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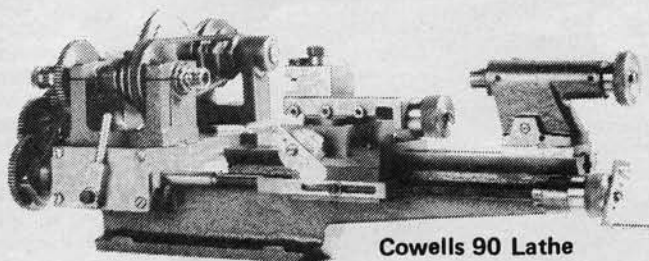
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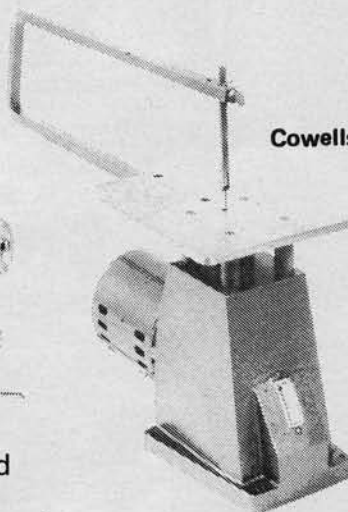
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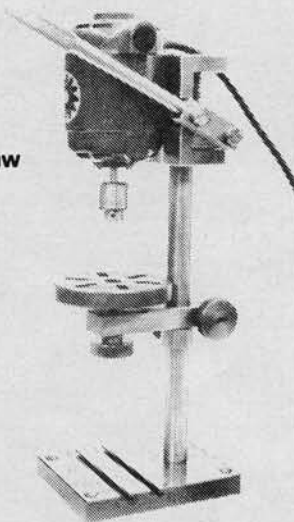
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TOOLS OF THE TRADE

JIM KING LOOKS AT THE COWELL 90 LATHE

IN AN AGE when living accommodation is at a premium and many hopeful model engineers are living in apartment blocks where self-contained workshops are just another pipe dream, the advent of another small capacity lathe capable of being used and stored in a restricted space in a manner akin to that of the domestic sewing machine will be of interest to many. Another blow, perhaps, for sex equality for the male population? Not that the market has no other machines available to cater for this need, but the lathes generally on sale in this class and size are of continental origin and it is a market that in recent years has not had a British product to interest the potential customers.

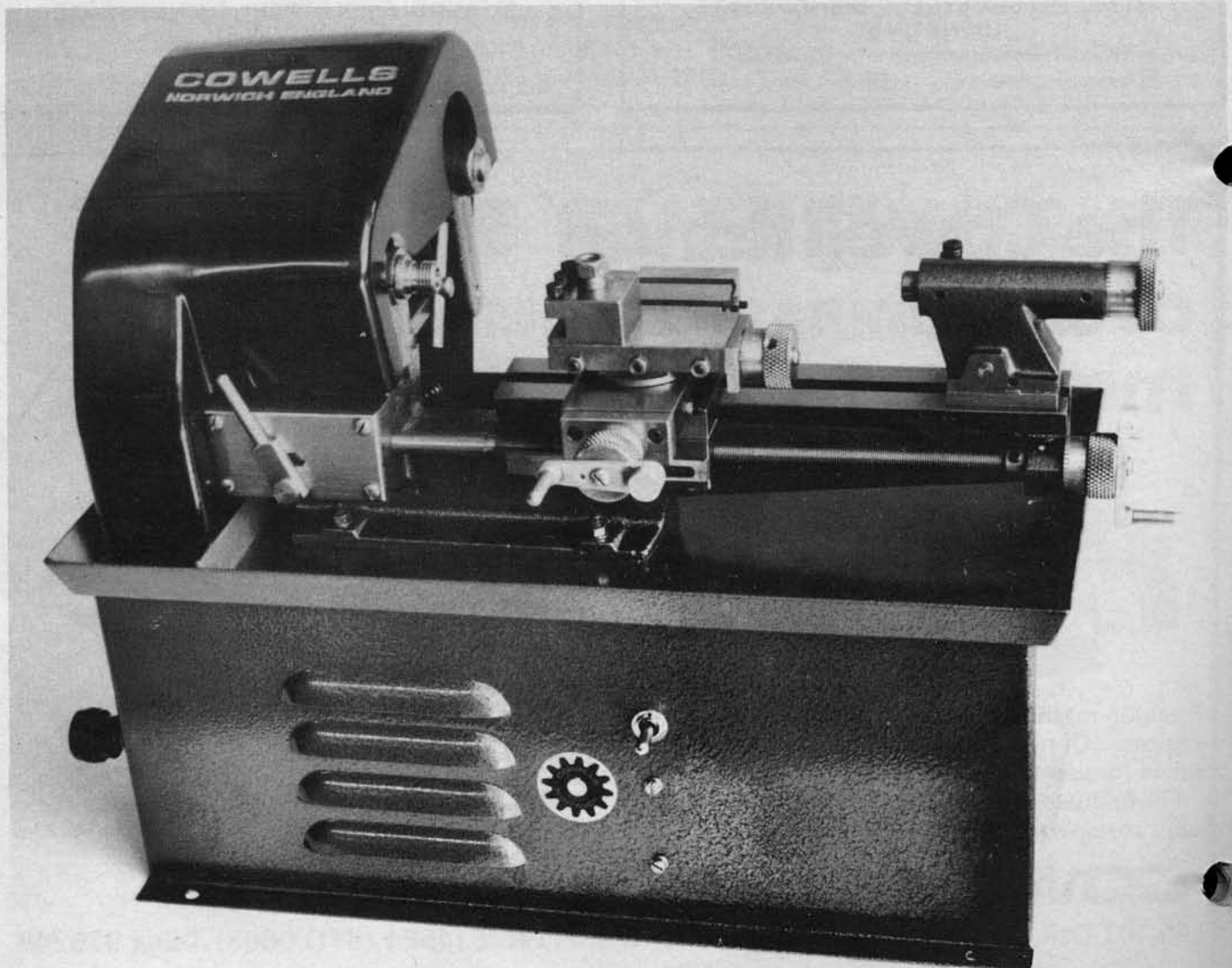
The Cowell 90 is a lathe designed as a serious competitor in this market, one that has an ever-growing number of potential customers with the constant increase in general leisure time and activities, and

one that will interest many who like to buy British if the product is as good as the overseas competitor. Original design of the machine was by Brian Perris who brought the lathe into production with several other small tools designed for this same market. Several years of hard work saw the Perris Company in a very sound position but all efforts came to an end when Brian Perris died on the way home from the 1976 Model Engineer Exhibition. Soon after the company folded and most people thought that this was the end of the line for these products, and indeed for a period the whole project was in a state of limbo until Sid Cowell of Norwich acquired the assets which included the remaining stock and the patterns. The machines were put back into production and made a welcome re-appearance at the 1977 Model Engineer Exhibition and to prove that business was meant, Cowells had a stand again in 1978 and will be

regular exhibitors in the future displays.

So once again there is a British small lathe back on the market and it is already selling to the capacity of the manufacturer, for like so many other engineering companies, capacity is only restricted at the present time by a scarcity of skilled workers, and so there is a short waiting time in delivery. Hopefully this time will diminish until over the counter sales will be possible and already Cowells are setting up a network of agents so that prompt delivery of orders can be made.

What then is the specification of the Cowell 90? There can be no better way initially than to repeat that given in the Cowell Catalogue. The lathe is built in the traditional way of many larger machines with a cast iron cantilever bed. In fact all major castings are of high grade cast iron and in the machine now in use by the writer, are well-finished and have been well "seasoned" in store while awaiting



TOOLS OF THE TRADE

final machining. Machine tolerances are close and gib strips are fitted on the moving slides to give adjustment in use. But why talk about details when we were going to lay out the Specification for you? So here it is:—

Speed range using 1450 motor with 25mm (1") dia. pulley			
Ungeared	880	500	280
Geared	188	107	60
Speed range with high speed bearings, free running speeds			
High ratio	7500	4260	2430
Low ratio	830	470	270
Spindle Nose Thread	14mm x 1.5mm Pitch		
Spindle Bore	6.4mm (¼")		
Spindle and Tailstock			
Taper	'O' Morse		
Cross Slide Travel	89mm (3½")		
Compound Slide			
Travel	38mm (1½")		
Tailstock Barrel			
Travel	32mm (1¼")		
Centre Height	44mm (1¾")		
Distance Between Centres			
	200mm (8")		
Swing Over Bed	88mm (3½")		
Swing In Gap	120mm (4¾")		
Swing Over Cross Slide			
	47mm (1⅞")		
Speed range using 1725 RPM motor with 25mm (1") dia. pulley			
Ungeared	1042	592	332
Geared	222	126	71

As can be seen, a number of options are available for the basic lathe, it can be bought with or without a motor, motors are available for most voltages and there is a version with bearings suitable for the high speed needed for clock-making and the like. Some may find it a disadvantage that the machine is very much with it in having metric threads but this is not so as ISO threads will serve most purposes in the model, light engineering and instrument making worlds.

Accessories

To complement the lathe there is a full range of accessories, vertical slides, steadies, tailstock chucks and very good three- and four-jaw chucks made exclusively for Cowells by Pratt-Burnerd. Of course, like all machines, when it first appeared the Cowell 90 was not perfect, there are always improvements and extras to be made to any basic design and this was no exception. Already minor changes have been made, the original Perris-designed handles have been discarded and all current models are fitted with a better type of hand wheel. For the customer with the original handles a replacement will be supplied at a nominal charge. The motor case and covers are also being modified in the light of users' experience and it is the hope of Cowell's that users will let them have a continuing flow of information as to how they find the lathe in use.

The manufacturers say that the lathe can be mounted on a board and stood on any convenient surface to use. Being used to having machine tools no matter how small, firmly bolted down I was sceptical Model Mechanics, February 1979

at first but after bringing the lathe from Norwich and fitting a 13 amp. plug, the lathe was placed on the dining room table and a piece of mild steel about 3 in. long and ¾ in. diameter was reduced down to ¼ in. without any problem. It would be advisable, though, to place a piece of hardboard under the machine and also to clamp any mounting board down as some movement will take place due to vibration. A good idea also is to have the vacuum cleaner handy in case you get chips or swarf on the floor for you know how funny the womenfolk can get.

Proof of the robustness of the Cowell 90 was provided within a few days of its acquisition when it was loaned to the St. Albans Society for use during their exhibition and it was just left for anyone to use. Screwed down, of course, to prevent any bright ideas of the light fingered

brigade, it was worked all three days without any problem.

So much for a first appraisal of the Cowell 90 and it can be assumed that in the coming months there will be a lot of work found for it, so that any improvements can be suggested to the manufacturer and also some of those smaller turning jobs that have been awaiting my retirement can be completed. First jobs will be a couple of Stuart No. 10s for marine use and these have been selected firstly because I have an immediate use for them and, secondly, they would appear to be the largest traditional type of engine that the Cowell 90 can handle with comfort and it will prove of interest to see how the machine performs while doing the job. Perhaps when some progress has been made the Editor will find space for a resumé of the work.

Iris Phelps using the Cowell 90 lathe.



Prices: Model 10-200
Model 10-200A
Model 10-200B

£154.15
£173.43
£246.85

These prices are excluding motor, faceplate and chucks. Other accessories will be required.