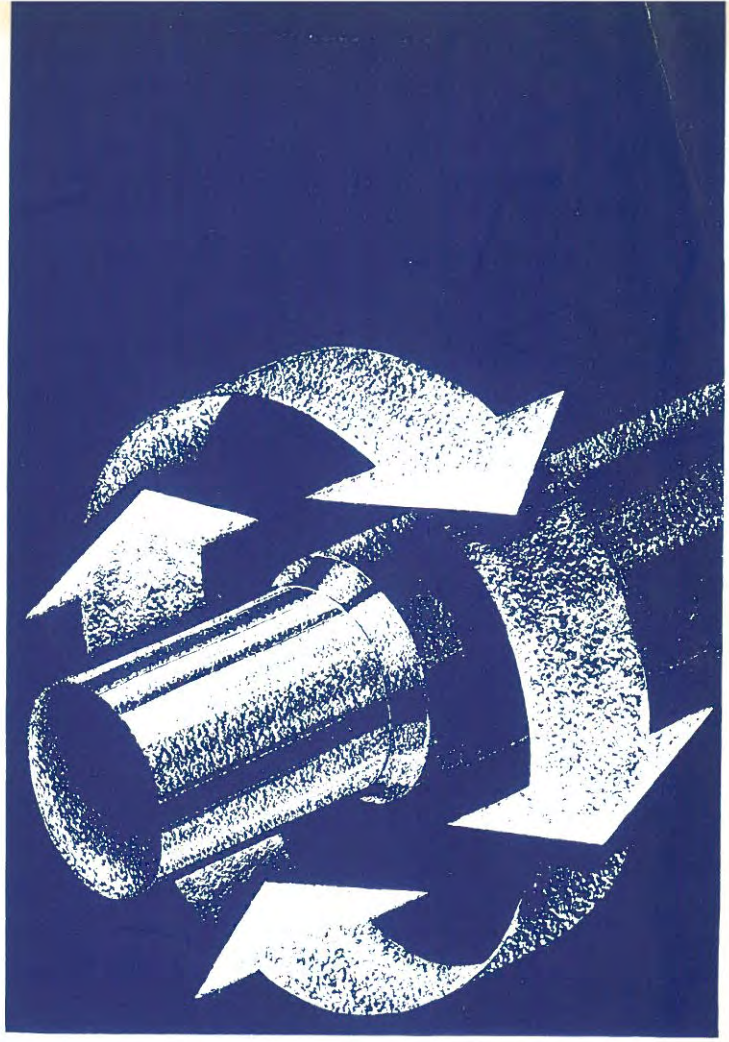
Introducing the



H.S.400 AUTOMATIC PATENT HIGH SPEED CENTRELESS BAR TURNING MACHINE

by

FARMER NORTON

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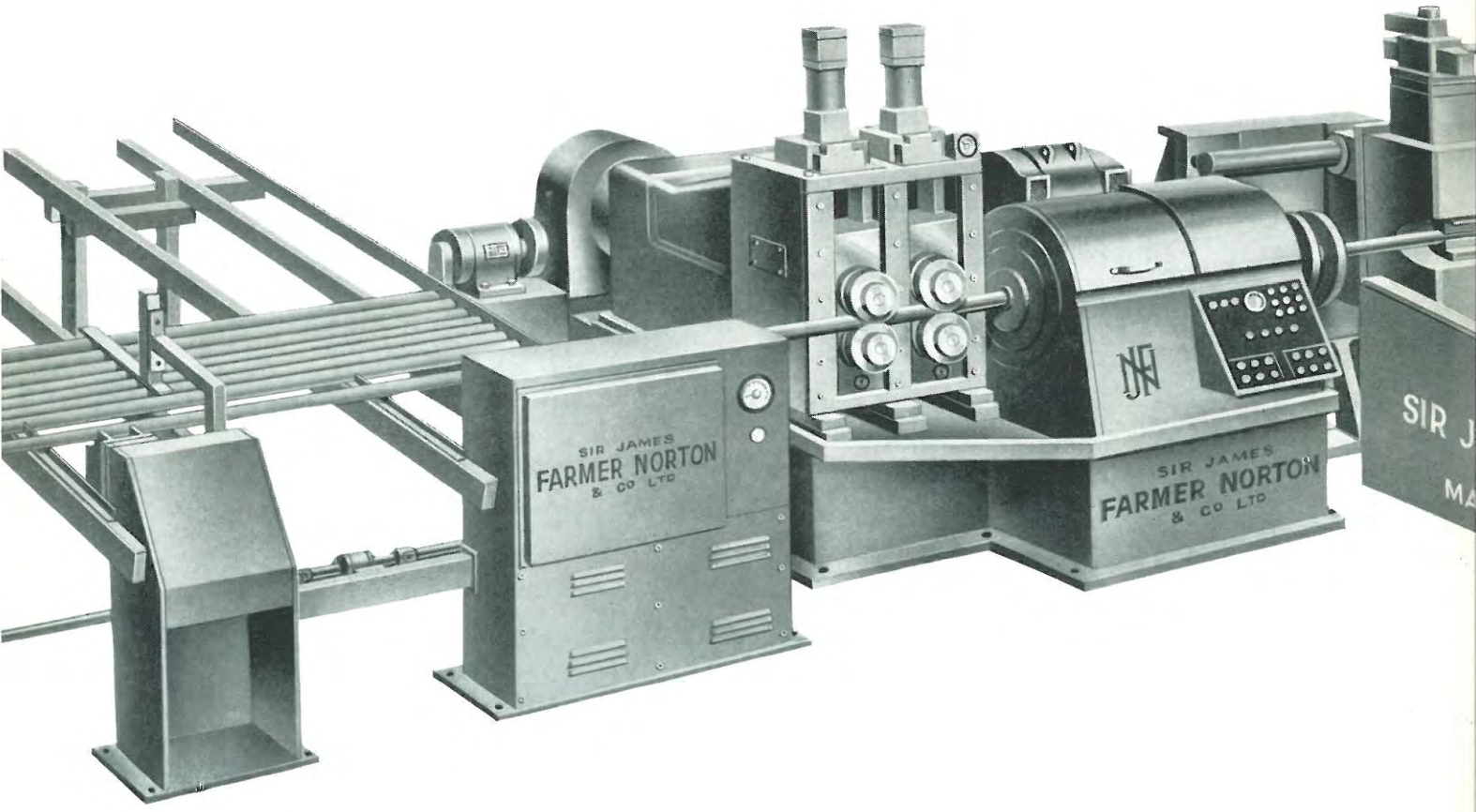
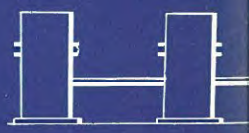
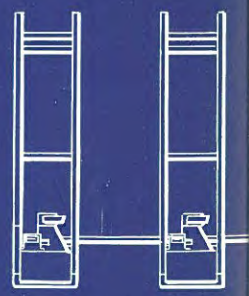
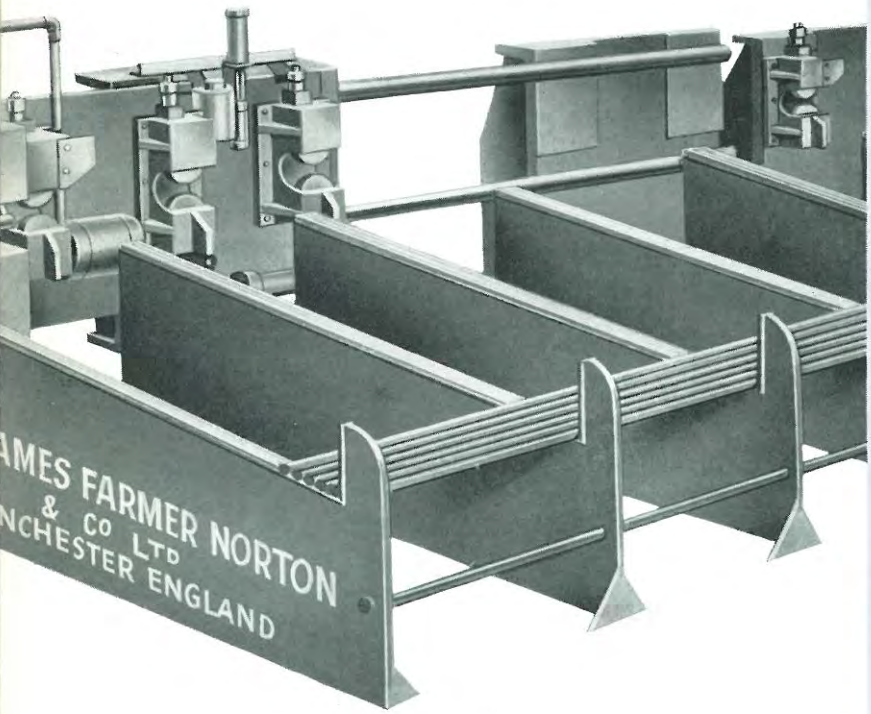


1	INGOING STILLAGE	11	FEED ROLL DRIVE BOX
2	FEED ROLL UNIT	12	FEED DRIVE VARIATOR
3	HEADSTOCK	13	COOLANT PUMP
4	CONTROL CONSOLE	14	CARRIAGE TRAVERSE PUMP
5	COLLET RELEASE	15	SPINDLE DRIVE GEARBOX
6	CARRIAGE GRIPPING HEAD	16	SPINDLE DRIVE MOTOR
7	CARRIAGE	17	DRIVEN INGOING ROLLERS
8	CARRIAGE NIP ROLLS	18	HYDRAULIC UNIT
9	CARRIAGE RAILS	19	FEED ROLLS
10	FORWARD SUPPORT ROLLS	20	OUTGOING STILLAGE

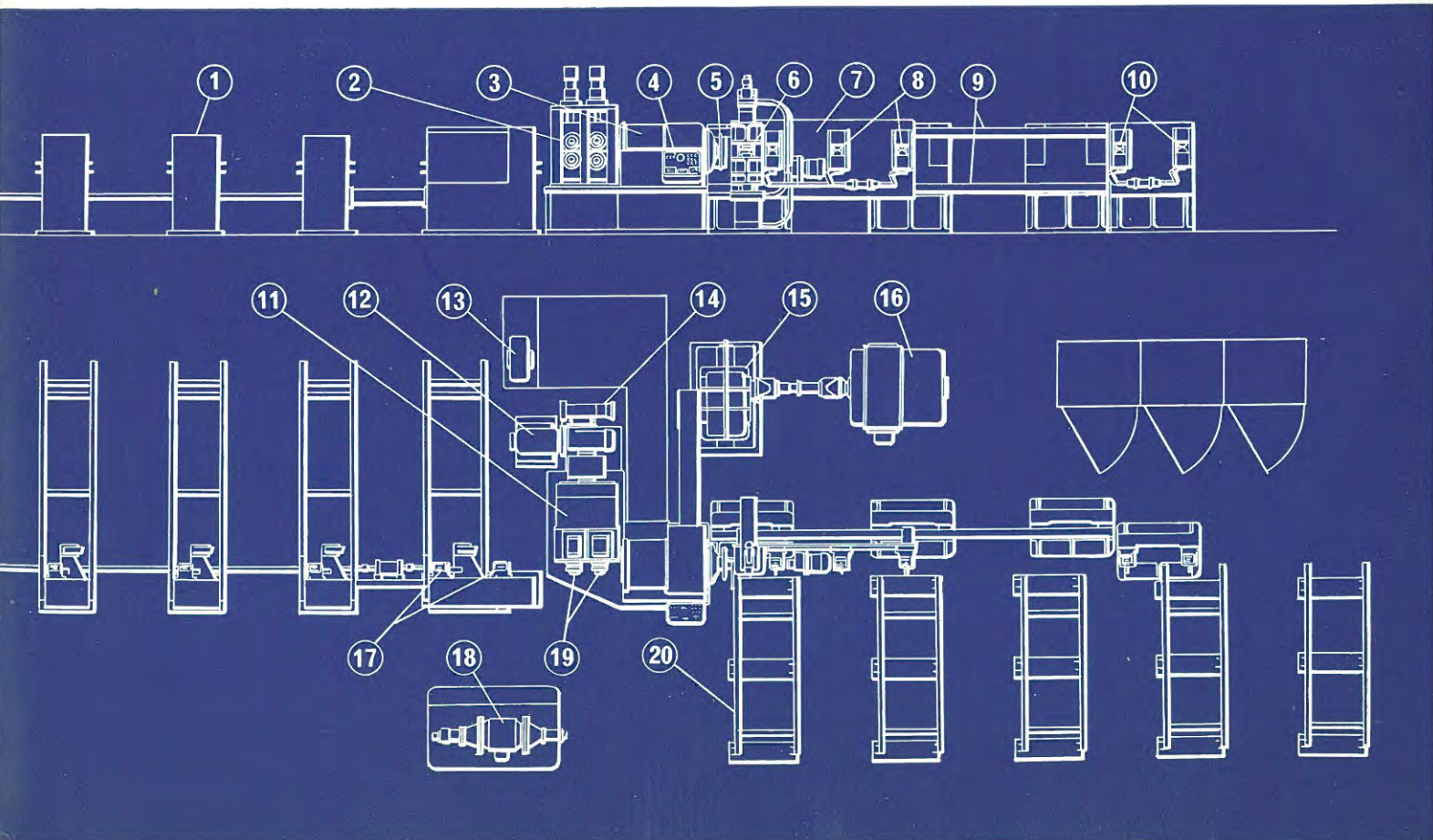






SALIENT FEATURES

- Completely fully automatic operation.
- Bar Throughout speeds infinitely variable from 4 to 40 feet (1·22 to 12·2 metres) per minute.
- Use of tungsten carbide 'throw-away' tip tools eliminates tool grinding.
- Cutting tools can be adjusted while running if so desired.
- Hydraulic pressure guides prevent tool 'chatter'.
- Special form of feed rollers counteracts cutting torque.
- Extremely robust construction enables full utilisation of high spindle speeds with fast throughput feeds.
- Can remove up to $\frac{5}{32}''$ (4 mm.) from the bar diameter at one pass through the machine.
- Spindle speeds infinitely variable from 200 to 1600 R.P.M.
- All machine controls from one central operating position.
- 'Oil-Mist' Lubrication to main spindle bearings.
- Swarf disposal by motor driven conveyor discharging into bins on ground level.
- Can be incorporated in production line with straightening machine for directly feeding two or more 'finish pass' centreless grinding machines.



MACHINE DATA

Minimum Finished Bar Diameter	1 in. (25 mm.)
Maximum Finished Bar Diameter	4 ins. (102 mm.)
Minimum Bar Length	7 ft. 6 ins. (2·28 metres)
Maximum Bar Length (Standard) (can be increased to suit clients requirements)	20 ft. (6 metres)
Spindle Speed Range (infinitely variable)	200 to 1600 R.P.M.
Bar Throughput Speed (infinitely variable)	4 to 40 ft. per minute (1·22 to 12·2 metres per minute)
Main Motor: Horse Power	100/150
Speed (infinitely variable)	500 to 1500 R.P.M.
Hydraulic Unit Motor: Horse Power	15
Speed	1440 R.P.M.
Overall Length of machine (for 20 ft. bars)	48 ft.
(for 6 metre bars)	14·6 metres
Overall width of machine	16 ft. 3 ins. (5 metres)
Overall height of machine	6 ft. 6 ins. (2 metres)

SHIPPING SPECIFICATION

Standard Machine (including Electrical Equipment)

Approximate Net Weight	575 cwts. (29,216 kgs.)
Approximate Gross Weight (packed for shipment)	680 cwts. (34,550 kgs.)
Approximate Volume of packing cases	1900 cu. ft. (54 cu. metre)

SIR JAMES FARMER NORTON & CO. LTD.

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