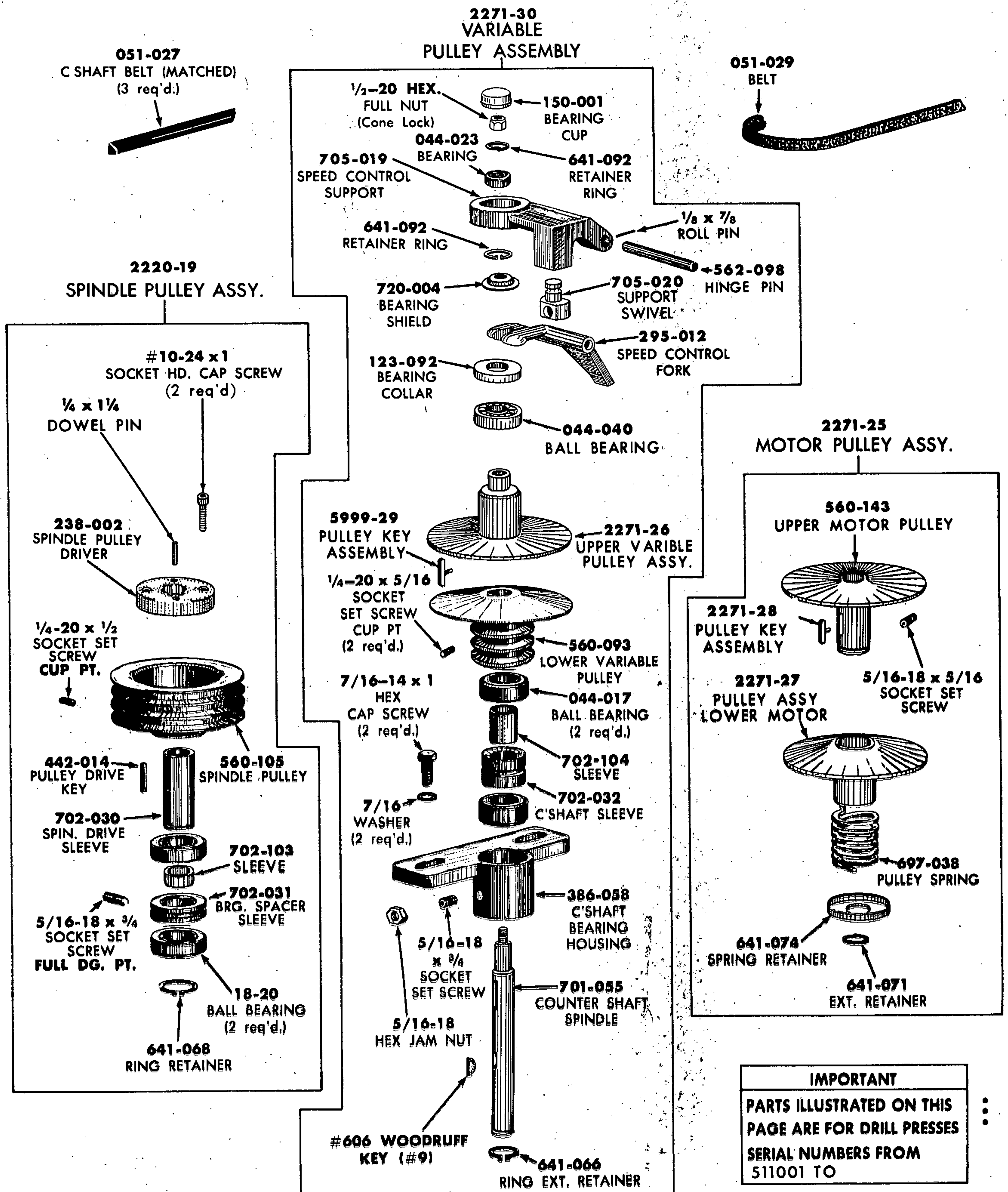
2220-37 DRILL STOP ASSY.



IMPORTANT

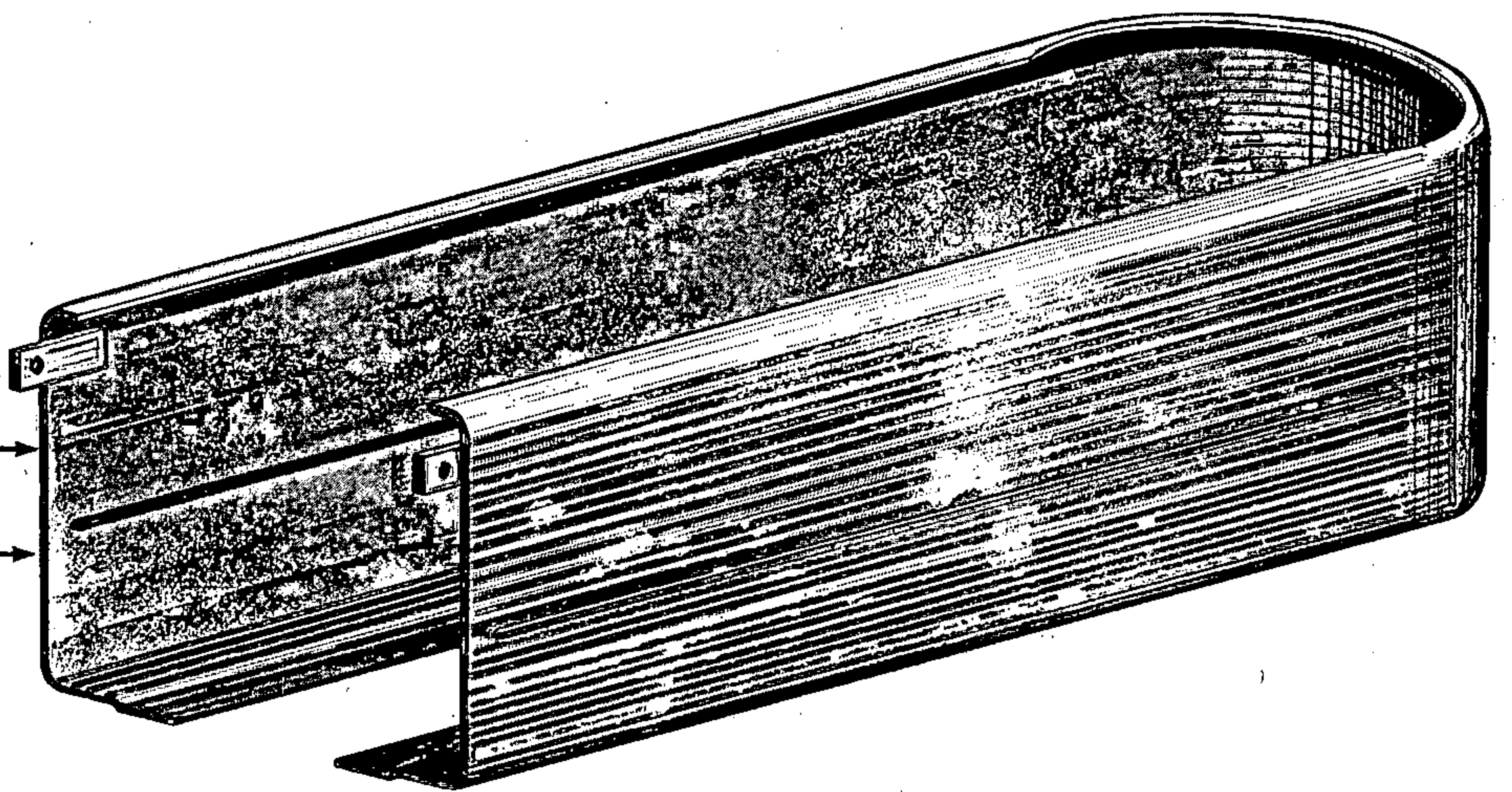
PARTS ILLUSTRATED ON THIS PAGE ARE FOR DRILL PRESSES SERIAL NUMBERS FROM 503725 TO

20" DRILL PRESS VARIABLE DRIVE PULLEY PARTS



20" DRILL PRESS VARIABLE DRIVE GUARD & PUSH ROD ASSY. PARTS

342-046
BELT GUARD
342-047
BELT GUARD
for
(POWER FEED)



2271-31 HANDWHEEL PUSH ROD ASSY.

5/16"-18 x 5/8
HEX CAP SCREW
(2 req'd.)

5/16 WASHER
(2 req'd.)

#8-32 x 3/8
ROUND HEAD MACH. SCREW
(3 req'd.)

441-049
KNOB
(3 req'd.)

698-059
STUD
(3 req'd.)

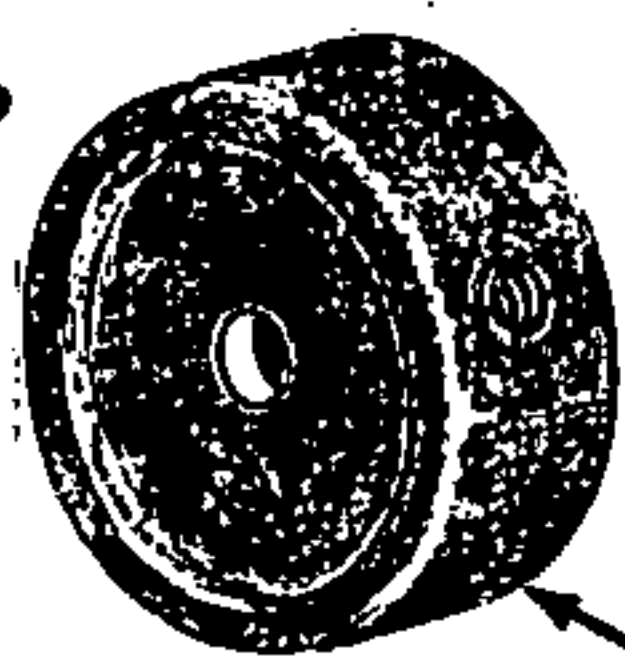
W76-3
BEARING

648-011
CAM RING

055-009
HANDWHEEL
BOLT

1/4-20 x 3/8
SOC.
CAP SCREW

130-016
SPEED CHART



382-019
HUB

1/8 x 1/2
ROLL PIN

#2 x 3/16 RD. HD. TYPE U
P.K. DRIVE SCREW
(2 req'd.)



536-018
NAMEPLATE

342-050
SPIN. PULLEY GUARD

828-033
PUSH ROD TUBE

1/2-20
HEX JAM NUT

5/8-18
HEX JAM NUT

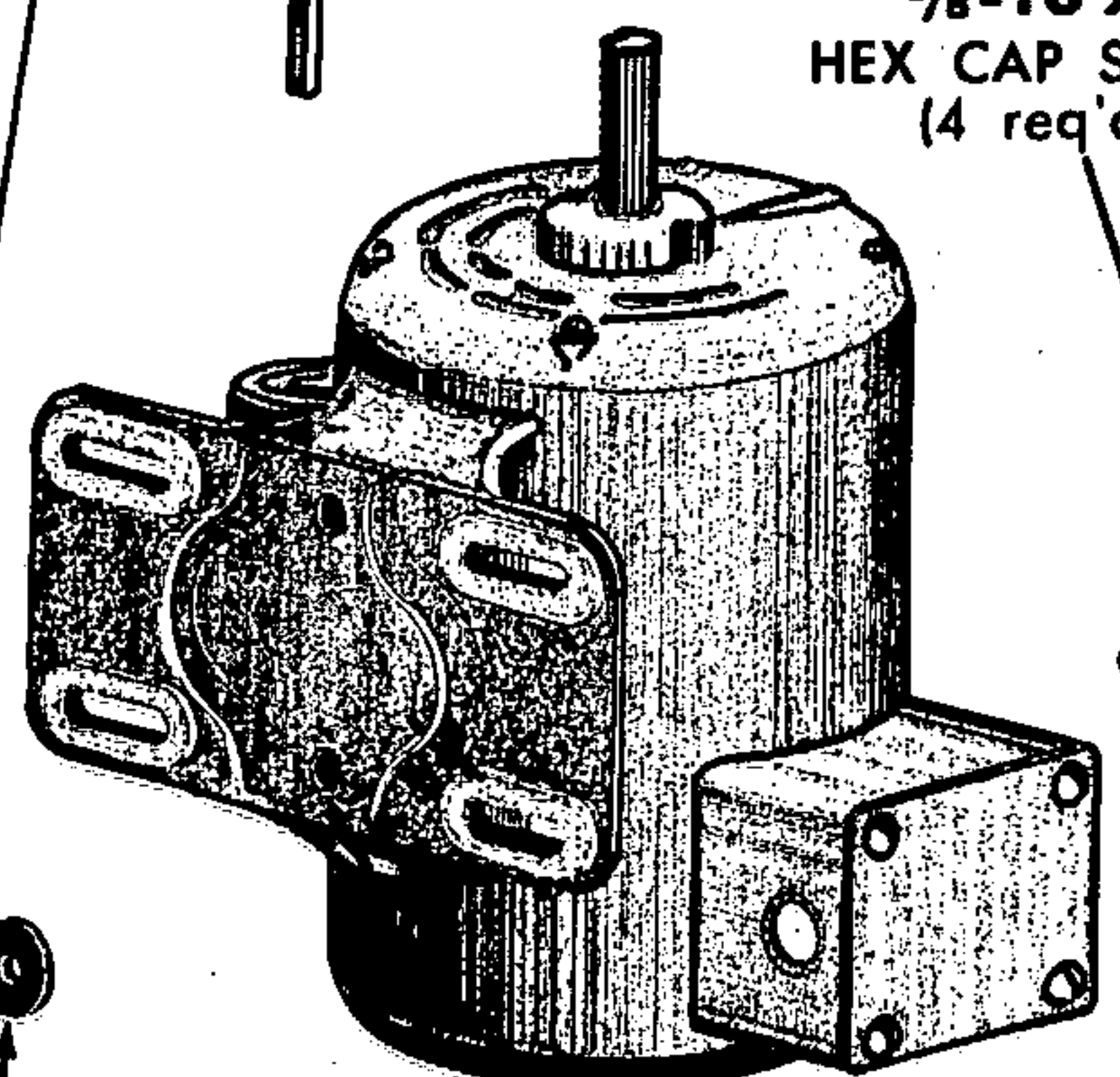
2271-29
PUSH ROD
W/ROLLER

5/8-18
HEX JAM NUT

1/8 x 5/8
ROLL PIN

3/16" x 3/16"
x 1-1/4" KEY

3/8-16 x 1
HEX CAP SCREW
(4 req'd.)

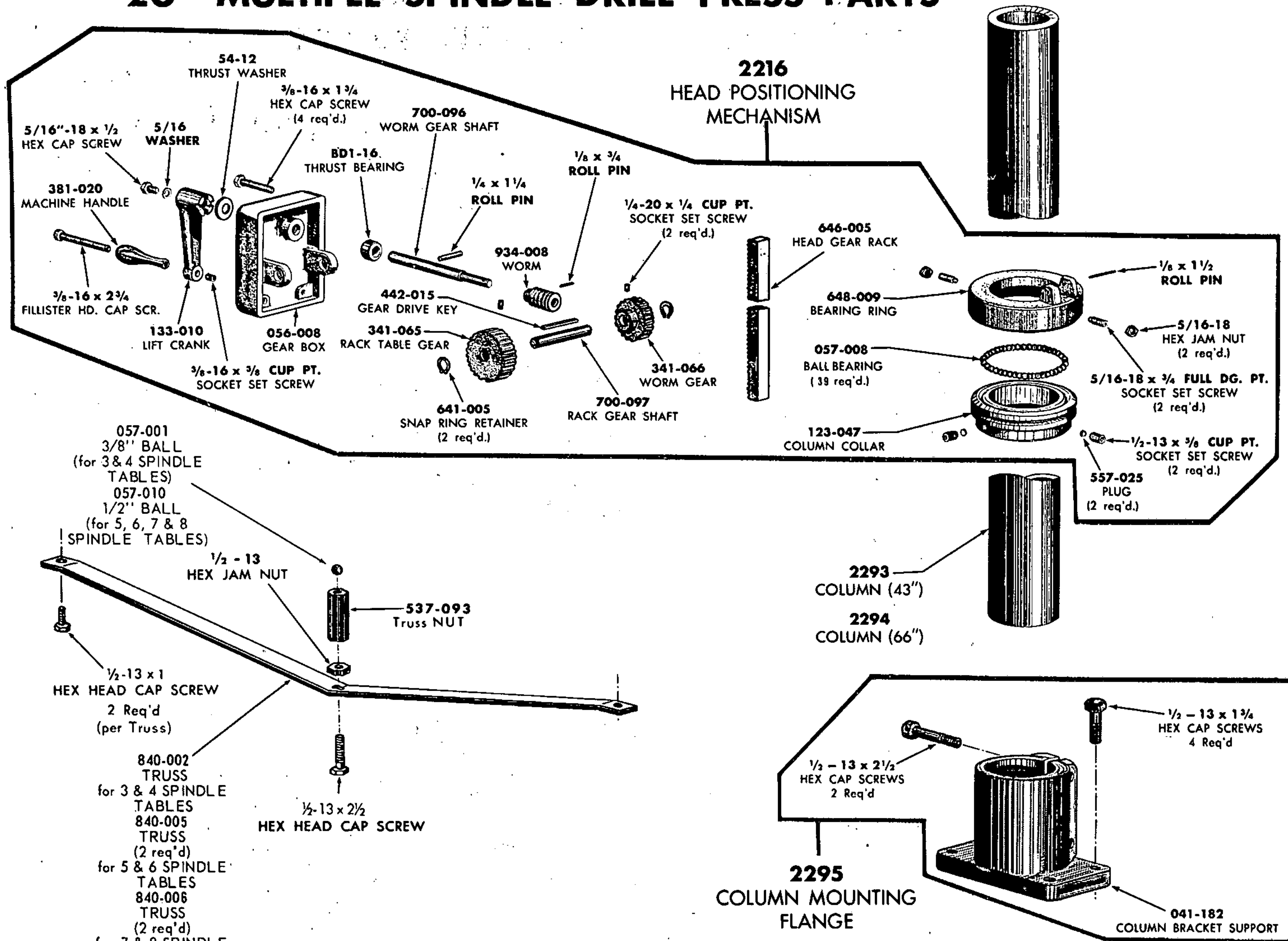


3/8 PLAIN WASHER

IMPORTANT

PARTS ILLUSTRATED ON THIS
PAGE ARE FOR DRILL PRESSES
SERIAL NUMBERS FROM
511001 TO

20" MULTIPLE SPINDLE DRILL PRESS PARTS



OIL TROUGH TABLES

- No. 2292 Table. 24" x 40" working surface. Takes two 20" heads.
- No. 2296 Table. 24" x 80" working surface. Takes four 20" heads.
- No. 2297 END SECTION. Two sections provide 24" x 120" working surface for six 20" heads.
- No. 2298 MID SECTION. 24" x 40" working surface. Takes two 20" heads. Use with two No. 2297 End Sections.
- No. 2299 TABLE LEG. Two legs required for Nos. 2292 and 2296. Three legs required for two No. 2297. Three legs required for two No. 2297 with one No. 2298.

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

1/2-13 x 1 1/2 HEX CAP SCREWS 4 Req'd

DL-151 LEVELING SCREW 2 Req'd (PER LEG)

63-114 PIPE PLUG 2 Req'd