James Lightweights

New 225 c.c. Roadster with A.C. Generator and Coil Ignition : Attractive and Comprehensive Range of Rear-sprung Models for 1954

ENTERPRISE in design characterizes the highly attractive range of lightweights which constitutes the James programme for 1954. It would appear that almost every requirement of the lightweight enthusiast has been given careful consideration, and the machines developed accordingly. Every model except the trials Commando is equipped with a spring frame. The range consists of 98 c.c. and 122 c.c. roadsters, 197 c.c. touring, trials and scrambles machines, and an entirely new 225 c.c. touring model. The 197 c.c. roadster and scrambler, and the new two-two-five, are all equipped with a new frame employing a pivoted rear fork. All models are powered by Villiers two-stroke engine-gear units. It is envisaged that production of the new range will begin before the London Show.

The new frame employs a loop of 1¼in diameter × 12-gauge steel tube to form the front down tube, engine cradle and seat pillar, and a top tube of 1¼in diameter × 14 gauge. Both the steering-head and seat-pillar lugs are brazed-up malleable castings. Also brazed into the seat-pillar lug are two taper tubes which form an upper rear frame; these tubes taper from 1¼in diameter at the forward end to ¾in diameter at the rear. The rear frame provides attachment points for the rear mudguard, the twin-seat and the top of the suspension units. The last mentioned slope well forward to their top anchorages which, consequently, are not far behind the seat-pillar lug. The resultant triangulation formed by the seat-pillar, rear-fork and suspension units eliminates any need for rear-frame loops or stays.

Pivoted from a fabricated steel lug welded to the seat pillar, the rear fork comprises two 14-gauge steel tubes which taper from 1¼in diameter at the front to 1in diameter at the rear. At the front the tubes carry malleable lugs which are bridged by a brazed-in transverse tube. Forward of the bridge, the lugs terminate in transverse bores in which bonded rubber and metal bushes are a heavy interference fit. The entire assembly is locked up on the pivot lug by a ½in-diameter hollow-steel spindle, tapped at each end to take securing bolts. All pivoting action of the fork stems from torsion of the rubber bushes; hence no lubrication is required.

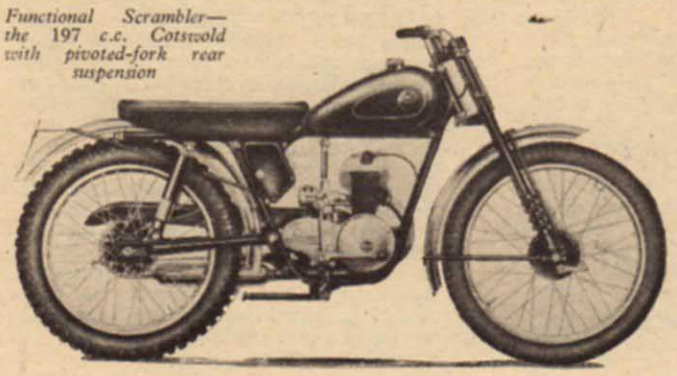
The fork ends are brazed on and trapped. In addition to providing the wheel spindle slots, they carry chain adjusters and, in the case of the left-hand fork end, a slotted lug for brake anchorage. Welded-on ears provide the lower attachment points for the suspension units. The units are of the conventional telescopic type and incorporate hydraulic damping on both depression and recoil. A total movement of 4in is possible at the rear-wheel spindle. Front-wheel suspension is afforded by the James telescopic fork.

Four-point attachment is provided for the 225 c.c. four-speed engine-gear unit. Designated the Mark 1H, the new Villiers engine is clean and stylish in appearance. The cast-aluminium primary chain case blends smoothly with the lines of the crankcase. The chain case is balanced (in appearance) at the right-hand side of the engine by a similar casing which encloses a flywheel A.C. generator. An oil filler plug in the top of the primary chain case also permits the chain tension to be checked. Removal of three screws retaining the nameplate on the right-hand side of the engine gives access to the contact breaker for adjustment purposes.

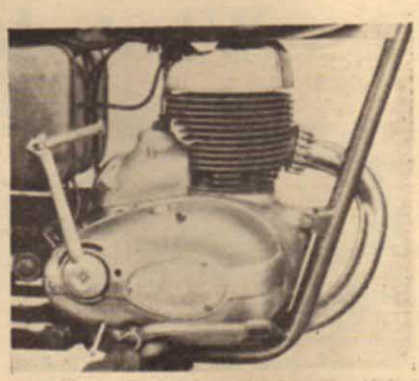
Unlike the four-speed 197 c.c. unit, the 1H has the gear pedal mounted on a separate shaft which is not concentric with that of the kick-starter. A gear selection indicator is incorporated. The gear box oil filler plug is provided with an integral dip-stick to indicate the oil level. A small-diameter, multi-plate clutch is employed. Overall gear ratios are 6.21, 8.2, 11.8 and 19.05 to 1.

A cast-aluminium shroud streamlines the carburettor. The air intake at the rear of the shroud contains a combined air filter and strangler. Beneath the tool box is carried the ignition coil, and between the tool box and the battery case, the rectifier. A key-operated ignition switch is recessed into the top of the flywheel - generator casing.

Functional Scrambler—the 197 c.c. Cotswold with pivoted-fork rear suspension

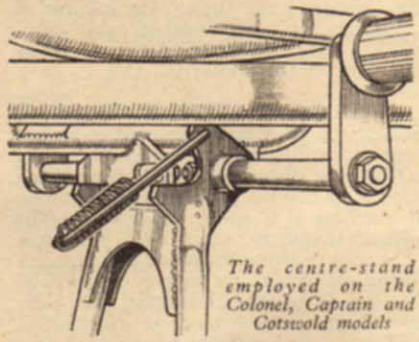


The engine has a cast-iron cylinder barrel, retained by four studs and nuts, and a light-alloy head which is held in place by four bolts screwing into the barrel. A hemispherical combustion chamber has the sparking plug disposed slightly to the rear. Bore and stroke measurements are 63 × 72mm; the compression ratio is 7 to 1. Supporting the crankshaft are four ball bearings, two on each side; a roller big-end bearing is employed. Power output is stated to be 10 b.h.p. at 4,500 r.p.m.



Close-up view of the new 225 c.c. engine

Colonel is the name given to the new 225 c.c. model. It is well proportioned and presents pleasing lines. Both front and rear mudguards are valanced. Rigid support of the front mudguard is achieved with the use of only two mudguard stays—both of oval-section tube. This scheme is adopted on all the 1954 James models. The rear mudguard incorporates a new rear-lamp and number-plate assembly. Steel fairing between the plate and the guard encloses the lighting cable and the fixing bolts. A twin-filament bulb is fitted to facilitate installation of a stop light if one is desired.



The centre-stand employed on the Colonel, Captain and Cotswold models

Twin, matching boxes, one of which houses the accumulator and the other the tools, are fitted one on each side of the seat pillar. The twin-seat, which utilizes latex cushioning and Vynide upholstery, blends in well with the lines of the machine. Forged-steel footrests are employed, with taper adjustment through 360 degrees. The centre-stand spring is coupled to a short radius arm which allows the one spring to retain the stand in either up or down position. An adjustable stop is provided for the brake pedal.

Journal-bearing hubs are used in both wheels. Brake-drum diameter is 6in front and rear. Cast-aluminium brake shoes with bonded linings are employed. Tyre size is 3.00 × 19in on both wheels.

Other equipment includes a 2½-gallon fuel tank fitted with moulded-rubber knee grips, an electric horn mounted on the

lower bridge of the front fork and an 80 m.p.h. trip speedometer.

The 197 c.c. Captain touring model has a frame and wheel suspension almost identical with those of the 225 c.c. Colonel. A three-speed Mk 8 Villiers unit supplies the power and provides rectifier/battery lighting. Brake diameter is 5in front and rear. In all other respects the Captain differs but little from its larger brother.

Another model which has the latest frame is the new Cotswold scrambles machine; in this case the action of the rear suspension units is stiffened up by the use of heavy-rate springs. Front-wheel suspension is provided by the James competition telescopic fork, which employs coil springs and hydraulic damping. This machine is fitted with a Villiers competition engine-gear unit, which has a four-speed, close-ratio gear box. A twin-seat is fitted as standard, as is a wide-reach handlebar. Tyre sizes are: front, 2.75 × 21in; rear, 3.50 × 19in.

Production of the highly successful Commando trials model, which has a solid frame, is to continue with a few minor modifications. The lug on the frame which supports the footrest bar is slightly more to the rear.

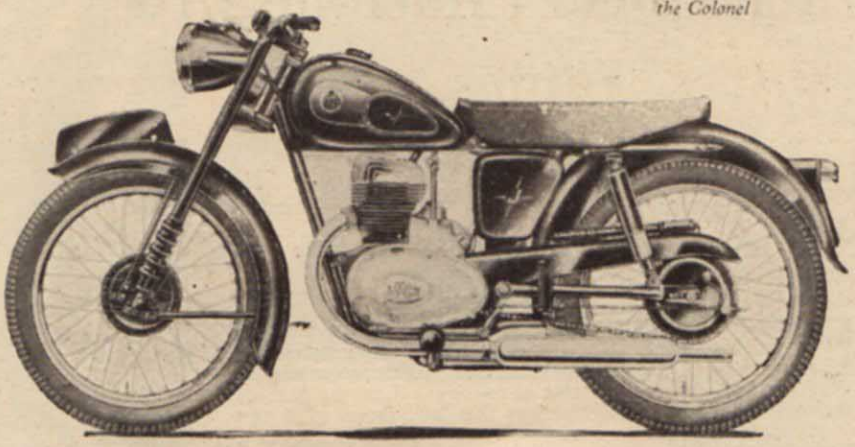
As previously, the mudguards are of polished aluminium; the rear mudguard incorporates a deep valance which protects both runs of the rear chain from dirt flung up by the rear wheel. The competition saddle is adjustable to three different heights, namely, 30½in, 31in, and 31½in. Tyre sizes are 2.75 × 21in front and 4.00 × 19in rear. Wheel rims on both the trials and scrambles models are chromium plated.

The power unit of the Commando is the 197 c.c. Villiers competition engine with four-speed gear box. Gear ratios with a 50-tooth rear-wheel sprocket are 6.54, 8.83, 15, and 22.6 to 1.

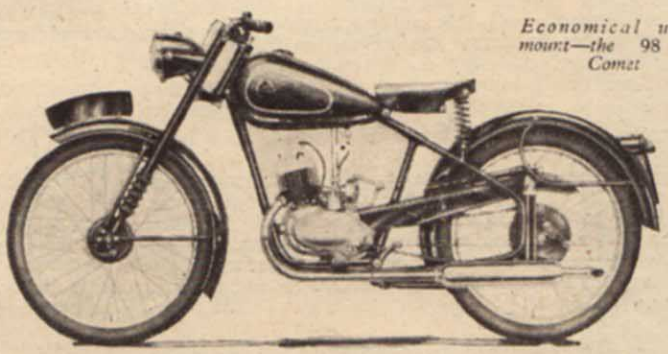
One 122 c.c. model, the Cadet, is listed for 1954. Introduced a year ago, this model has gained a large measure of popularity as a low-price economy machine. The specification includes a telescopic front fork and a simple but effective form of plunger rear springing.

Detail alterations have been made to the Cadet. The footrest support tube is carried by a substantial frame lug located at the lower end of the seat pillar; the footrest hangers are taper-fitted to the tube (and are thus adjustable), and are locked up by a through rod and nuts.

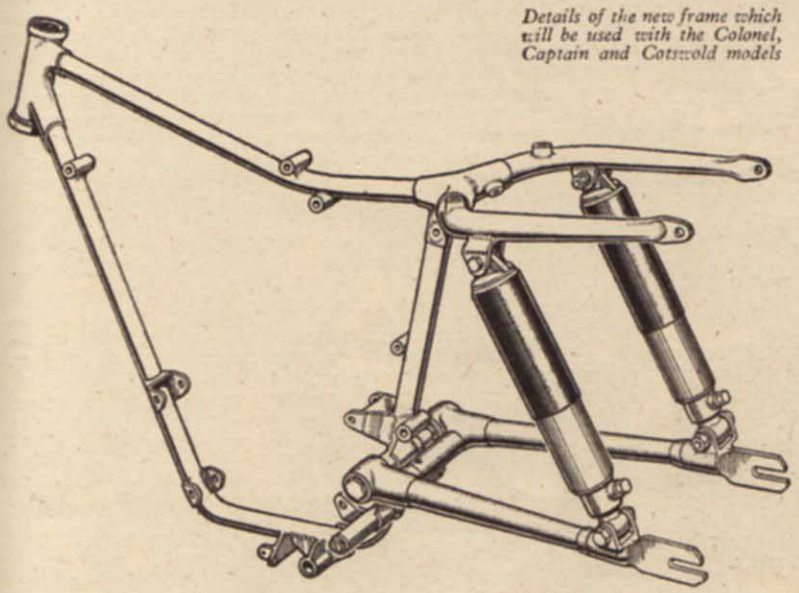
Handsome new 225 c.c. roadster—the Colonel



Economical utility mount—the 98 c.c. Comet



Details of the new frame which will be used with the Colonel, Captain and Cotswold models



New, deep D-section mudguards are fitted front and rear; both are supported by tubular stays. There is also a new pressed-steel chain guard which is valanced over the top run of the chain. Direct lighting is provided by the 122 c.c. Villiers 13D three-speed engine-gear unit. Brake-drum diameters are 4in and 5in front and rear respectively. Both wheels are shod with 2.75 × 19in tyres.

Smallest model in the range is the 98 c.c. two-speed Comet which, for 1954, is equipped with a telescopic front fork and plunger-type rear springing. Powered by the Villiers 4F unit, the Comet is, in most other respects, almost identical with the 122 c.c. Cadet. Tyre sizes are 2.25 × 19in on both wheels.

Finish on all the 1954 James models is a rich, deep-red enamel, a colour which is said to be resistant to fade even in hot climates. Wheel rims have an Argenized matt aluminium finish except on the competition and 125 c.c. models. Tanks carry a plastic badge and are fitted with moulded-rubber knee grips. Makers are the James Cycle Co., Ltd., Greet, Birmingham, 11. Prices (in which total price includes purchase tax, payable only in Great Britain) are as follows:—

	Basic price £	Total price £ s
98 c.c. Comet	63	75 12
122 c.c. Cadet	73	87 12
197 c.c. Captain	104	124 16
197 c.c. Cotswold (scrambles)	120	144 0
197 c.c. Commando (trials)	115	138 0
225 c.c. Colonel	125	150 0

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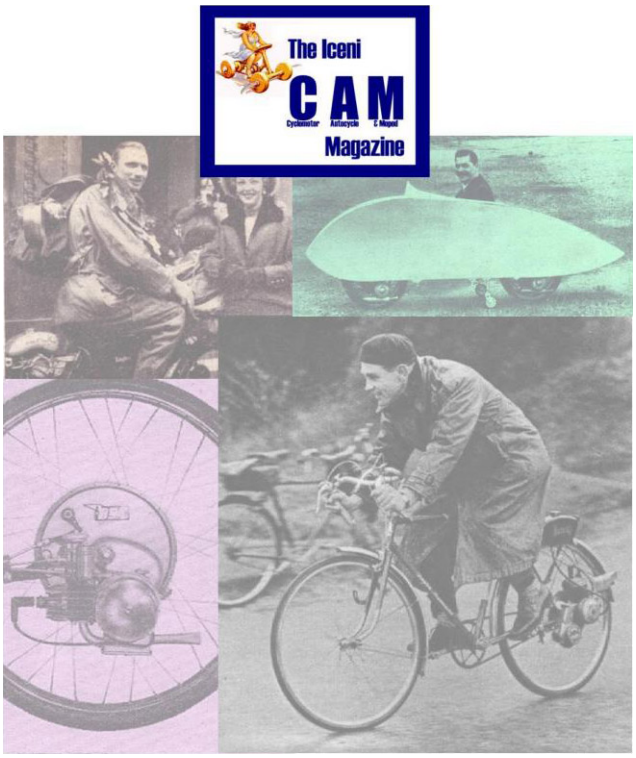

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