

The gear was reported in the CTC Gazette, Dec 1906, from which the illustration is taken. It is not a derailleur but has a single long chain with two independent freewheels, one of which is always idling backwards. When pedalling forwards the smaller freewheel takes the drive from the upper chain-run in the normal way and the lower chain-run passes backwards over the larger, idling freewheel to loop round the chainstay-mounted guide sprocket.

When pedalling backwards the drive is taken by the larger freewheel with the smaller one idling. One disadvantage is that the cycle cannot be wheeled backwards – both freewheels lock up against the chain. There were various implementations of retro-direct gears, which were fairly popular in France, and the model illustrated would appear to be by Hironnelle. Hironnelle held the patent and sold both the gear and cycle up to WWII.

Our own British Cyclo Gear Co. also made their own similar retro-direct in the 1930s, both as a complete cycle or as a factory fit to the customer's cycle. It was exhibited at the London trade fairs from 1934 onwards but never proved popular enough to be put into production and catalogued.

The Boizot Bi-direct two-speed suggested by the editor's footnote was not of this type, being a true derailleur, using the now conventional jockey and tension sprockets. For those not familiar with the jargon, an illustration of the Boizot Bi-direct is shown below. The jockey sprocket is at the top and moves the chain to change gear; the tension sprocket is at the bottom and tensions the chain. This geometry forms the basis of all modern derailleur gears.

Gordon Selby, Wells



Thanks to everyone who wrote in about this. The amount of feedback suggests that there's a real interest in veteran cycles among a significant number of you.

ON HOLIDAY WITH A BIKE

Many of us will know of the problem of trying to reconcile a family package holiday and having a bike similar to the one at home. Unless you are going to Majorca, with its superb choice of bike hire firms, you are restricted in choice to:



- Trying to hire locally and being disappointed with a run of the mill, and poorly maintained hack;
- Struggling to take the best one and hope that it does not get damaged;
- Having a week or two without a bike.

But now there is another option. I purchased an Airnimal Joey just before a trip to Barbados, not even trying it before it was put into its hard case. Not a murmur from the staff on GNER, Underground, Southern railway, Virgin Atlantic or the local island bus company as to 'What is in that case?' It travelled as ordinary luggage and within five minutes of opening the case on arrival, it was ready for the road.

It handled very well, even on some of poorly maintained road services. I will not complain about the state of our roads for a while. Carrying it up to the hotel room was no hassle and standing it at the side of bed brought forth no comments from the staff. So: a very happy cyclist and no more comments of 'Do you have bring that bike with you' from the wife.

Peter Gray, York

We're planning to run an article soon on travelling abroad with your bike, covering everything from trains to 'planes to coaches like European Bike Express. The focus there will be on full-

YOU RIDE



DAVE MILES' DAWES KINGPIN CONVERSION

I wanted a cheap folder, but even second-hand prices seemed high for a Brompton or a Dahon, given what I would be using it for. So I bought an old Dawes Kingpin, which was in good condition but very heavy.

I was inspired to convert it by a website: <http://www.hpv.on.ca/hpvso/myhpvr.htm>. Also useful was <http://www.sheldonbrown.com/raleigh-twenty.html>.

I replaced the original Sturmey Archer 3-speed and dynohub wheels with Moulton APB wheels, which I bought via Cycle's Small Ads. The rear triangle was 120mm and needed to be 135mm for the new wheel. I re-spaced it by placing two pieces of 2x4 timbers into it and gently prising it apart. To align the rear wheel, I used a derailleur hanger in both dropouts.

I replaced the cotter-pin type bottom bracket with a Shimano one from an old mountain bike, and added an alloy crankset with a 48-tooth ring. The same donor bike provided a rear derailleur. Although there are seven sprockets, it's not possible to use the smallest gear so it's a 6-speed: 34-73in.

The brakes were trickiest, as the originals were too short for the replacement wheels. I fitted an old Weinmann at the rear by fitting a plate to the original mount, and the rear brake just fitted at the front.

It now weighs 12.5kg, and is fine around town.

Cycle wants to know about your favourite bike. Write or email the editor to find out what's required (details on p88).