

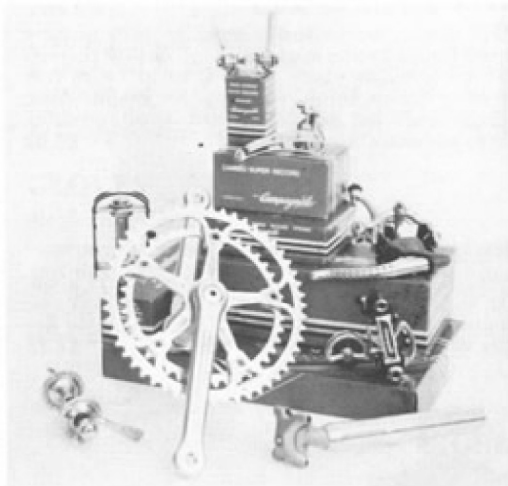
# Campagnolo

## a name worth saving for

Throughout the cycling world, above all others, one name immediately brings thoughts of quality in lightweight cycle components. Campagnolo's products are not cheap, but a trip to the company's headquarters at Vicenza, Italy revealed some of the reasons why.

Ask a Sikh, a South African or a Swiss about top components for cycle racing and you can be pretty sure that the name Campagnolo will be mentioned. In fact it is the most well known name in the world's cycle trade - and not without reason. Campagnolo products have been made for something like half a century, to be fitted by those who could afford them, and envied by those who couldn't. The advent of Japanese equipment in the last decade has given a practical alternative at a lower price, but usually the purchaser will admit he "can't afford Campag. at the moment". It would be difficult to find a parallel example in another industry - say Rolls-Royce cars, perhaps - where one brand name has such an envied image. Critics say for instance, that you pay for the Campagnolo 'name', that Campagnolo rarely produce anything new. But if the same derailleur gear design works, and the quality still sells, isn't that answer enough? Or perhaps not; perhaps it would take, for some sceptics, a visit to that small town in northern Italy where it all started, and where it still happens. Then they could see for themselves.

Campagnolo is a name in the cycling world. Campagnolo is an institution in the industry. But most of all, and most reassuring of all, Campagnolo is a person, the incredible driving force that motivates the company's thinking and the personnel the company employs. "He's an incredible personality. We work not for the company, but for that man", said one of the watchmen on the gatehouse at the main factory in Vicenza. And that was the message repeated by every employee. It's not



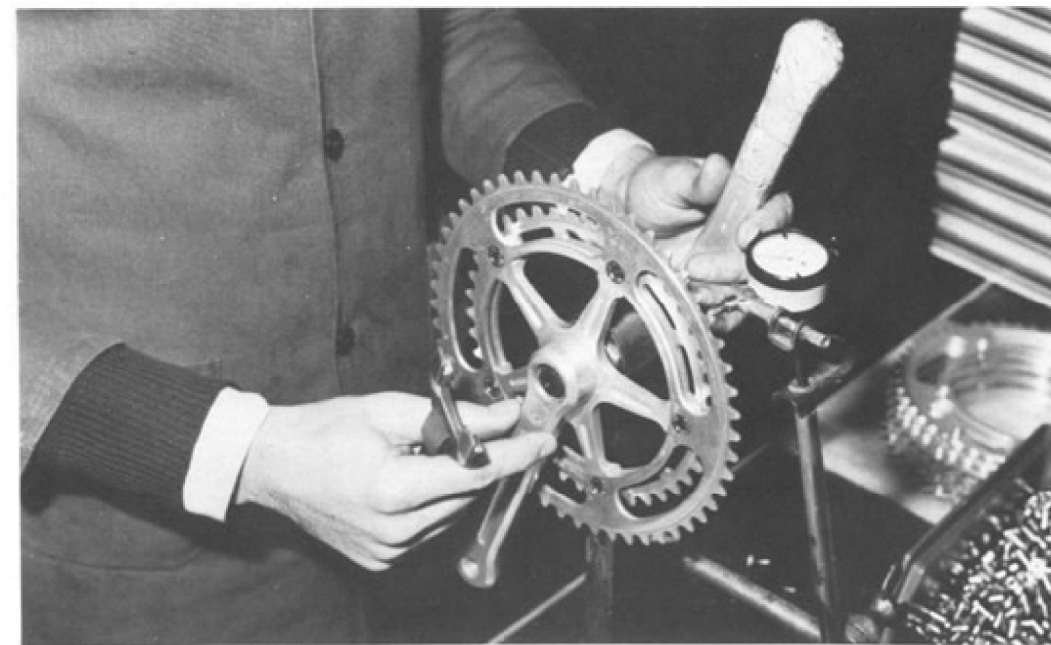
surprising. At the age of 77 Signor Tullio Campagnolo, referred to respectfully as the 'Commendatore', is still a dynamo, working all hours at the headquarters, turning up to preside at shows all over the world, and at cycling's greatest events. His mind is sharp as a razor, and his principles about as unshakeable as a double barrelled shotgun. They say that one day, as is his habit, he was wandering through the factory and picked up a component to check it. A glance revealed something not to his liking. The offending item was despatched through the nearest window and the whole batch scrapped. Campagnolo is backed by a team of executives, research technologists, engineering experts. But until a component is right for the 'Commendatore' then it won't carry the name of Campagnolo, and everybody knows it. This explains why innovations are slow to come out of Vicenza; the company doesn't produce newcomers with the regularity of a Neapolitan mamma, but when was the last time Campagnolo produced a wrong 'un'?

Tullio Campagnolo believes in what the riders want, and no wonder. For wasn't he a rider himself way back in the 1920's, and didn't he discover what was needed the hard way? He was a top amateur in his day. On one occasion he had fastest time in a two-up pre-Olympic time-trial. The trouble was, he had to settle for third place because he had long since had to abandon his partner. On another occasion he was about to win a group sprint in the Coppa Italia when he was brought down by a motor cyclist ten metres from the line. One Milan-San Remo he rode as

an independent and was fourth over the line at half-distance, but two stops for mechanical trouble ruined everything, and he had to sacrifice a top position. But perhaps the most significant point in his racing career - as far as what was to follow is concerned - came in a miserably cold event in November 1925. He was first over the Dolomite climb which was the main obstacle, but on the descent he was brought to a halt by a puncture, in the middle of a blizzard. Frozen stiff, he found that his numbed fingers couldn't even undo the wing nuts of his hub so that he could change his tyre. At that point he started to reflect on how inadequate cycle components were in such conditions.

Cyclists nowadays should bless the fact that Tullio's father wasn't a baker or a printer, but instead had a hardware shop, with some interest in tools in engineering matters. It meant his son was able to work on his prototypes in the back room of the store. In due course the first Campagnolo quickrelease spindle was produced, to be given the best of road tests by its inventor.

It gave him a taste for more, always with the goal of making the racing cyclist's lot easier. In 1930 he took out his first patent, which was to be followed by almost 200 more in the course of the next halfcentury, with appropriate extensions to give worldwide



Checking chainrings for perfect alignment.

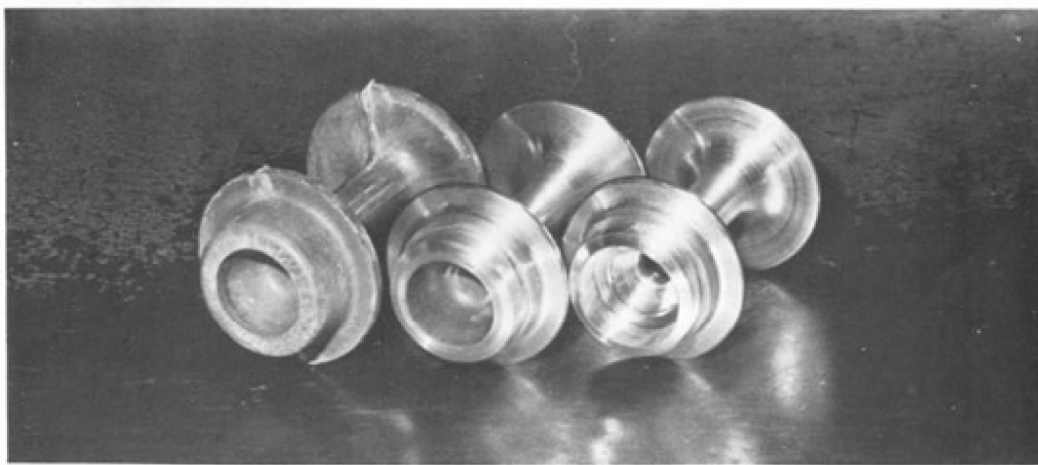
cover. The first gear mechanism came three years later and in 1936 the big breakthrough happened. The great Italian champion Di Paco, using the first of the production models of the Campagnolo gear, started to pile up the wins. Other big names followed suit: Magni, Bartali, Tullio Campagnolo was still working alone, using specialized machine-shops where necessary to help his own production. Not until 1940 did he take on his first employee, and then further expansion was halted by the war.

In 1947 he started exporting, and as the years went on his range of components became bigger and bigger, with seatpins, chainwheels and more recently brakes, making more complete the accessory groupings. Now Campagnolo is exported to around 100 countries including those of eastern Europe, about 80% of production goes abroad. The keynotes of expansion were a continuity of quality and precision, and a constant contact with the sport at a top level, in order to get the best possible testing-ground for proposed new products.

Campagnolo's research department today has a full-time job keeping up with design trends and with new materials. When Eddy Merckx broke the world hour record in Mexico in 1972 he was using a range of Campagnolo

prototypes - pedals, hubs, seatpin which employed magnesium alloys, which have similar properties to steel but at a quarter of the weight. At big bike races all over the world, Campagnolo's service crews are present, particularly the World Championships and the Olympics, where apart from race service during the road events, Campagnolo have mechanics ready to tackle any problem and to help with new equipment. Many British international teams have benefited from this event service, with existing Campagnolo items renovated or replaced where necessary. Some countries, notably the U.S.A., have a permanent Campagnolo service vehicle. Many professional teams have Campagnolo as a co-sponsor or supplier, and the Campagnolo name is represented at cycle shows all over the world.

Sophistication is a keynote of Campagnolo these days. In the manufacture of components the machine has virtually taken over. Says their production manager, Signor Michelotti "A man only feeds our machines and checks their operation. He could never regulate the operation of a machine well enough for us. The machines work to the tolerances they are set." Campagnolo has several factories in Vicenza and another is planned soon. The Commendatore himself showed us around the newest of the factories, the machines still working late at night. He seemed as proud of the bright restaurant facilities for the work force as of the works itself, which probably gives a clue as to why he is so highly regarded by his employees. That particular works was a building of contrasts in technology. In one corner a straightforward traditional press was stamping out washers to go into a gear lever,



Three stages in the development of a small flange hub.

working 16 hours a day unattended, with just a roll of steel strip needing to be changed occasionally. Others were much more advanced, including several driven by computer tape. I watched fascinated as one machine went through several operations to produce the crank 'spider' three at a time being produced. It was typical of several mammoth pieces of hardware which carry out not one operation, but several, making manufacture much more simple.

Campagnolo's raw materials are metal rods and bars, plus alloy forgings and castings produced to their own specifications which are machined and otherwise finished at Vicenza. Naturally much technology is in the forgings themselves: alloy has a 'grain' which must run in the right direction for a particular component to have maximum strength. Every breakage returned to Vicenza is investigated. Often there are clear reasons for a component breaking - a crash, incorrect fitting, misuse. But this investigation could conceivably reveal a way of improving subsequent production. All of which doesn't mean that Campagnolo uses the customers as guineapigs. As mentioned before, there is much testing done on every new product, and every possible care is taken to ensure that the production model is at least as good as the prototype.

There are tools to check production, of course. But there are tools to check the checking tools, to ensure consistency. There is one checking tool which is like a microscope. You look at a screen and see what looks like a chainwheel tooth in profile. But it isn't, it's the shape of a thread, seen at 30 times magnification, with any departures from the

correct shape immediately noticeable.

Compressed air, at a set pressure, is also used to test the efficacy of a thread, and similarly to secure a bolt to the correct tightness - something else they prefer not to leave to human trial and error. Everywhere there are signs reminding the workers of the importance of precision, of sticking exactly to the specifications. I saw the specification of the stages of manufacture of a chainring. Simple enough, you might think. Except that from the stage of the alloy blank to the finished ring took 29 operations. When you consider that there are 6,500 different items in Campagnolo production you start to get the feel of the operation.

Or perhaps you don't. Because although you can see the many machines, appreciate the effect the name of Campagnolo has on the quality market, you need only go into the final assembly department to get an entirely different impression. At the assembly stage they go back to the principles of the cottage industry where 'mass production' are dirty words. I watched one man testing Nuovo Record rear gears, mounting them by the top bolt to a prepared rightangle set-up, working the spring of the parallelogram, checking that the jockey wheel cage was at exact right-angles to the spring's line of operation. Every gear goes through this operation, which takes 30 seconds apiece. Every gear be they from the Super Record range or the Nuovo Gran-sport. Then I watched large-flange hubs being



Inspecting the alignment of the flanges and the freewheel threads on a large flange hub.

checked, for the concentricity of the flanges and of the freewheel threading. I saw chainwheels bolted onto a prepared axle and checked for truth - again every one.

So Campagnolo is a company of contrasts, with big firm technology, coupled with the attention to detail, the pre-occupation with precision, which typifies much smaller operations. It says much for this Italian company that they are used as a yardstick by their customers and their competitors. Competitive lines are invariably judged in comparison with Campagnolo; on price, quality, design. Many competing companies make their components interchangeable with Campagnolo, because if they didn't, their own sales would be lower. But Campagnolo competes with other companies on its own terms. They insist that they will not lower standards, and so tarnish the company name. They insist that if the rider wants the best, then he will eventually afford the price. We are never likely to see this Italian institution, one of the centre-pieces of attention in the two wheel manufacturing world go into bargain basement production. They just couldn't reconcile it with their existing principles of production.

Luciano Giacomelli, Campagnolo's export director, put it in a nutshell. "People just cannot believe our system, they cannot believe what we do here."

After even a short trip around Campagnolo, I believe.