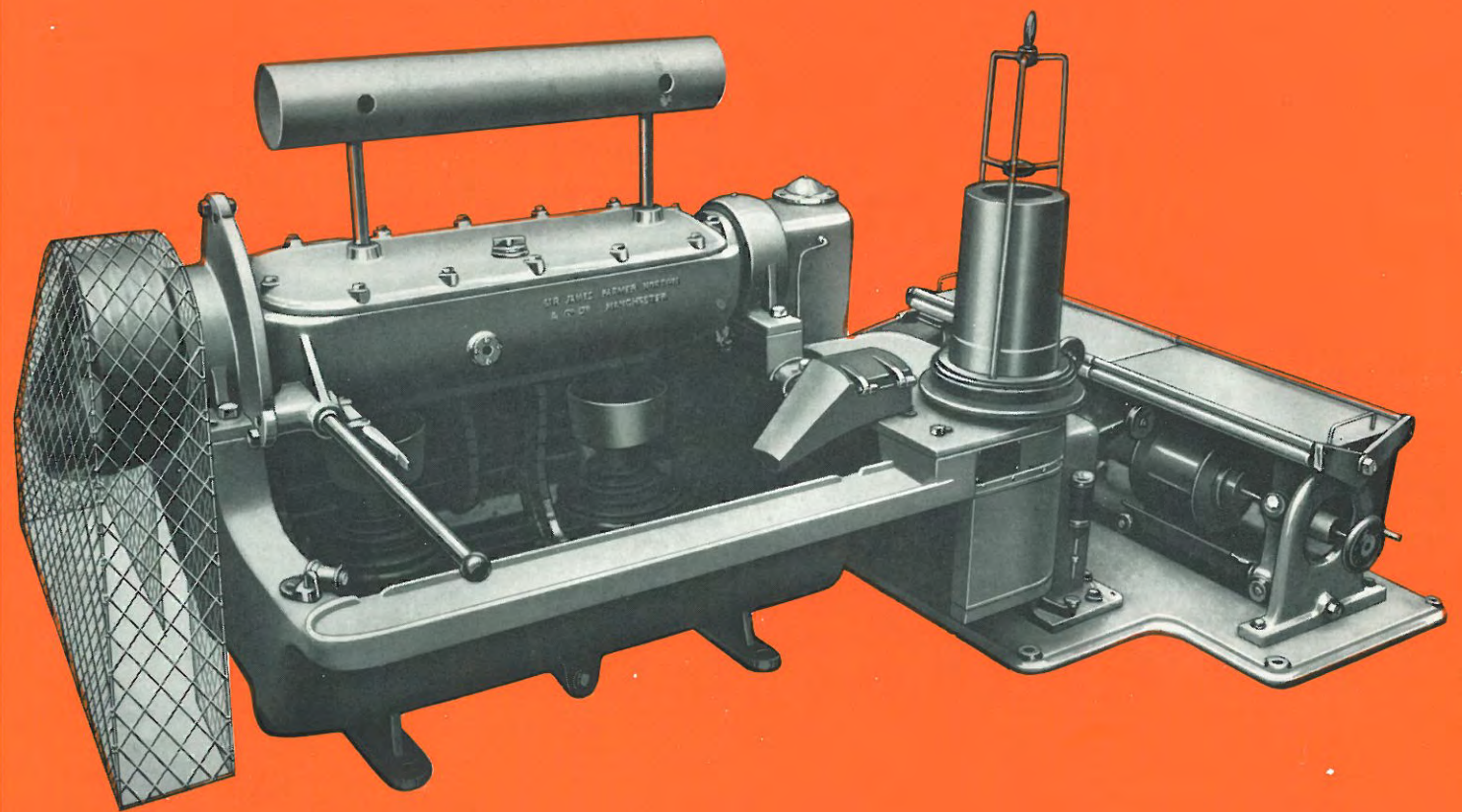
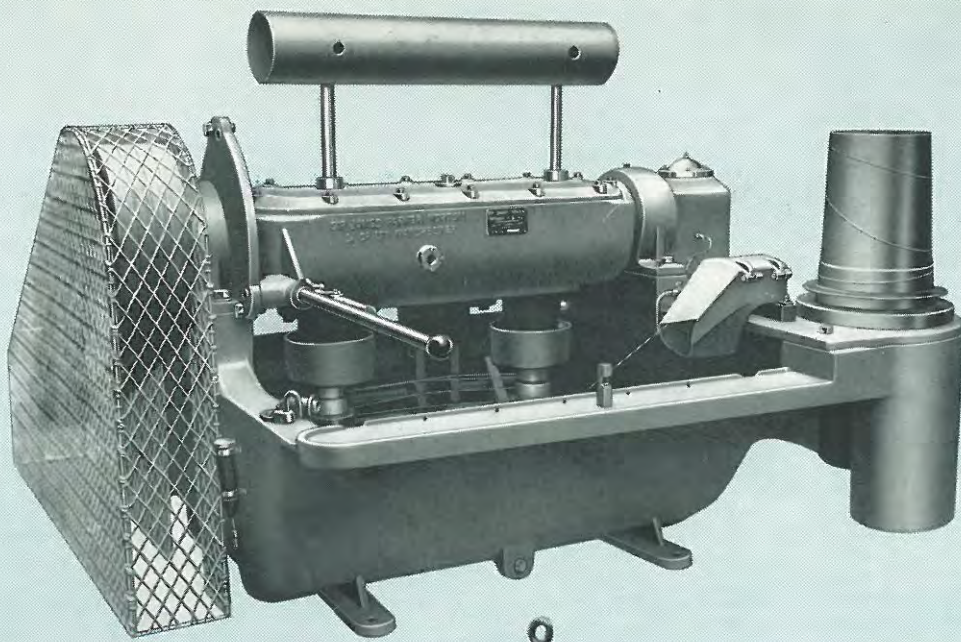


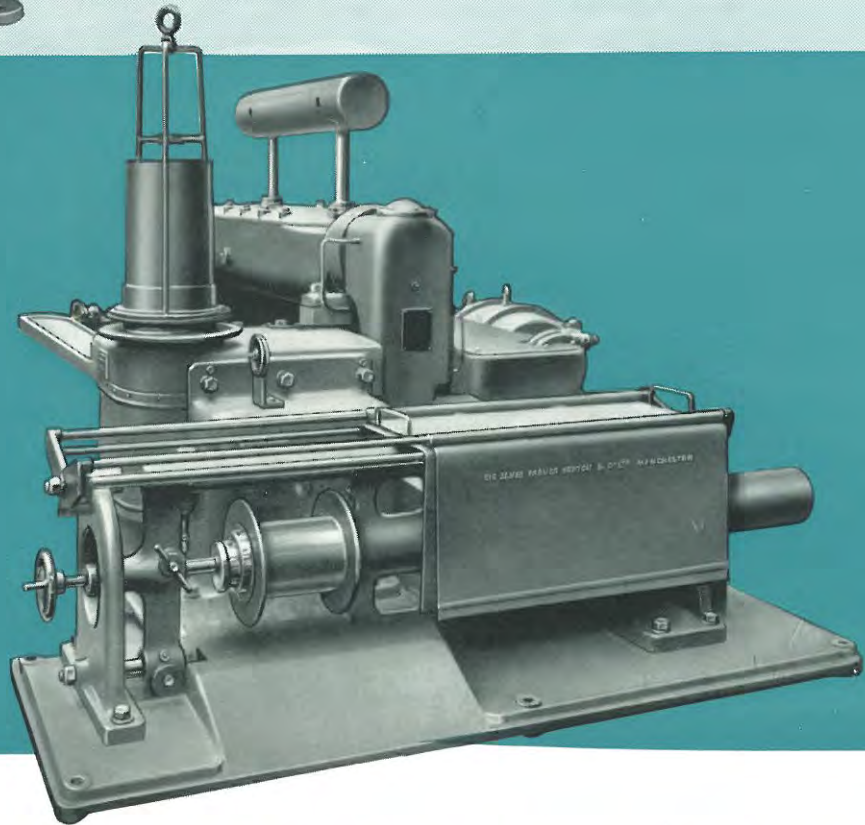
high efficiency
WIRE DRAWING
machines



Farmer Norton



FN2A WIRE DRAWING MACHINE

FN2A WIRE DRAWING MACHINE
WITH HEAVY SPOOLER

FN2BA WIRE DRAWING MACHINE

This machine is in design and construction similar to the FN2A machine except that it is equipped with four sets of drawing cones as compared with the FN2A machine which has two. As a result of this, the machine can be built to accommodate either 15, 17, 19 or 21 dies according to the number of drafts required. To draw through a reduced number of dies, the first one or two die positions can be by-passed

or, alternatively, the finishing block slowed down and the last few dies omitted.

The machine can be supplied with a spooler for handling up to 30 lb. bobbins. This forms an integral part of the machine. A heavy type spooler similar to that illustrated with the FN2A machine can be supplied for spools of 100 lbs. or more.

Farmer Norton

FN2A WIRE DRAWING MACHINE

This is a machine designed for the drawing of ferrous and non-ferrous metals through either 9, 11 or 13 dies. The machine consists of a main gearbox carrying the drawing cones. This is mounted on trunnion bearings which enables the cones to be brought into the horizontal position for threading up. For drawing, the cones are lowered into the liquor tank.

The machine is equipped throughout with ball and roller bearings and all gears run in oil in a totally enclosed gearbox.

As the machine operates on the slip principle, the drawing cones are made of special high-grade hardened and ground steel. This is necessary to withstand the abrasive action of the wire on the cones.

The dies and cones during drawing are entirely immersed in the liquor tank and, due to the largest diameter cones being in the deepest part of the trough, the turbulence of the liquor is so small on the surface that splashing cannot take place. This turbulence in the bath ensures that the dies are kept free from foreign matter and that both the drawing cones and dies remain cool.

The main drive to the machine is by a single floor mounted electric motor and is usually one of three types:—

- 1 DC with 2 or 3:1 speed variation
- 2 AC slip ring with single speed pulley drive
- 3 AC slip ring with 2, 3, 4 or 6 speed gearbox

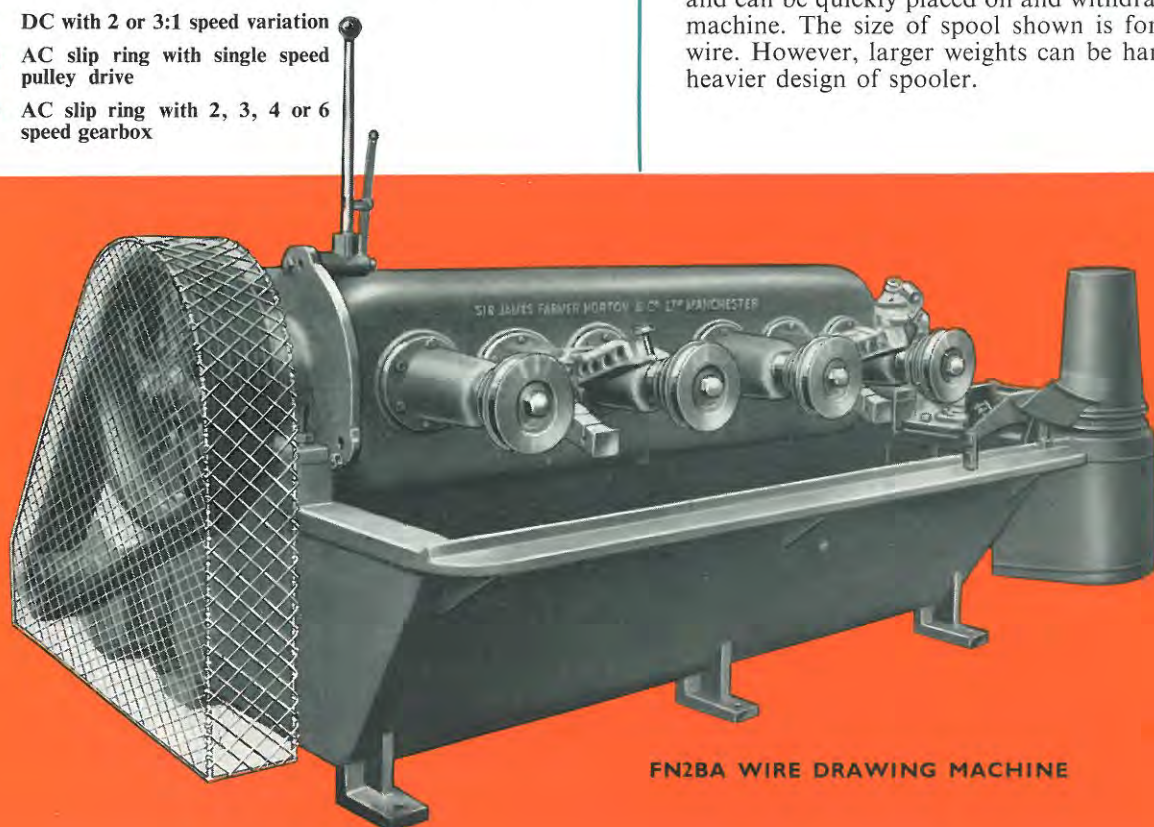
The control gear is arranged to give inching and a steady start to the motor to facilitate threading up of the machine.

For the different types of metal to be drawn, the machines would be generally similar but the horsepower of the motors would vary according to the tensile strength of the wire and the speed at which it is to be drawn.

Machines of this type are usually supplied with a finishing block of from 10" to 14" in diameter.

Illustrations of a typical machine are shown with the spooling gear attached in addition to the finishing block. This enables the wire to be finished either in coils or on spools.

When a spooler is supplied, it takes its drive directly from the machine and is therefore perfectly synchronised with it. The drive is through an infinitely variable gear which, once set, operates automatically, reducing the speed of the spool as the diameter increases. This ensures constant wire tension. Instead of the usual method of traversing the wire across the face of the spool, the spool itself is traversed backwards and forwards, thus giving a neater lay of the wire. Spools of varying sizes can be accommodated and can be quickly placed on and withdrawn from the machine. The size of spool shown is for 100 lbs. of wire. However, larger weights can be handled with a heavier design of spooler.



FN2BA WIRE DRAWING MACHINE

TYPICAL FN2A MACHINE PARTICULARS

Material	Inlet Dia.	9 Die Machine		11 Die Machine		Speed Ft. per Min.	H.P. Required	Efficiency —
		Finished Dia.	Production in Lb. Hours	Finished Dia.	Production in Lb. Hours			
Copper	-102	-032	325	-026	215	2500	30	70
	-060	-0202	144	-0164	98	2500	30	80
	-048	-0164	117	—	—	3000	30	80
Brass	-102	-032	157	-026	103	1200	20	70
	-060	-0202	70	-0164	47	1200	20	80
	-048	-0164	80	—	—	2000	20	80
Phos. Bronze	-102	-032	140	-026	100	1000	20	75
	-060	-0202	61	-0164	41	1000	20	85
	-048	-0164	80	—	—	1600	20	85
Mild Steel	-092	-032	110	-026	72	900	25	75
	-056	-0202	64	-0164	48	1200	25	80
	-044	-0164	58	—	—	1700	25	80
Carbon Steel Finishing 105 Tons □"	-072	-027	63	-022	40	700	25	75
	-056	-0202	37	-0164	25	700	25	85
	-044	-0164	37	—	—	1000	25	85
Carbon Steel Finishing 144 Tons □"	-072	-027	45	-022	33	500	25	75
	-056	-0202	28	-0164	20	500	25	85
	-044	-0164	33	—	—	900	25	85
Carbon Steel Finishing 164 Tons □"	-072	-027	38	-022	25	420	25	75
	-056	-0202	24	-0164	15	420	25	85
	-044	-0164	25	—	—	700	25	85
Aluminium	-160	-044	165	—	—	2500	30	60
	-120	-036	120	—	—	2500	30	65
	-080	-0272	86	—	—	3000	30	70
		11 Die Machine		13 Die Machine				
Zinc	-092	-052	560	-047	450	2000	50	70
	-072	-0407	360	-0368	290	2000	40	70
	-064	-0362	290	-0327	240	2000	35	75
	-048	-0271	190	-0246	176	2000	25	80

Approx. Space Required	Length	Depth	Height
MACHINE WITHOUT SPOOLER	7' 0"	9' 0"	5' 6"
MACHINE WITH SPOOLER	10' 4"	9' 2"	5' 6"

FN2BA MACHINE PARTICULARS

MATERIAL	Inlet Dia.	Finish Dia.	Production in Lb. Hours	No. of Dies	Speed Ft. per Min.	H.P. Required	Efficiency %
COPPER	-092"	-0116"	83	19	4000	30	85
CARBON STEEL 120 tons □"	-048"	-0124"	21	17	1000	25	85

Approx. Space Required	Length	Depth	Height
MACHINE with or without 20 lb. Spooler	10' 2"	8' 6"	5' 6"
MACHINE with Spooler for 100 lbs.	13' 6"	9' 6"	5' 6"

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