



# A UNIQUE TANDEM DESIGN

## The Bertrand "Sololite," a Machine That Shows Intelligent Use of Solo Components

BESIDES its unique, patented frame design, the Sololite tandem, now being produced by C. Bertrand and Co. (654, High Road, London, N.12), is of particular interest, as its design and specification has provided an example of how

broken gear-control cable and a burst inner tube, and there was no indication that any part of the machine was being subjected to undue stresses or strains.

The machine ridden by two members of "Cycling's" staff was built and

strength, looped stays join the top tube to the seat stays. This arrangement permits the shortening of the wheelbase of the tandem. On the test machine the wheelbase was 60 ins. The main frame members were constructed from 1-in. and 1½-in. Reynolds 531 butted tubing, the round-section fork blades being strengthened with internal liners.

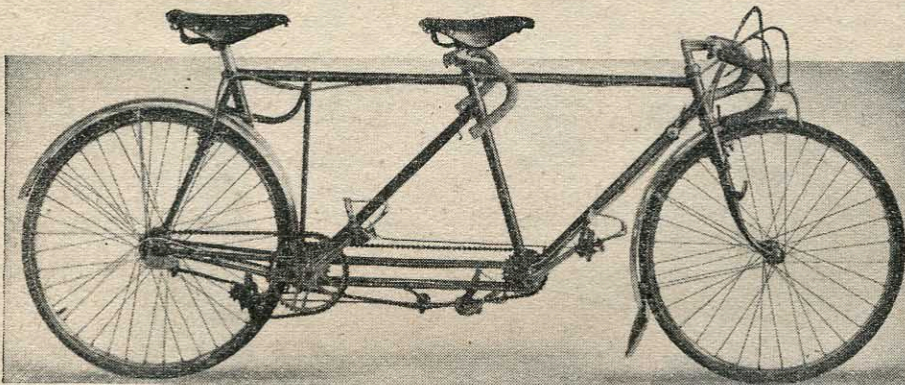
The machine showed exceptionally good handling qualities, steering being light and road holding good. One criticism applied to the test machine was that the bracket height of 10 ins. with 26-in. wheels was too low, although the fact that the machine was fitted with a free wheel permitted safety precautions.

Naturally, the use of solo components and fittings has led to noticeable weight-saving, and the test machine in touring trim tipped the scales at 42 lb.

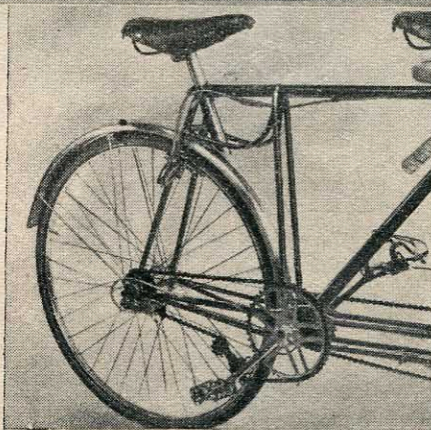
Several novel features were included in the fitting-out of the machine, the most attractive being the special design of double brake lever, which permitted the operation of the brakes with the hands on the "tops" of the handlebars. A handlebar-end lever control was fitted to operate the Hercules three-speed hub, which was used in conjunction with a specially adapted two-speed derailleur.

Comments from the rear seat:—

The riding position generally is good, the 23-in. top tube providing a long enough reach when the saddle was 3¼ ins. behind the rear bottom bracket. One criticism was the length of the chain stay



(Above) The "Sololite" tandem as road tested. (Lower, right) A close-up view of the rear frame assembly showing how the short wheelbase is achieved.



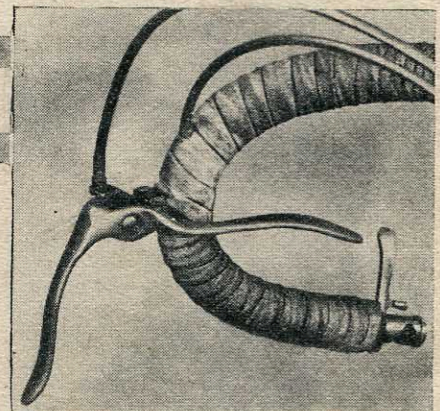
the acute shortage of certain specialized tandem components and fittings may be overcome by the intelligent use of solo bicycle parts. Generally speaking, the complete adaptation of solo components to a tandem is not to be recommended, since the demands then placed upon these parts is more than was intended by their designers and manufacturers, but in this case the Sololite specification appears to keep well within the minimum safety limits.

During road testing, which was carried out in deliberately "heavy-handed" manner, the casualty list comprised a

equipped for the personal use of the designer, E. R. G. Sage, the Sololite normally being retailed as a frame-set.

The feature of the frame construction is the replacement of the customary heavy-gauge bottom tube by four ½-in. diameter tubes. These tubes, actually formed by two lengths of tubing shaped round the front bottom bracket, converge into single tubes just forward of the rear fork-ends, providing a high degree of lateral stability at the base of the frame.

Similarly, thin diameter tubing is used in the construction of the rear-seat assembly, which incorporates a variation of the "broken" seat-tube principle, twin ½-in. gauge tubes providing vertical contact between the rear bottom bracket and the rear top tube, while, for additional



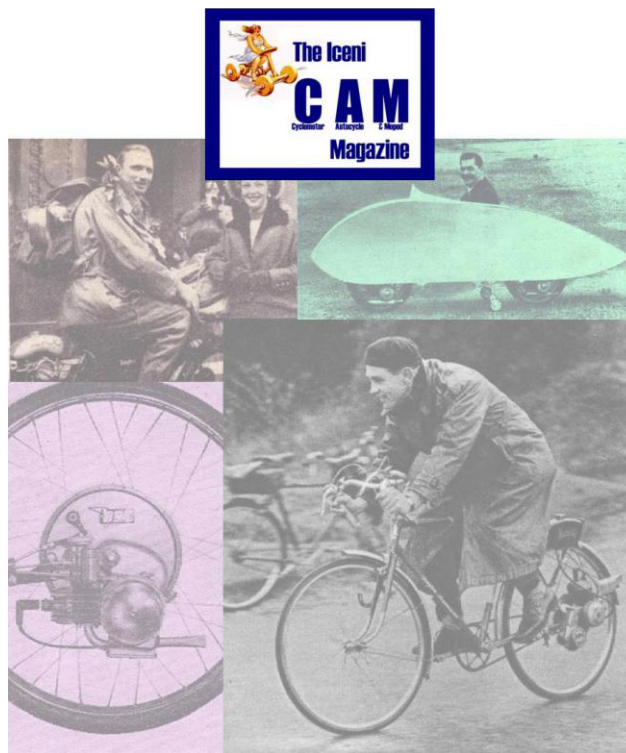
Double brake lever giving control from the "tops" of the handlebars and the handlebar end gear control.

used in conjunction with the derailleur gear mechanism. The chain stay length of 14¼ ins. did not allow sufficient clearance for the right foot (size 8 shoes), and on several occasions there was contact between the heel and the gear mechanism. No "whip" was evident at any time, regardless of repeated "thrashing."

**"SOLOLITE" TANDEM SPECIFICATION**  
**Frame:** Reynolds 531 double-butted tubing. Continental cutaway lugs. Brazed-on fittings. Frame sizes, 21-in. front, 20½-in. rear. Angles 71 degrees parallel.  
**Forks:** Round section, solid ends. Continental cutaway two-plate crown. Butted steering column.  
**Bearings:** Bayliss-Wiley bottom brackets. Granby head fittings and bearings.  
**Wheels:** Dunlop road-racing high-pressure tyres and rims, 26 ins. by 1½ ins.  
**Pedals:** (front) Boa, (rear) B.S.A.  
**Transmission:** Williams five-pin chainwheel, cross-over drive. Renold "Coventry" chain.  
**Handlebars:** Maes Tour de France. Front bars on G.B. 2½-in. forward extension.  
**Brakes:** Resilion "Cantilever" with patent dual-position brake levers.  
**Saddles:** Brooks B.17.  
**Mudguards:** Hebbs alloy, double stay.  
**Equipment:** Inflator.  
**Finish:** Royal blue, chrome fork crown and rear drop-out.  
**Price:** Frame, forks, bottom bracket interiors and head fittings, £28 10s.



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