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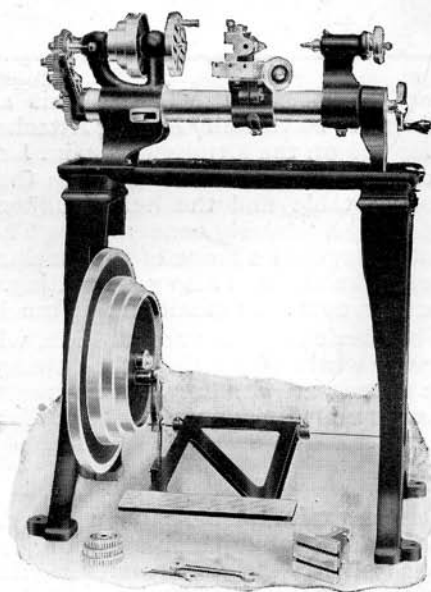
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SPECIAL ATTACHMENTS

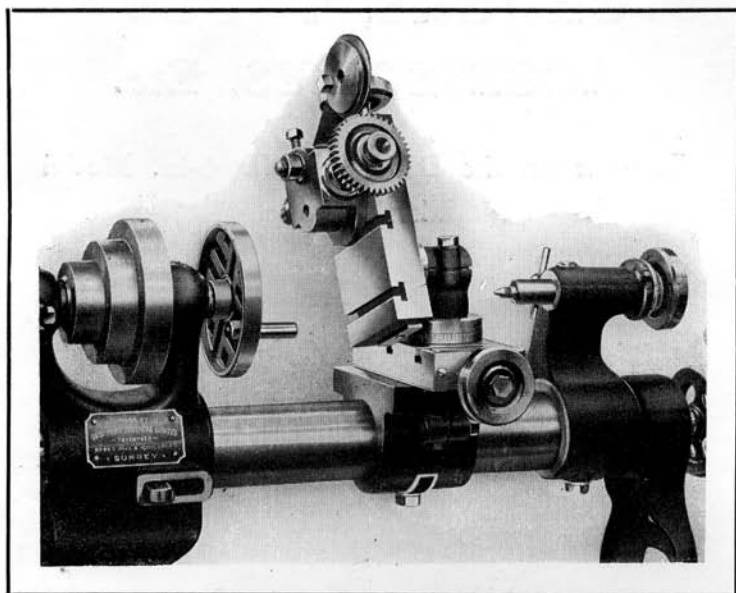
CHUCKS, TOOLS, ACCESSORIES, Etc.

**For use on the DRUMMOND 4-in. Model
Maker's Lathe.**



The DRUMMOND 4-in. Lathe

Milling and Gear-cutting Attachment.



After many tests and experiments this attachment is confidently claimed to be the only Milling Attachment suitable in every way for use on the Drummond 4-in. Lathe. A very great variety of Milling work can be done on the lathe itself, the slotted boring table and the height adjustment of the saddle making this particularly convenient. The addition of this attachment enlarges the scope of the machine to include work on the vertical slide, and also gear-cutting, etc., so that the lathe becomes a complete small Milling machine.

Work can be carried on the vertical slide, which can also be set for angular work, or on the gear-cutting spindle, for indexing. The cutters are run between centres, thus allowing good stiff cuts with all lathe speeds available for milling.

Specification.

Large diameter graduated base tongued to suit lathe table slots carries heavy bracket adjustable in complete horizontal circle, with locking bolt. Bracket carries vertical slide with long square ways and tee-slotted table. This slide may be rotated through a complete circle, and is provided with a graduated index. The table is provided with steel leadscrew and handwheel for adjustment.

The dividing head may be bolted to any of the three tee-slots of the vertical slide; it carries the spindle, accurately fitted, with thrust adjustment, and with a nose duplicating the lathe mandrel nose. Thus the lathe faceplate, chucks, etc., may be used with the attachment, and work turned may be transferred to the milling spindle without re-setting. The lathe screw-cutting change wheels are used for indexing, and provide a large range of divisions. The wheel selected to give the required number of divisions is held on the rear end of the spindle, and a pawl is provided to hold the wheel firmly while cutting.

The whole attachment is quite rigid, and first-class work, free from chatter, is ensured.

Dimensions.

Size of Table	-	-	-	-	7 5/16-in. by 3 1/2-in.
Movement of Vertical Slide	-	-	-	-	3 1/2-in.
Maximum height of Mandrel above lathe centres	-	-	-	-	3 1/8-in.
Maximum height of Mandrel above saddle	-	-	-	-	7-in.

Price.

Milling and Gear-cutting Attachment complete - £6 : 0 : 0
Code word:—Add MA to machine code word. If ordered separately, AMA.

Milling Arbors and Cutters will be quoted for separately on receipt of particulars of requirements. (See also page 10.)

Fixed and Travelling Steadies.

The judicious use of a steady will be found to greatly increase the speed at which slender work may be machined, and will ensure a better finish and freedom from chatter. The fixed steady also provides a method of drilling, boring, and facing long pieces which may be held in the chuck, with their entire length overhanging therefrom, and carried in the steady at their outer ends.

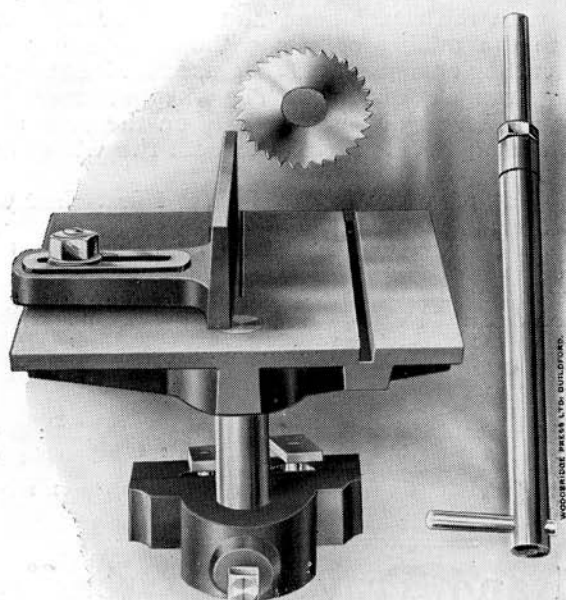
The fixed steady is of the three point support type, and clamps on the cylindrical bed of the lathe. The base portion is split across a horizontal plane, the two halves being held by bolts at front and rear, so that the steady may be placed in position and removed in a moment. Three hardened set screws support the work, the maximum diameter work which can be admitted being 1 7/8-ins.

The travelling steady is attached to the rear of the saddle when in use by two bolts fitting in the tee-slots. It consists of a stiff bracket, supporting a cross stud, on which the hardened work support is held. This is provided with two vees, and is readily adjusted by two set screws in the base bracket.

Prices.

Fixed steady for 4-in. Lathe - - - £1 : 5 : 0
Code word:—FAS added to machine code word. If ordered separately, AFAS.
Travelling steady for 4-in. Lathe - - - 17/6
Code word:—TAS added to machine code word. If ordered separately, ATAS.

Circular Saw Tables.



This saw table is easily and quickly mounted on the lathe, and performs a great variety of work very economically. It is quite stiff in use, and for frames, panels, etc., will be found to be a great time and trouble saver.

The table is truly surfaced, and may be adjusted for height. The base bracket bolts on the boring table of the lathe, the saw table being carried on a stout pillar.

An adjustable fence is fitted, and this can be removed completely if required. A slot is also provided for the guidance of jigs or any special arrangement for guiding odd shapes, angles, etc., accurately across the saw. The saw spindle is accurately turned, and carries the saw between dead square faces.

Diameter of saw, $3\frac{1}{2}$ -ins.

Diameter of bore, $\frac{1}{2}$ -in.

Prices.

Saw Table complete with best quality circular saw (suitable for metal or hardwood), and saw spindle - - -

£2 : 15 : 0

Extra saws, with accurately ground bores - - -

6/6

[NOTE.—Saws bought from tool stores will often be found to have inaccurate centre holes of odd sizes. The above saws are ground in the bore ready for use.]

Code word:—Saw Table complete, add SAC to machine code. If ordered separately, ASAC.

CHUCKS.

Special Note.

The prices quoted in the following are for Chucks fitted to our Lathes, or to any lathe mandrel of suitable size sent to us for fitting, or threaded exact Whitworth sizes. If the lathe to be fitted is **not** of our make, the lathe mandrel should be sent for fitting wherever practicable.

The prices quoted are for Chucks **fitted to the lathe mandrel ready for use.**

A great deal of misapprehension, we find, exists in regard to the price of Chucks as usually quoted. It is not everyone who is acquainted with the amount of work required to a Chuck as purchased in the usual way at a tool-dealer's before it is fitted up ready to use.

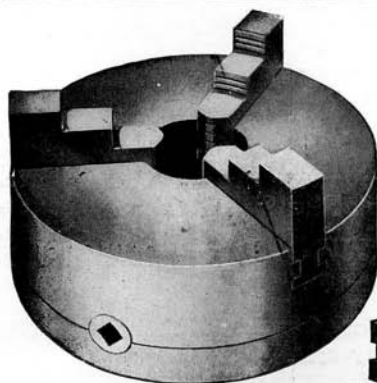
The same or very similar Chucks to those quoted here can be found listed in some Catalogues at a little below these prices, but a separate charge is always made for fitting to the lathe, which will be found to bring them to a price considerably higher than is quoted by us; and also in the case of the purchaser fitting the Chuck himself the necessary Back Plate Casting will bring up the price to, in most cases, more than is here quoted.

Your attention is also respectfully called to the advantage of having Chucks fitted by a firm of actual lathe manufacturers. We have frequently found that the fitting of Chucks, when done by a jobbing firm of engineers for the tool-dealers, who seldom or never do the work themselves, is anything but correctly done, causing the Chuck to quickly become inaccurate.

We fix the Back Plate usually required to the part of the Chuck intended to be fitted to it by the makers, and all threads are lathe-cut in a proper manner.

Selecting Suitable Equipment.

If lathe users will state what class of work they desire to accommodate, we will impartially advise them as to what in our opinion constitutes the most satisfactory equipment. Thus, on receipt of particulars of requirements, a complete minimum outfit of chucks, tools, drills, and any special accessories would be quoted for in detail.

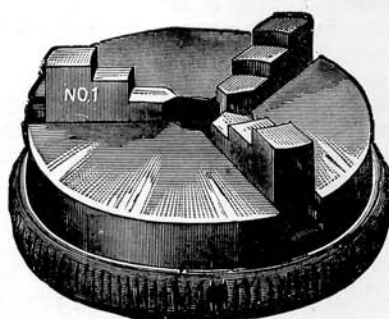


GEARED SCROLL SELF - CENTRING CHUCKS.



These chucks are very strong and suitable for heavy work. The body of the chuck is in one piece, and is very deep under the jaw, so that there is no danger of breakage from the corner of the slot. The wear on the gearing is distributed by the pinions, and these ensure perfect balance and convenience in use. Two sets of jaws, lathe and drill, are supplied.

Size	Will hold	3 jaws		4 jaws	
		1 set jaws	2 sets jaws	1 set jaws	2 sets jaws
3-in.	3 $\frac{3}{8}$ -in.	£4 6 0	£4 18 6	£4 14 0	£5 7 0
4-in.	4 $\frac{1}{2}$ -in.	£4 14 6	£5 7 0	£5 2 6	£5 15 0



The "Champion" Lever Scroll Chuck.

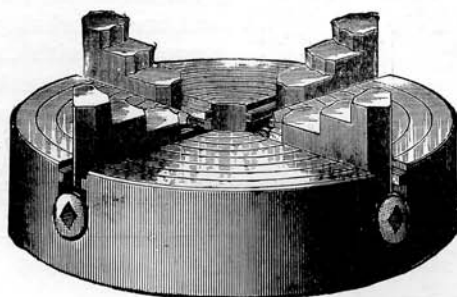
For use on foot and light power lathes, and for high speeds, as in wood-turning. Although very light they are strong and durable, as the shells and scrolls are made of malleable iron, and the jaws of steel. These Chucks do not have as much gripping power as Chucks which operate with a key, but are lower in price, and for many uses are unexcelled.

Size	Will hold	Price	
		1 set jaws, lathe	2 sets jaws, lathe and drill
3-in.	3 $\frac{5}{8}$ -in.	£2 12 6	£3 1 0
4-in.	5-in.	£2 17 0	£3 7 0
5-in.	6-in.	£3 7 0	£3 17 6

NOTE.—When ordering Chucks with one set of jaws, only state whether "lathe" or "drill" type jaws are required.

INDEPENDENT CHUCKS.

Reversible Jaws.



These Chucks are a great improvement on the old style of independent Chuck, in which the great friction thrown on the screws and shoulders is a frequent cause of failure to hold tightly.

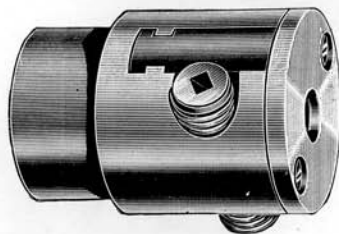
The jaws are of the solid reversible pattern, and on account of their long traverse the safe capacity of the Chuck is much larger than that of common pattern independent Chucks of equal diameter.

Each Chuck is provided with four solid reversible steel jaws, operated by separate screws. Every variety of round, square, irregular or eccentric work may be held in them to be operated upon. These Chucks will hold with great firmness, and will receive work considerably larger than their diameter. All sizes are provided with circular lines on the face by which to set the jaws true for holding round work. There are no projecting screw heads, the ends of the screws having square recesses to receive the key. The ease with which the jaws can be reversed is a feature of great convenience.

Prices.

Size	Will hold	Price
4-in.	5-in.	£3 17 6
5-in.	6-in.	£4 6 0
6-in.	7½-in.	£4 18 6

IMPROVED KEY DRILL CHUCK.



This Chuck will hold with great firmness, and is suitable for heavy workshop duties. It is provided with the necessary Morse taper shank to suit the lathe, and is recommended by us for all purposes.

Size	Holding	Price
2½-in.	0 to ½-in.	£2 18 6



"1883" DRILL CHUCK.

This Chuck is a convenient, well-made, substantial tool at a low price. It is operated by hand, and works on the self-tightening principle, the resistance of the cut tending to close the jaws still more firmly upon shank of the drill. Will hold small drills firmly and true.

Size	Capacity	Weight	Price
2-in.	0 to $\frac{9}{16}$	1¼-lb.	£2 0 0
2½-in.	$\frac{1}{8}$ to $\frac{3}{4}$	1½-lb.	£2 4 6

Collet Chucks.

Collet Chucks to fit the 4-in. lathe can be supplied. These are fitted with collets of any size within their range which may be desired. Prices on application.

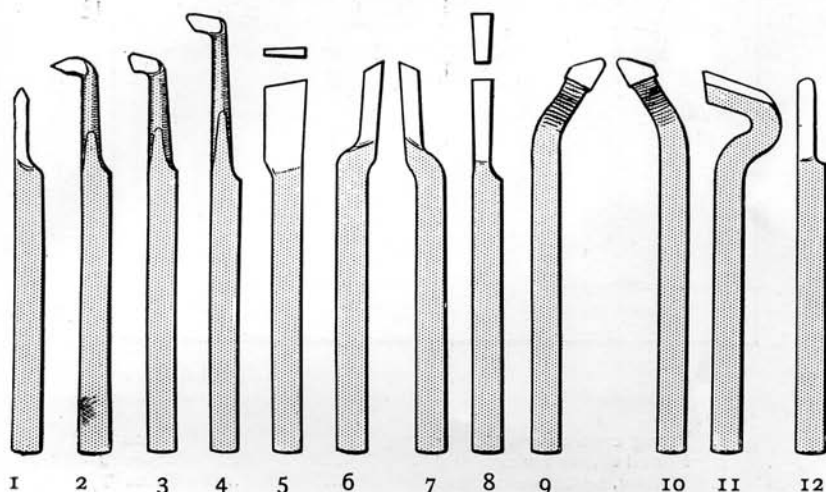
Where a hollow mandrel is required, existing solid mandrels will be converted into hollow with $\frac{3}{8}$ -in. diameter bore, if they are returned to us, at small cost.

Drills.

Sets of best quality twist drills in all English, Metric or wire gauge sizes will be quoted for on receipt of particulars of requirements.

Special "Slocumb" centre drills, for making correctly formed 60° centre holes with proper clearance, price 10d. each.

SLIDE REST TOOLS.



These Tools are our own make, and are of the finest quality carbon steel, hardened, tempered and ground ready for use. The set comprises the following :—

- | | |
|-----------------------------------|---|
| 1. Outside Whitworth Thread Tool. | 8. Square Edge Tool, or Broad Parting Tool. |
| 2. Inside Whitworth Thread Tool. | 9. Left Hand Roughing Tool. |
| 3. Short Boring Tool. | 10. Right Hand Roughing Tool. |
| 4. Long Boring Tool. | 11. Front Roughing Tool. |
| 5. Narrow Parting Tool. | 12. Round Nose Tool. |
| 6. Left Hand Knife Tool. | |
| 7. Right Hand Knife Tool. | |

Nos. 9 & 10 are Hook Tools, as shown in No. 11.

Price.

Complete set of tools, $\frac{3}{8}$ -in. square steel, **18/6**

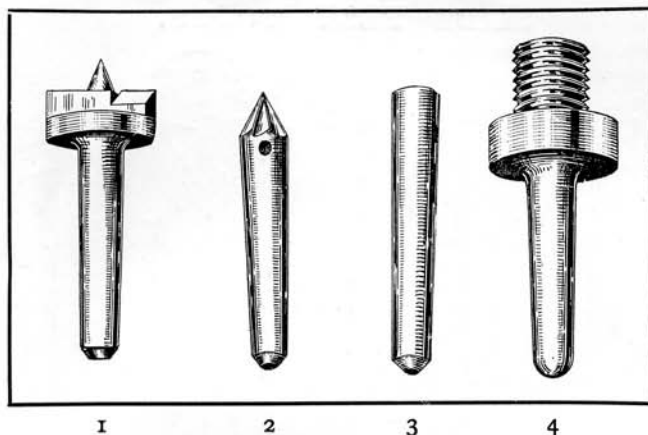
Hand Turning Tools.

Set of Handle Tools for wood turning—3 gouges, 2 chisels, and 1 parting tool, price **18/-**

Set of 6 Handle Tools for Metal, price **18/-**

Toolholders and any special tools quoted for on receipt of requirements.

SPECIAL FITTINGS.



Centres

Fig. 1.	Prong centre for wood turning	...	...	Price	7/6
Fig. 2.	Fluted centre for centring	...	...	Price	7/-
Fig. 3.	Hollow, or female centre	...	...	Price	7/-
Fig. 4.	Adaptor for converting back centre to mandrel nose	...	...	Price	8/-
Ordinary centres, 60° unless otherwise stated				Price	7/-
					(13/6 pair)
Half centres				Price	7/-

Extra large centres for tube work, or other types of centre, can be supplied. Prices on receipt of requirements

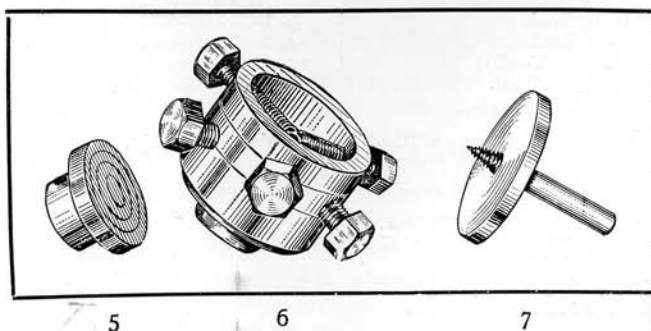
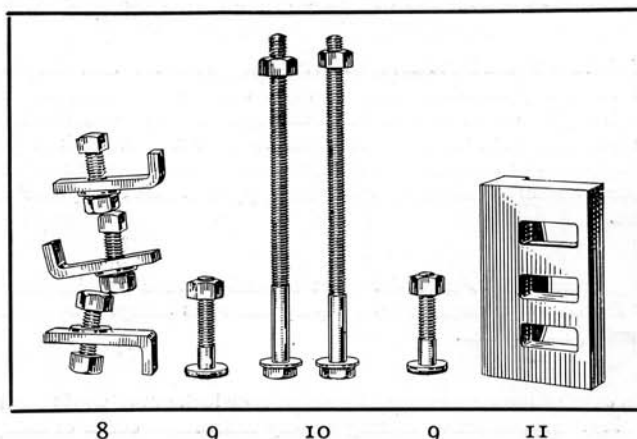


Fig. 5.	Drill pad (fits on tailstock)	...	...	Price	6/6
Fig. 6.	Bell Chuck, with 8 screws, 3-ins. diameter, holding 2½-ins.	...	...	Price	26/6
	4-ins. diam., holding 3-ins.	...	...	Price	33/-
Fig. 7.	Taper Screw Flange Chuck for wood	...	...	Price	10/6

Boring bar with 3 cutters, length 11-ins.	...	Price	15/-
Arbor for Milling Cutters to run between centres, 10-ins. long, with collars fitting three sizes of cutter holes	...	Price	23/-



Bolts, Clamp Plates, Carriers, etc.

- Fig. 8. Set of dogs for holding work to face-plate, complete with bolts, etc. - Price **6/6** set
Fig. 9. Bolts and nuts for faceplate and angle plate work, up to $2\frac{1}{2}$ -ins. long Price **1/-** each
Fig. 10. Long bolts for fastening work to boring table, etc., to 12-ins. long - Price **4/6** each
Fig. 11. Angle plate for faceplate - - - Price **7/-**
Set of 3 Lathe Carriers holding from 0 to 1-in. Price **11/6** set

Hand Rest.

A strong hand tee-rest can be supplied for use with this lathe. This is provided with a machined pillar which is clamped in the saddle in place of the topslide pillar; it thus has vertical and swivelling motions. The rest is $4\frac{1}{4}$ -ins. wide. Price **4/6**

Change Wheels.

Standard change wheels can be supplied at the rate of $1\frac{1}{2}$ d. per tooth. For extra wheels of numbers of teeth not included in the standard set given with the machine, quotation given on receipt of particulars.

It would be almost impossible to catalogue completely all the special fitments and arrangements that have been made from time to time for Drummond Lathes. An enquiry for any special arrangement can usually be met by a definite quotation for a suitable fitting.

GUARANTEE AND CONDITIONS OF SALE.

DRUMMOND BROTHERS, LIMITED, guarantee that they will replace any portions of any machines made by them which can (within 12 months from date of delivery) be shewn to have failed through defective material, workmanship or design, provided such parts are returned to their works, carriage paid. In no case will they pay, or be responsible for, repairs made without their knowledge or sanction, or for indirect damage, or any consequential loss or expense incurred by purchasers.

This guarantee is to take the place of, and exclude any implied by law or arising at the common law, and no further liability is accepted by DRUMMOND BROTHERS, LIMITED.

In the case of the occurrence of any strike or lock-out of workmen, fire, breakdown of machinery, defective casting or any unforeseen cause of delay, the time fixed for the completion of the order or contract shall be extended accordingly.

The terms of payment agreed upon shall be strictly adhered to. No minor defect which may be discovered after the plant is set to work is to interfere with the payments by the purchasers at the proper time, full provision being made for dealing with possible defects under the makers' guarantee.

The weights, sizes, etc., given are approximate, and not binding in detail, although the illustrations and specifications may as a rule be taken as a correct representation of the machines. It will, however, be understood that alterations in patterns are necessary to keep the machines up to date, and all alterations are made with a view of effecting the more perfect efficiency of the machine.

Prices in this catalogue are subject to alteration without notice.

Prices in lists are for goods delivered free on rail, Guildford Station, carriage forward. Cases are not charged for if returned in good condition within 14 days carriage paid.

THE TERM AGENT

Is used in the complimentary sense only, and those firms whom we style our agents are not authorised to advertise, incur any debts or transact any business whatsoever on our account, other than the sale of goods which they may purchase from us; nor are they authorised to give any warranty or make any representation on our behalf other than those contained in the above guarantee.

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