12 EXTRA REASONS

for buying

COLCHESTER LATHES

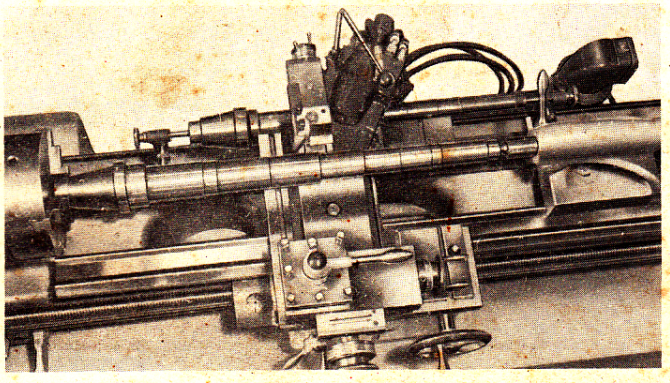

FIG 1

Well-known for their ruggedness and reliability, Colchester lathes are now available with added extras which make them even more attractive to purchasers. New features have been developed to increase the scope and productivity of our machines, and to bring greater satisfaction to the already large number of users. The most important of these changes is the fitting of a longer and broader cross slide to accommodate the Hydraulic Profiling Unit, the new type telescopic taper turner, and the rear toolpost.

Illustrated top right (fig. 1) is the new, low priced Hydraulic Profiling Unit, available for all sizes of Colchester lathes, fitted with the new long cross slide. Our new unit is designed to operate on a different principle as compared to the conventional method, and provides a far greater accuracy of response under normal operating conditions. Slow tapers may be turned accurately, and with confidence. The unit may also be used for taper turning, boring and facing on chucked components, taper threading and the threading of components up to a shoulder without the necessity of an undercut.

Consisting of three basic assemblies, which are fully inter-changeable, the depth of cut is controlled from the normal machine operating position. The fitting of this unit in no way impedes the use of the machine as a normal lathe.

The piston and cylinder assembly is mounted at 60° to the longitudinal axis of the machine, and is complete with the tracer valve unit and mechanical retraction lever. A ground and tapped pad is provided on the rear of the bed to accept the rear beam assembly, which consists of a specially sectioned bar and two tailstock assemblies, which carry the circular master between centres. This allows standard parallel masters to be used for taper turning. The free standing pump unit is provided with a pressure gauge, and has a vertical flange mounted pump motor. Connection between the pump unit and piston unit is by three standard flexible hoses.

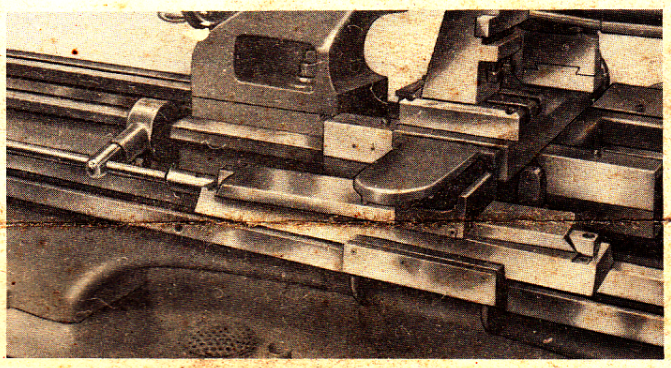

FIG 2

A new type of telescopic taper turner (fig. 2) is now available for use with the latest Colchester lathes. Great attention has been paid to the easy working of this piece of equipment, in which ball thrust bearings have replaced the more conventional bronze bearings in the saddle screw assembly. Control of the depth of cut is by the normal cross slide handwheel which ensures greater accuracy and ease of use.

Supplied as a pre-packaged unit, complete with all fixing screws, the fitting of this taper turner is a simple job, even after the machine has left the factory, since all necessary fixing holes are pre-drilled and tapped during manufacture.

On all sizes the maximum angle of taper is 20° included angle, either way. Working stroke is 12″ for the Chipmaster, Student and Master models, and 18″ for the Triumph and Mascot models.

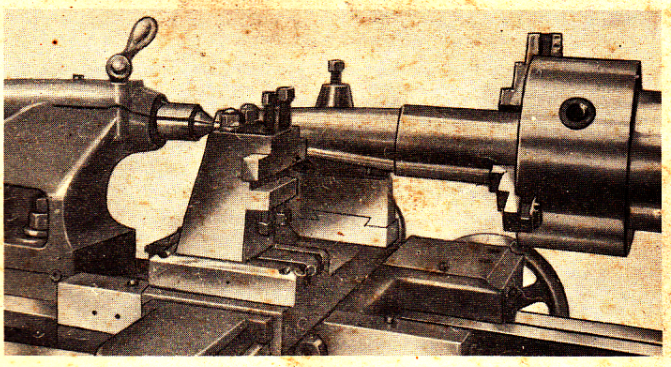

FIG 3

Rear Toolposts (fig. 3) are now manufactured for all sizes of Colchester lathes. Available immediately as pre-packaged units, this accessory can be fitted to any late type Colchester lathe. All necessary holes for mounting are pre-drilled and tapped during manufacture, and fixing screws are included in the package. Tool-sizes for the rear toolpost are as follows: 5″ Chipmaster, 6″ Student, 6½″ Master—¾″ × ½″, 7½″ Triumph and 8½″ Mascot—1⅛″ × ⅞″.

High Speed Threading Feature (fig. 4) is the latest addition to the range of equipment to increase productivity. Threading of components with whole thread, half thread or quarter thread per inch Whitworth or B.S.F. threads can be carried out at up to five times normal speeds. With this feature, it is possible to thread tight to a shoulder, or to thread blind bores without an undercut at maximum speeds.

The following examples will give some idea of the speeds at which one may expect to cut normal threads:

11½ t.p.i. at 1500 r.p.m. 6½ t.p.i. at 800 r.p.m. 4¾ t.p.i. at 400 r.p.m.

There is no need to watch revolving dials or co-ordinate movement when engaging the cut, as the feature automatically ensures that it is impossible to engage the lead nuts in any but the right position.

This rapid threading feature is available for fitting to the following Colchester lathes, at the works, before delivery:

6″ Student, 6½″ Master, 7½″ Triumph and 8½″ Mascot.

Machines fitted with this feature are available for demonstration at the Colchester works, and we shall be pleased to carry out detailed time studies on your own components on receipt of your own drawings.

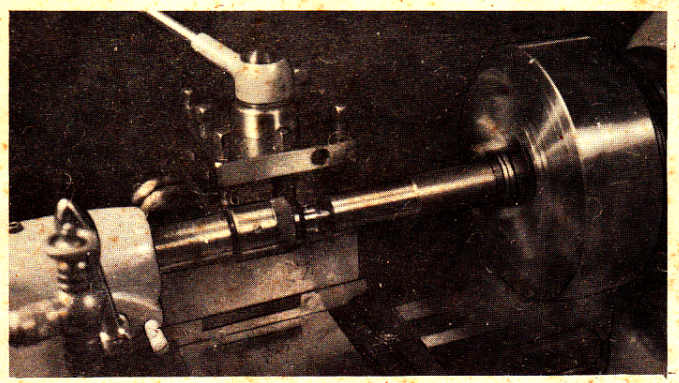

FIG 4

The Colchester Multi-Tool holder (fig. 5) will be appreciated by all who are engaged on short run repetition work. Consisting of a standard tool block to which may be fitted several types of special toolholders, the complete outfit will enable the user to carry out the whole range of lathe operations, without resetting tools each time. Once the tool is set for height (easily accomplished by means of a height adjusting screw fitted to each toolholder) it can be removed and returned to the machine any number of times in the full knowledge that when clamped in position the tool will automatically be at centre height.

A variety of toolholders is available for various operations. The turning toolholder will turn, thread and knurl; there is a combination toolholder for boring and facing in one operation; a boring bar holder, which, with the addition of a morse taper sleeve, will accommodate taper shank drills and reamers, and a special parting off toolholder.

A high order of accuracy is ensured, and there is a guaranteed consistency of 0.0004″ at the tool point.

At present this toolholder is only available for use with 5″ Chipmaster lathes, and the 6″ Student lathe.

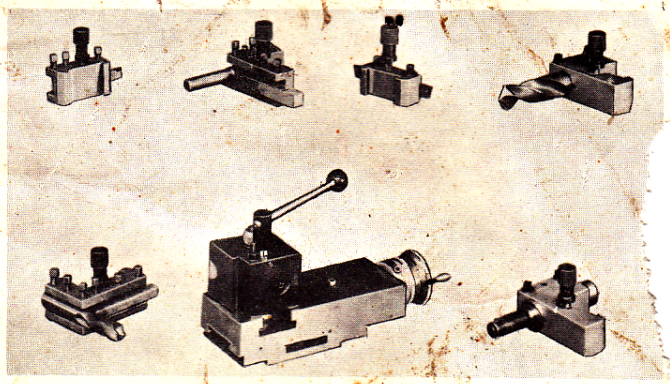

FIG 5

The turret type bed stop (fig. 6) has been developed in order to allow repetition turning to dead length. In conjunction with the new type of slipping clutch now fitted to Colchester lathes, the bed stop will provide an accurate means of dead length repetition work.

The turret head may be fitted to either side of the saddle, and may operate in either direction of feed. Indexing of the turret head is by a ratchet lever mechanism, which will work in either direction. Five hardened screws are provided in the turret head, each of which may be set to a different position and retained by means of a lock nut. These screws bear against a stop pad, which is adjustable for position on the bed. If the bed stops are not required for any job, the stop pad may be removed from the bed entirely.

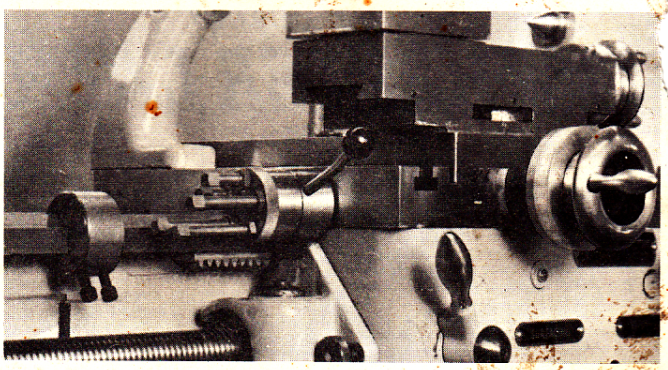

FIG 6

A Single Type of Bed Stop (fig. 7) is also available, which will stop the saddle in one position only.

Clamped securely to the bed, the stop may be used to arrest feed in either direction. When not required for use, the stop is easily removed from the bed.

Fig. 8 shows the Terry "Anglepoise" low volt lighting unit, which is now fitted to all Colchester lathes, in place of the former lighting unit. This feature will be welcomed by operators, since the basic design of the "Anglepoise" light is such that it cannot be deflected from position by cutting forces when once set.

Available for all sizes of Colchester lathes, the new lighting unit can be supplied from stock.

Modifications have been made to the headstock gearing of all types of Colchester lathes.

For silent operation all headstock gears are form shaved. Coupled to this, the mating faces of sliding gears have the teeth chamfered to facilitate easy engagement when changing speeds.

Longer gear life, and increased resistance to wear have been ensured by a new induction hardening process. A specially designed automatic machine has been evolved which will produce a uniform depth of hardness, and hardness form. It will deliver the hardened gear completely free from distortion; and with a finish on the tooth form which will compare favourably with profile ground gears.

By substitution of gears of a new pitch, we have been able to increase the root section of the teeth, which has added greatly to their strength and lasting qualities.

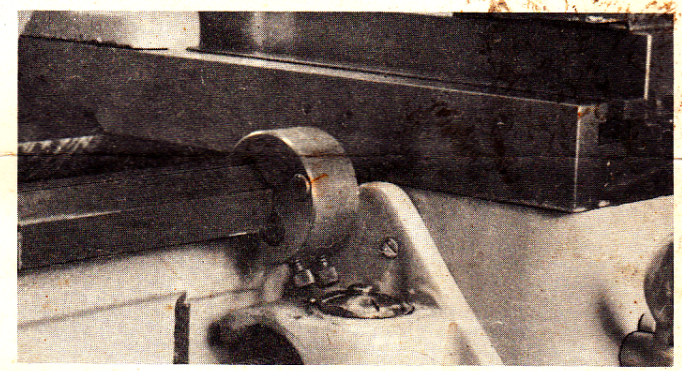

FIG 7

The two bedway stops referred to above can now be used because of a new type of slipping clutch incorporated in the feed mechanism.

Consisting essentially of three steel balls retained in a sleeve by spring pressure, the clutch will adequately transmit power whilst it will slip easily under conditions of overload.

This enables saddles to be run to a stop without fear of damage to the feed mechanism. The new type of slipping clutch will provide perfect safety over a long period, maintenance and adjustment being almost nil.

More and more lathe users are coming to realise that it is in their interest to have a machine with hardened bedways. For an extremely modest extra cost when building, their machine can be supplied with hardened bedways, to give them many years of trouble free service, retaining initial accuracy over long periods of extremely arduous duty.

When using a hardened bed there is little likelihood of any cuttings marking or damaging hardened slideways either by heat or abrasion.

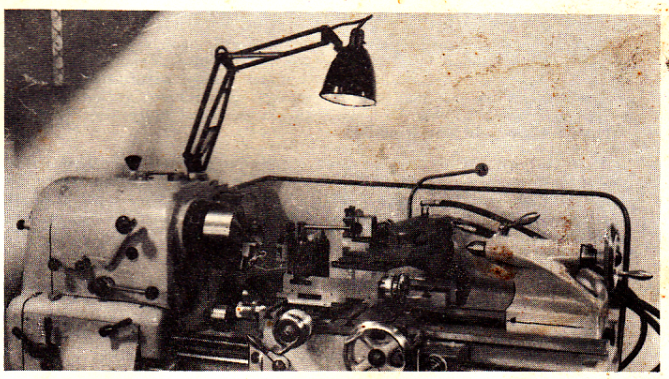

FIG 8

Every Colchester lathe now delivered is provided with a Talyrond Graph, showing the accuracy of that particular machine when turning round on a test piece.

Normal tolerance on this test is to turn round within "one tenth of a thou."! (0.0001″). In actual practise, after careful study of these Talyrond Charts, it is found that the average accuracy figure for this test is in the order of seven hundredths of a thou!! (0.00007″).

This figure compares very favourably with the following standard tolerances.

Schlesinger Finish Turning lathe	0.0004″
Schlesinger Toolroom lathe	0.0002″
American Toolroom lathe	0.0003″

You cannot afford to ignore these new features of Colchester lathes. They are designed to assist users in the battle for more production at less cost. Our technical sales staff will be pleased to place their services at your disposal should you have any query regarding the use or application of your Colchester lathe or its equipment.

An Announcement of:

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