Pfauter offers two models of the "SHOBBER®" to meet the varied requirements of transmission and gear manufacturers. The basic specifications of these models are as follows:

Basic specifications	SHOBBER® 180		SHOBBER® 300	
Maximum workpiece diameter	180 mm	7 in.	300 mm	12 in.
Maximum module (pitch)				
– Hobbing	6 mm	4 D.P.	8 mm	3 D.P.
– Shaping	4 mm	6 D.P.	4 mm	6 D.P.
Maximum axial slide travel	200 mm	8 in.	250 mm	10 in.
Weight of machine (approx.)	7800 kg	(17,200 lbs.)	9600 kg	(21,200 lbs.)

"SHOBBER®" models 180 and 300

are similar in design. The hobbing units are of different capacity but the shaping units are identical. (See page 14 for additional technical data.)

Pfauter was granted German patent No. 1 168 741*) on October 20, 1962. This patent describes a "machine for the fully or at least partially simultaneous machining of two different sets of teeth of different dimensions on the same workpiece".
The machine described in the Pfauter patent is known as the „SHOBBER®". – SHOBBER® = SHaper + hOBBER – One "SHOBBER®" does the work of two machines, a conventional hobber and a shaper. Hobbing and shaping operations are combined in one machine, and the optimal cutting conditions can be selected independently for each operation.

*) The "SHOBBER®" is also patented in the USA, Great Britain, France, Italy and India.

The "SHOBBER®" offers several important advantages:

1. Reduction in machining time as 2 or more gears, sprockets, clutches, cams, etc. can be cut simultaneously.
2. Capital investment is minimized as only one machine, one set of tooling and one automatic loader is required.
3. Less floor space is required.
4. Workpiece accuracy is improved because all teeth are cut at the same time. Errors due to variations in hobbing and shaping tooling and setup inaccuracies are eliminated.
5. Tapered teeth can be shaped by a simple dial adjustment.
6. Shaper cutter spindle stops at top dead center when cut is completed.
7. Common hydraulic, coolant and lubrication equipment supply both the hobbing and shaping units and simplify maintenance.

Illustration 2
Three different tooth forms — two involute gears and a clutch — are being machined simultaneously. The gear and clutch being shaped have the same number of teeth.