

NO, I have *not* been a regular reader since No. 1. I don't think I could have been even taking an intelligent interest in motorcycles in February, 1902. All I can remember about that year is the Coronation—and that chiefly for the jollifications it involved. From the motorcycling point of view, this may be a confession. But I am not sorry I don't date quite so far back!

I missed the pioneer period; my motorcycling only started getting on for 10 years later, when machines had gained a reasonable degree of reliability; had acquired what we thought a nice measure of speed, and even of comfort, and were consequently beginning to become popular. Which seems to raise the question of which has been the pleasantest period in motorcycling history so far? I suppose the strictly correct answer ought to be the one just preceding the present war—for the reason that the 1939 models were better than any of their predecessors. But, of course,



The front-wheel drive Cykelaid, about which "Carbon" writes this week, in tricycle form.

# everybody's

that is nothing like the whole story.

Motorcycling must have been at its most exciting in the earliest days, when you never knew quite what the machine was going to do or, for that matter, how far it would condescend to take you. But wayside repair work can pall, and it may well be imagined that riders were apt to suffer from a feeling of frustration; motorcycling possessed such obviously glorious possibilities, but the machines so seldom delivered quite all the goods. As reliability increased, some of the kick may have gone out of riding, but the ability to get where you wanted, when you wanted, must have more than compensated for that.

Just before the Great War motorcycling had not lost all its novelty and was still something of an adventure. But perhaps the game was even more enjoyable in the middle '20s, when the sport had begun to establish itself, and before certain later and less pleasant developments had set in.

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LOOKING back at the motorcycling world of 40 years ago reminds me that so far nobody has been able to throw any light on the identification of the antique machine that S. A. P. Wills has discovered somewhere down in the West

Country. I referred to it in our issue of January 15; the distinguishing features are that the engine, which is mounted on the front forks and drives the wheel by a round belt, has two outside flywheels, one on each side of the crankcase. Another peculiarity is that the silencer is shaped to form the front mudguard. I hope to hear shortly from Wills when he has been able to investigate further, but to date it has defeated all of us to name the make.

Chiefly from the round belt, I judge this machine to belong to the very early days of motorcycling; I should guess its date as being between 1900 and 1905. At that period front-wheel drive was not at all uncommon, having been popularized by the Werner, which was about the most successful motorcycle to be marketed in the first year of the present century. Several manufacturers adopted the general layout; among them was the Raleigh concern, while Enfields introduced a variation by mounting the engine in front of the steering head, but taking the drive back to the rear wheel by means of a crossed, round belt.

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THERE were some points of interest about the front-wheel-drive idea. It was adopted by the Werners and their followers round

about 1900 merely for the sake of simplicity. The designer's job at that time was that of finding the best position on a pedal-cycle frame in which to fix a motor, and the space in front of the steering wheel looked as convenient as anywhere. The Werner brothers picked upon it and the success of their original model naturally led others to follow suit.

Incidentally, the Werners were French; the name sometimes leads people to believe that the make was German. In a year or two they scrapped their original design and replaced it with one in which the engine was mounted vertically in the frame; that is, in the modern manner. They originated that form of construction; incidentally, they also produced, some few seasons later, a vertical twin that must have been somewhere near 500 c.c. So they did at least their share as pioneers of the development of the motorcycle, and evidently had a good deal more foresight than the majority of their contemporaries.

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Those early front-wheel-drive machines must have been alarmingly unstable and, in fact, almost impossible to hold up on a slippery road. Besides having a high centre of gravity, they had rigid forks and very small tyres, and must have been

an uncomfortable handful under almost any conditions.

The introduction of the built-in vertical motor killed the engine-on-the-forks idea stone-dead. That is, for ordinary motorcycles. But it survived for very many years for motor attachments intended for fitting to pedal cycles. That was natural enough, as the original reason continued to operate, although latterly designers of such contrivances were more inclined to favour fitting the motor over the back wheel. Its effect, in that position, upon the stability of the machine was hardly less undesirable, although such designs have been marketed even within our own time.

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THE last front-wheel-drive application that appeared in this country was an outfit called the Cykelaid, made by an engineering

continued production for two or three years longer, but never, one gathered, were able to secure much of a market. Doubtless the unconvictionality of their machine was too much for the general public.

You will notice that the Cykelaid carried its engine at the bottom of the forks instead of the top, thus lowering the centre of gravity very considerably, as compared with the usual f.w.d. layout. The drive was by chain through a cork inset clutch, and the capacity of the engine was 133 c.c. These motors were made at York, but were fitted with Villiers flywheel magnetos. They had the reputation of giving a good deal more power than was then expected from an engine of that size in those days.

Although the Cykelaid people supplied complete machines (including tricycles, incidentally), they marketed their device primarily as

motorcycles to front-wheel drive, and I remember that we illustrated a Raleigh that he had altered in this way. The result was rather Heath Robinson; ingenious, but decidedly complicated, as you can well imagine. The machine was stated to run quite well, although one would expect that the numerous chains in the drive must have needed a bit of watching.

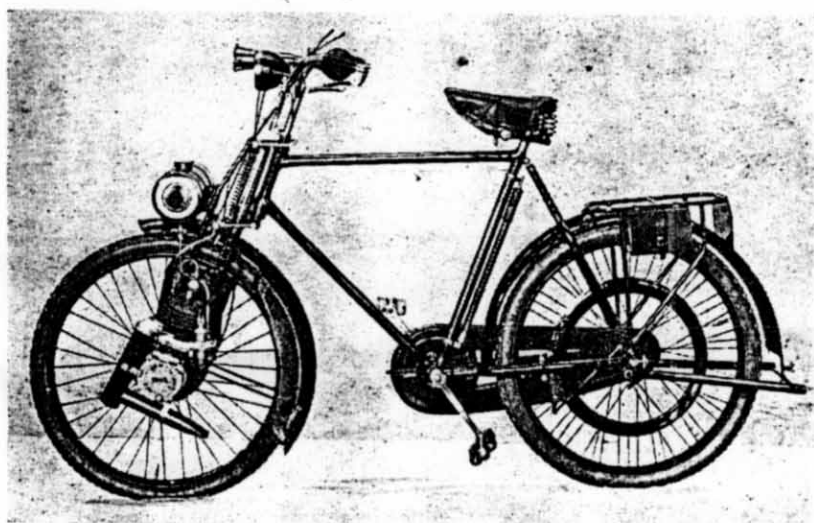
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THE advocates of front-wheel drive claim that a machine of this type should be able to pull itself out of a hazard that would stop an ordinary motorcycle with wheelspin. There may be something in that, although I should be inclined to think that it would not amount to much in practice. If the drive were applied to both wheels it would be another matter, but if only one wheel is to be driven then I doubt if it makes a great deal of odds whether it is the back one or the front.

However, the f.w.d. idea was quite liked by certain people, who, around a dozen years ago, were trying to develop a better cross-country machine for Army use. At about

By

*Carbon*



A solo, front-wheel drive Cykelaid. One would imagine the steering must have been heavy.

firm in York, which, I believe, was originally started to manufacture steam vehicles. At any rate, they were real engineers and knew how to make things well.

The Cykelaid, of which I have been able to find a photograph for your inspection, was a distinctly clever little job and the makers very nearly got away with it commercially. They first took it to the Motorcycle Show in 1923 and con-

an attachment that could be fitted to any sound bicycle. But there is rather more to be said for such a layout besides its convenience as a means of converting a pedal machine to power. Front-wheel drive has always had its advocates amongst motorcyclists, even if their numbers have never been many. Years ago, in fact, there was a reader of "Motor Cycling" who made a more or less regular hobby of converting ordinary

the same time, there had been talk of using creeper tracks with the same end in view, and it was quite natural that the f.w.d. principle should be considered as well.

Arising out of this, the same group had a further notion. That was that, if you are going to use front-wheel drive, your wheel forks and engine make a nice separate unit, which can be slipped on and off the rest of the motorcycle in very quick time. They visualized that this fact ought to be extremely advantageous from the Army point of view; instead of a machine having to go into workshops for repair, it would only need to be fitted with a replacement front component and could be back on the road again inside half an hour, or probably very much less. Prof. Low was consulted about this idea, and I remember his discussing it with me at the time. In fact, he allowed us to publish a rough sketch of the projected machine. How far the experiments actually got I do not know, but evidently results were such that it was not thought worth while to proceed farther.

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