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The "MODEL H" that wasn't

Oracle looks at a Matchless design that, somehow, didn't reach the public

The nice thing about this pastime is that something new is always turning up, perhaps a strange thing to say when everything we deal with is decades old in the first place; but what I mean to imply is that there's always something new to learn.

T'was reader Gordon Jeal from Coventry who caused this latest rambling, when he sent in a few pages from a publication titled the *Irish*

Cyclist & Motor Cyclist (estab'd May 1885, no less) wherein appeared details of a flat-twin Matchless. "Never knew that Matchless built a flat-twin" added Gordon, did you? Well, no, can't say that we did, so we looked into it a little more thoroughly and after a fortuitous call to a friend who specialises in the marque we found ourselves in possession of what must be a very rare catalogue indeed.

The part magazine

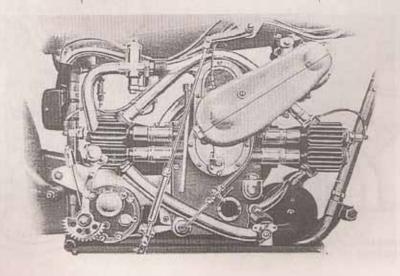
provided by Gordon was dated December 13th 1916, a date slap in the midst of the most terrible war the world had ever known, yet spirits must have been high for better days to come and nowhere more so than in the busy factory at

Plumstead, Woolwich, London, where Messrs H.A. Collier & Sons Ltd were engaged on work of national importance. Their busy minds and hands may have been fully occupied in producing munitions, but they could still find precious moments to translate forward thinking motorcycling ideas into metal it seems, for here was a complete passenger motorcycle combination already under test by the press and evidently ready for production

the moment peace returned. What's more, this project was new from stem to stern.

The machine was propelled by a side valve flat-twin engine - a complete break with tradition for Colliers displacing some 732cc from its two 70mm x 95mm cylinders. Cylinder barrels were heavily finned to eliminate over heating and abnormal expansion or contraction, whilst a single gear driven cam pushed the tappets to open massive 1 1/2" valves whose stems and springs were thoughtfully protected from dirt and grit by telescopic covers. A one-piece nickel steel crankshaft provided rigidity and alignment at the bottom end, plain bearings being adopted for the mains and the two connecting rods, which were "H"

section steel stampings. A huge 12 1/4" diameter flywheel was mounted externally on the driveside mainshaft. Typical of the advanced thinking throughout the design, Colliers must have been amongst the first to fit aluminium alloy pistons in this engine, the principal having only found recent practical favour through wartime rapid development within the aero engine industry. A C.A.V. magneto on top of



the crankcase provided the ignition source, with breathing through a single lever A.M.A.C. carburettor on the end of a somewhat lengthy inlet tract. To our mind, this whole engine layout might well have been influenced by the well known Williamson machine; but then, it is only our opinion.

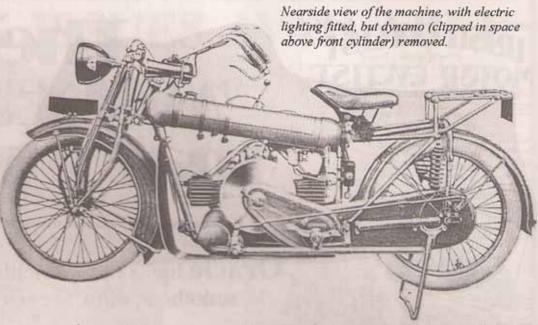
Lubrication was handled by a mechaincal plunger pump, driven from the engine camshaft and mounted externally by the timing chest. This pump drew oil from a half gallon capacity container within the crankcase

casting and distributed it through drillways in the crankshaft to the mains and big ends, with separate piped feeds going to the clutch housing and the primary drive chain. It was all automatic, took away the primitive hand pumping arrangements normal on British machines of the time and ensured a steady supply of clean oil to the vital working surfaces of the engine; a sight glass built into the oil chamber wall allowed an eye to be kept on lubricant levels.

Drive to the three-speed gear was via a silent chain, the inverted tooth type, it being enclosed in a case. The gearbox itself was mounted together with the engine thus forming a unit and as its shell was of circular outline, it could be rotated within its mountings to keep the primary chain correctly tensioned. All neat and innovational. A further

conventional roller chain took the drive to the rear wheel, again fully enclosed and arranged so that it need never be disturbed when wheel changing was necessary. Matchless patent system of q.d. wheels being adopted on all three wheels by means of a simple knock-out spindle secured by a single nut.

The frame was



something entirely new, although it incorporated some details from pre-war Matchless efforts in all major respects it was radical to say the least. For a start, the top tube had been so increased in diameter that it could double as an integral fuel tank, thus dispensing with the usual soldered tinplate tank, all its necessary clips and its weaknesses. Behind the saddle tube, a structure of tubes held the rear wheel in correct

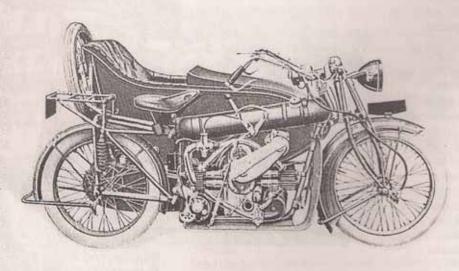
A swinging arm frame...as it would be known to a generation 40 years later...

alignment while allowing it to move through a useful arc under the control of coil springs mounted either side. The pivot for this springing feature was at the base of the saddle tube and immediately behind the final drive sprocket of the gearbox. It thus kept the final chain in almost constant tension throughout the range of suspension movement.

A swinging arm frame, as it would be known to and understood by a new generation of motorcyclists nearly 40 years later. The front forks were traditionally Matchless, effective if unwieldy to the eye. Front wheel braking was still by stirrup, a poor old do in relation to the remainder of the machine, the rear wheel being retarded by means of an internal expanding ring.

Also traditional was the paintwork, finished in a khaki shade of enamel, enhanced by gold and green lining, the usual bright parts being plated in nickel and with an optional electric lighting system and electric horn being available courtesy of a Lucas dynamo mounted

beneath the frame top tube/fuel tank. Tyres were 650 x 65 beaded edge, with a spare wheel fixed to the carrier on the rear of the coachbuilt sidecar body. Intended from the outset as a complete outfit, the sidecar was connected to the motorcycle frame by no fewer than six attachment points; the sidecar wheel and the rear



wheel of the machine being so designed that they moved in unison. Long swept back touring handlebars caused an upright but comfortable riding position and an engine undershield which turned upwards at the front gave weather protection to the riders legs.

All most admirable and the Irish Cyclist & Motor Cyclist concluded its favourable review with the words "...coming as it does from a house of such good repute it will find many purchasers when it is placed on the market." What they didn't give, was the model name/number of this exciting newcomer, the Matchless catalogue however, dated 1917 calls it the "Model H"

But that's not a Model H we hear you saying, we know that bike, it had a thumping great J.A.P. and later M.A.G. i.o.e v-twin, engine and a conventional fuel tank and it came out just after World War I. True, on all counts. The H models we see around in vintage events today also have a similar rear springing system and interchangeable wheels and

were sold as complete outfits; but they aren't like this particular Model H. Why?

We can't tell you that, nor how many of the flat-twin design were actually made. It could be that there was only the prototype, registered as LK 3496; which, if the case, would certainly have been subjected to the extensive testing claimed by the maker's in their catalogue. This catalogue is so

impressive and well prepared that it must have been the intention to make and sell the flat-twin in h u g e quantities. If, as we are believe, it worked well, why wasn't it

proceeded with? Remember, Colliers were not in the habit of making their own power units at the time, it was some years more before they built everything in-house; perhaps they hit a production snag, a problem in getting hold of the machinery on which to build the engines?

Whatever the answers, Colliers never again used a flat-twin engine in any of their motorcycles.

Timing cover removed leaves the innards on view. Oil pump is on forward face of chest, valves and springs neatly enclosed.

