

**ROYERSFORD-EXCELSIOR**

# **21" DRILL PRESS**

**BACK-GEARED      POWER FEED**

- **Operating Instructions**
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**ROYERSFORD FOUNDRY & MACHINE COMPANY, INC.**

**ROYERSFORD, PENNSYLVANIA**



# ROYERSFORD-EXCELSIOR

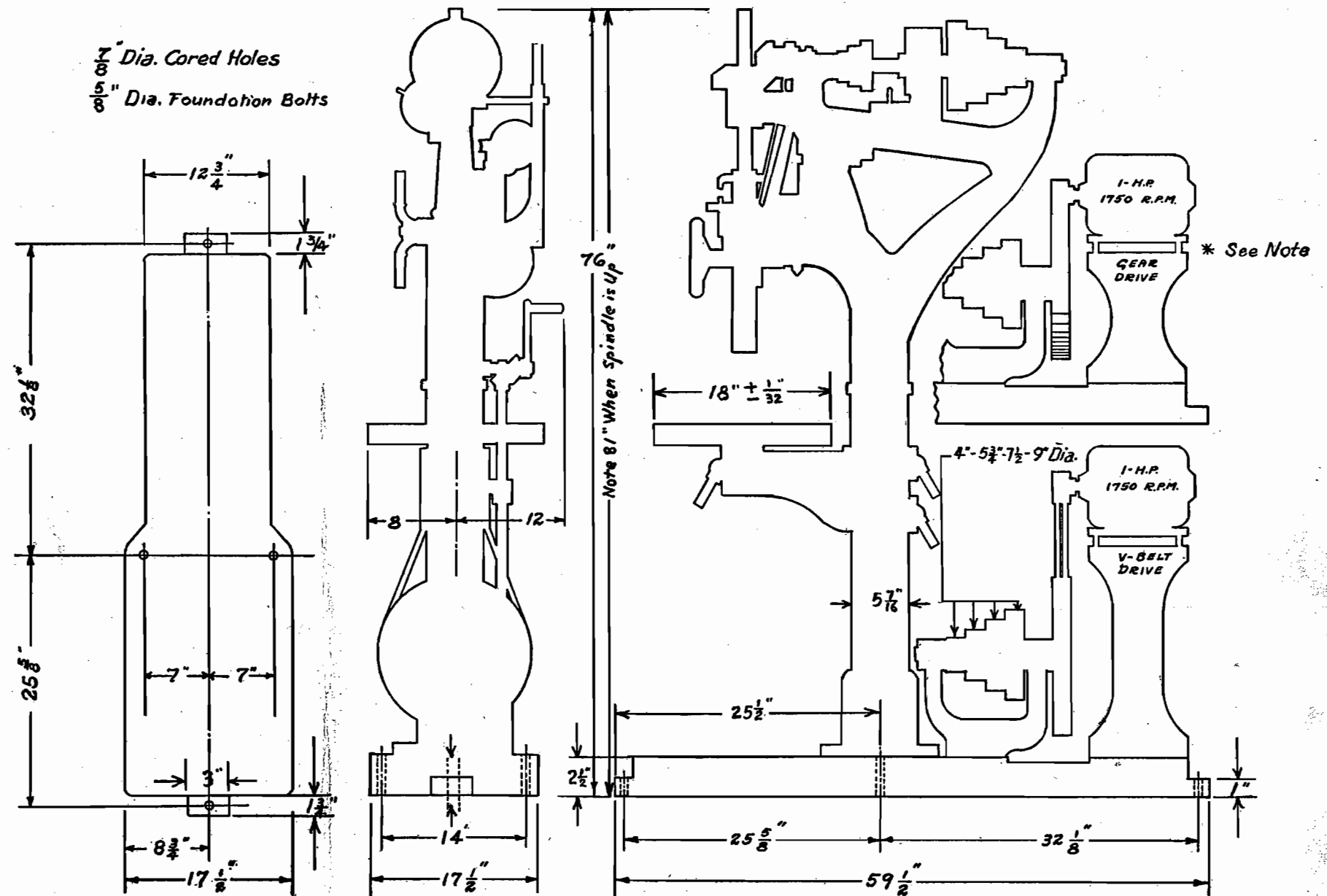
## 21" IMPROVED BACK-GEARED POWER FEED DRILL

### OPERATING INSTRUCTIONS

1. Follow directions of Lubrication Chart for oiling.
2. Keep all bearings properly lubricated.
3. Oil spindle at top and bottom frequently.
4. When new machine is first put in operation, run at slower speeds and lubricate every hour, which will permit the bearings to adapt themselves more perfectly and thereby extend life of bearings.
5. On V-Belt Drive, adjust the V-Belts to proper tension as necessary.
6. Do not operate machine with any guards removed.
7. Stop machine to change belt speed.
8. Run machine at proper speeds.
9. Secure work firmly before drilling.
10. Keep cutting tools well sharpened.
11. Use back gears for large-size drills.
12. Stop machine to engage back gears.
13. Drilling capacity of machine is 1 1/2" diameter drill.
14. Do not use larger drill than capacity of machine permits.

Care Saves Wear

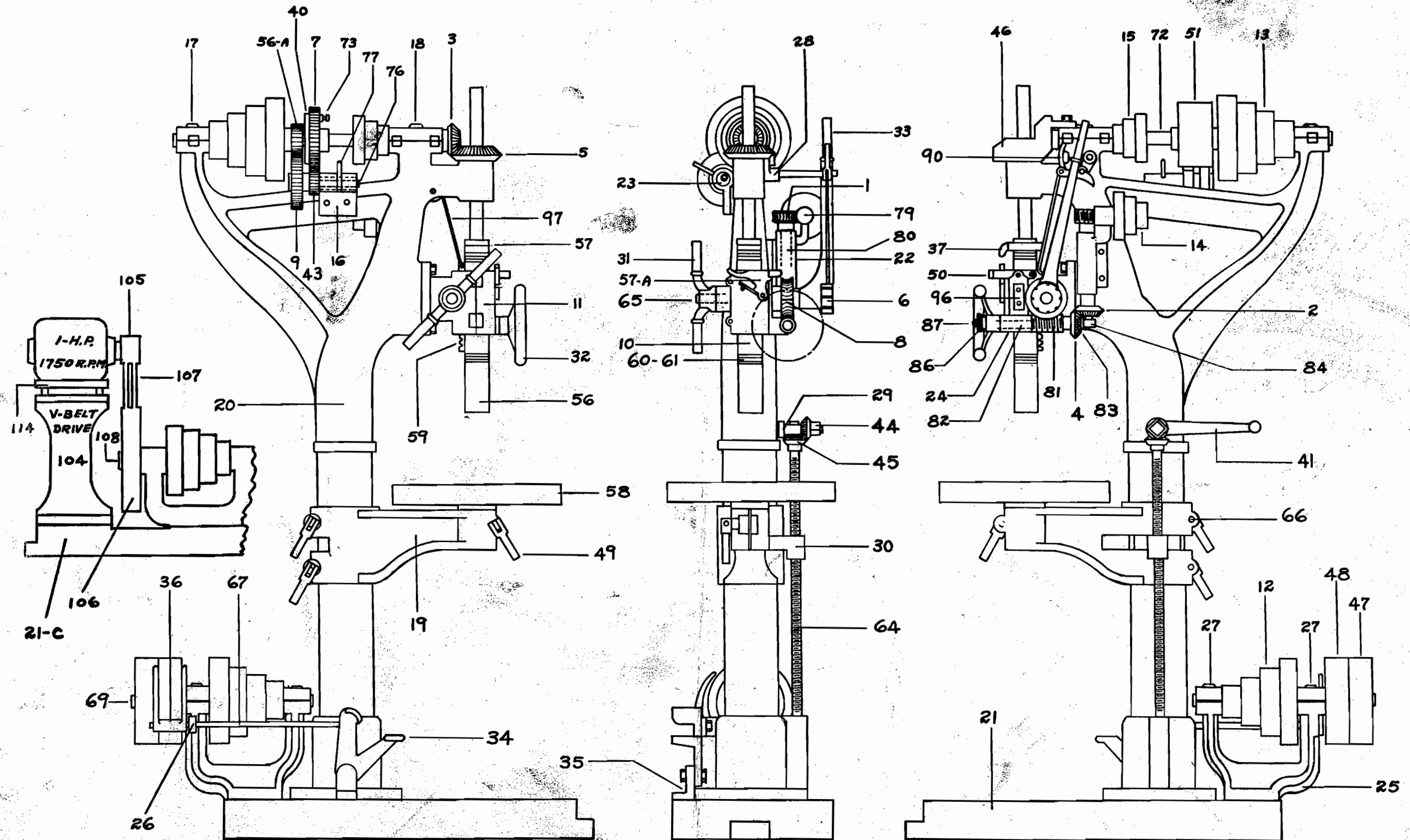
### FOUNDATION PLAN



# Royersford - Excelsior 21" Improved Back-Geared POWER FEED DRILL

## REPAIR PARTS CHART

(In ordering parts the letter "F" should precede each part number as shown on Repair Parts List on reverse side of this sheet)



# Royersford-Excelsior 21" Improved Back-Geared POWER FEED DRILL

## REPAIR PARTS PRICE LIST

No.	ITEMS	PRICE	No.	ITEMS	PRICE	No.	ITEMS	PRICE
F-1	30 Tooth Worm Gear	\$3.90	F-41	Square Box Wrench	\$2.40	F-79	Top Feed Worm	\$7.20
F-2	30 Tooth Miter Gear	3.30	F-42	Counterweight	4.20	F-80	Feed Bracket Shaft	3.00
F-3	24 Tooth Bevel Drive Pinion	11.40	F-43	Back Gear Pinion, 20 Teeth	3.30	F-81	Bottom Feed Worm	11.40
F-4	30 Tooth Mitre Clutch Feed Gear	3.30	F-43A	Back Gear Pinion, 20 Teeth (Steel)	5.40	F-82	Bottom Feed Worm Shaft	1.80
F-5	40 Tooth Bevel Drive Gear	12.00	F-44	Square Hub Mitre Gear	1.80	F-83	Feed Friction Clutch	2.10
F-5A	40 Tooth Bevel Drive Gear (Steel)	29.40	F-45	Round Hub Mitre Gear	1.80	F-84	Feed Shaft Connecting Pin	.72
F-6	8 Tooth Slot Wheel	3.90	F-46	Bevel Gear Guard	3.90	F-85	Spring for Feed Shaft Connecting Pin	.24
F-7	60 Tooth Back Gear	7.20	F-47	Tight Pulley	6.00	F-86	Knurled Hand Nut	2.40
F-7A	60 Tooth Back Gear (Steel)	21.60	F-48	Loose Pulley	6.00	F-87	Finished Nut 3/8"	.48
F-8	48 Tooth Worm Feed Gear	7.20	F-49	Clamp Handle for Table Bracket (3) each	.90	F-88	Flat Spring for Feed Lever	.42
F-9	52 Tooth Back Gear	6.30	F-50	Lifting Handle for Feed	2.10	F-89	Stop Collar Lock Screw	.42
F-9A	52 Tooth Back Gear (Steel)	18.00	F-51	Back Gear Guard	2.40	F-90	Brass Handle for Feed Lever	3.60
F-10	Spindle Sleeve	14.40	F-53	Motor Pedestal (Low)	21.60	F-91	Feed Trip Cap Screws	.30
F-11	Spindle Sleeve Bearing	18.00	F-54	Motor Drive Countershaft Gear and Shaft	33.00	F-92	Feed Sprocket Pin	.48
F-12	Countershaft Cone Pulley (Short Hub)	19.20	F-55	Sheave Wheel for Counterweight	.60	F-93	Feed Sprocket Pin Spring	.42
F-13	Cone Drive Pulley (Long Hub) (Top)	22.80	F-56	Spindle	42.00	F-94	Connecting Rod for Feed Sprocket Pin	1.60
F-14	Cone Feed Pulley (Lower)	5.40	F-56A	28 Tooth Back Gear Pinion (Cast Iron)	3.60	F-95	Spacing Block for Feed Slide	.90
F-15	Cone Feed Pulley (Upper)	3.90	F-56D	28 Tooth Back Gear Pinion (Steel)	7.20	F-96	Plate for Feed Slide	1.60
F-16	Bracket for Back Gear	3.30	F-56B	Spindle Complete (spindle, sleeve, lock nuts, thrust bearings and rack)	64.80	F-97	Weight Chain	2.40
F-17	Short Cap for Top Bearing	2.70	F-57	Spindle Lock Nuts (2) each	1.20	F-98	Motor Gear Guard	12.00
F-18	Long Cap for Top Bearing	3.90	F-57A	Feed Catch	2.10	F-99	Motor Pinion	21.60
F-19	Table Bracket	21.60	F-58	Table	33.00	F-100	Thrust Washer	4.80
F-20	Housing	102.00	F-58A	Table with Oil Groove	42.00	F-102	Base Clamp Nut Pin	.60
F-21	Base for Belt Drive	45.60	F-59	Rack	7.00	F-103	Fibre Washer for F-72	1.80
F-21A	Hub for Base	12.00	F-60	Ball Bearing Washers (2) each	3.30	F-104	High Motor Pedestal	30.00
F-21C	Base for Motor Drive	60.00	F-61	1/4" Balls, per set	.90	F-105	Small Motor V-Belt Pulley	7.20
F-22	Feed Bracket	11.40	F-62	Bevel Gear Key 1/4" x 7/8"	.90	F-106	Large Countershaft V-Belt Pulley and Shaft	24.60
F-23	Eccentric Sleeve	3.00	F-63	Handle Bracket Pin 3/8" x 7 1/2"	.72	F-107	V-Belts (2), per pair	9.00
F-24	Feed Shaft Bearing	5.20	F-64	Table Lifting Screw	6.00	F-108	Motor Countershaft	4.20
F-25	Countershaft Bracket	12.00	F-65	Pinion Shaft	19.20	F-109	Top Worm Gear Guard with Brass Cup	3.00
F-26	Shifter Arm	1.20	F-66	Clamping Screw and Handle for Table Bracket (3) each	2.40	F-110	Lower Worm Gear Guard with Oil Reservoir	2.10
F-27	Countershaft Bracket Cap (2) each	2.40	F-67	Shifter Rod	1.20	F-111	V-Belt Guard	15.00
F-28	Latch Bracket	.60	F-68	Shifter Rod Pin (2) 3/16" x 1 1/4", each	.24	To change from belt to motor drive, customer to return base and two pulleys		
F-29	Rough Mitre Gear Bracket	3.30	F-69	Countershaft 1 3/16" x 2"	3.60	F-114	Motor Adjusting Plate	6.00
F-30	Lifting Nut	1.60	F-70	Top Sheave Wheel Pin 3/8" x 2 1/2"	.24	<b>SET SCREWS</b>		
F-31	Feed Handle	6.00	F-71	Bottom Sheave Wheel Pin 3/8" x 5 1/2"	.36	3/16" x 1 3/4" Cap Screws	5/8" x 1 1/2" Cap Screws	
F-32	Hand Wheel	6.00	F-72	Top Driving Shafts 1 3/16" x 3 1/8"	4.80	1/2" x 1 1/2" Cap Screws	3/8" Reg. Washers	
F-33	Ratchet Handle	9.00	F-73	Back Gear Pin (3 parts)	3.00	3/8" x 1 1/2" Cap Screws	1/2" Reg. Washers	
F-33A	Ratchet Handle Complete	16.50	F-74	Spring for Back Gear Pin	.60	3/8" x 1 1/4" Cap Screws	5/8" Nuts	
F-34	Shifter Bracket	1.20	F-75	Lock Screw for Back Gear	.60	3/8" x 3/8" Cap Screws	1/2" x 2 3/4" Bolts	
F-35	Shifter Angle	.42	F-76	Back Gear Shaft	1.80	1/4" x 1 1/2" Cap Screws	1/2" x 6" Bolts	
F-36	Shifter Fork	1.20	F-77	Back Gear Shaft Handle	.90			
F-37	Stop Collar	1.20	F-78	Oil Pipe for Cone Pulley 1/4" x 2 3/4"	1.80			
F-38	Base Clamp Nut	1.20						
F-40	Back Gear Disc	2.40						

# Royersford-Excelsior 21" Improved Back-Geared POWER FEED DRILL

## LUBRICATION CHART

