

## **ANOTHER ONE THAT NEVER WAS**

*Harper Engines recently unearthed the description of a two-wheeled vehicle which Vincents were thinking of producing late in 1958: Mr. Murphy kindly forwarded them to MPH, and the major part of the description, with some preliminary reasoning, appears below.*

### **THE VINCENT "MONOCAR"**

*Vincent Engineers (Stevenage) Ltd.*

*MPH 212*

*Page 8*

A new type of vehicle designed to meet a great demand.  
Comfortable, warm and clean personal transport for the great majority who cannot afford a car.

#### **Why have motor cycles so conspicuously failed to win popularity?**

When first introduced to the market, cars and motor cycles were basically similar apart from the number of their wheels. They were uncomfortable, crude, noisy, dirty and offered no protection for drivers or passengers against the weather and road dirt thrown up by passing vehicles.

Both types of machine appealed only to the young and sporting who did not mind discomfort. Within a few years, however, the car manufacturers wisely began to introduce full protection against the weather and dirt, comfortable seating for all occupants, interior heating, silence and adequate space for carrying luggage. They won the approval of nearly all who could afford to buy a car and, in spite of the comparatively high cost of a motor car, built up world sales to a volume somewhere of the order of ten million cars per year.

The motor cycle trade in the meanwhile, concentrated on trials and racing to win the favour of the young and sporting and they conspicuously ignored the features that were so sought after by the car trade. They ignored comfort and weather protection so assiduously that a legend was built up and believed by nearly all in the trade that it was impossible to design a successful single tracked machine that provided the features that the car trade had found essential to volume sales. The trade, as a whole, took it for granted that a motor cyclist had to dress like a deep sea diver in order to ride in winter and, even then, he freezes with the cold. The resulting sales were, as one would expect, very small as compared with the sales of cars in spite of the great advantage of much lower initial and running costs.

#### **Latter day improvements in motor cycles.**

When the Vincent concern was founded in 1928 nearly every expert in the motor cycle trade agreed that it was *impossible* to design a satisfactory rear wheel springing system for a motor cycle. Vincents not only designed one, every machine they ever built was fitted with it and, apart from the later addition of hydraulic damping, its original basic conception was never altered.

Over twenty years passed before the trade in general were forced by the march of events to adopt rear wheel springing as standard. Likewise, Vincents were the first to depart from the time honoured saddle substituting a comfortable foam rubber dual seat, a move now copied by all leading makers.

Meanwhile, after the War, the Italian trade introduced the modern scooter which rapidly overhauled the conventional motor cycle in sales in spite of its many considerable faults in design which resulted in a machine of much worse handling qualities than the average motor cycle. This sales success was undoubtedly due to the slightly better weather protection of scooters, the limited luggage accommodation that they provided and the fact that they were of neater appearance, and therefore much easier to keep smart and clean. Later scooters, particularly some of the German models, have greatly improved handling qualities as their wheel diameters and wheel base now approach motor cycle standards.

The majority of modern de-luxe type scooters now incorporate electric self starters. These steps towards giving the public a little of what they want have resulted in a reasonable increase in sales of two-wheelers to a world quantity probably about double the sales immediately pre-war, but there is still no single tracked vehicle in production that offers in full any of the five features that the car trade has known for many years to be essential to volume sales.

That is to say, no machine is available with a neat and pleasing streamlined appearance that is easy to clean, complete weather protection and comfortable seating for both driver and passenger, an ample degree of heating to keep both the driver and passenger warm or really adequately covered and lockable luggage space.

#### **The Vincent "Monocar" meets the public's requirements.**

Our long experience of motor cycle design which included the building of machines which, until quite recently, held the Worlds' Solo and Sidecar Absolute Speed Records, building and long term testing of fully enclosed machines and the testing and development of many other unconventional features, convinced us that neither the conventional motor cycle nor the more modern conception of the Scooter could meet the essential requirements of the general public.

After the most careful study ranging over several years, including the making of mock-up models to test seating dimensions and the like, we eventually decided upon a machine with an entirely new front steering and springing system also with new seating positions for the driver and passenger. These seating positions, although new to motor cycles, are actually those that have been evolved as the best in motor cars.

The driver's seat is now lowered to some 22" above the ground and his legs extend forward almost horizontally onto footboards either side of the front wheel. Openings are left in the floor through which he can lower his feet, by drawing them back towards the seat, for the purpose of balancing the machine when stationary.

A gentle pull on a lever, like a car brake lever, places the machine easily and securely upon its stable broad based stand. A further pull of about 30 lb. lifts both wheels clear of the road. The passenger sits immediately behind the driver on a seat some 4" higher in order that the part of his legs below the knee may be in an almost vertical position. Both sit on wide comfortable cushions and are provided with back rests.

The coachwork gives an appearance very close to the general standards of a motor car. It must be borne in mind, of course, that whilst the vehicle as a whole has had to be drastically scaled down in order to achieve compactness and light weight, the central part in which the driver and passenger sit has to be maintained at full size.

We have designed and applied for provisional patents for a new type of centre pivot steering for the front wheel which also includes the springing and the hydraulic shock absorber. It is operated by steering rods in the same manner as a motor car's steering. Another patent application covers the main features of chassis and body layout.

The engine is mounted under the driver's seat and the rear wheel is carried by an oil bath which acts as a frame member, contains the rear chain and is permitted to swing in a vertical plane against the hydraulically damped rear spring, thus providing the rear suspension. The engine is fan cooled with a forced draught and the heated air can, when desired, be fed forward around the driver's feet, hands and body. The side doors of the bodywork ensure that much of this heat is distributed around the passenger and also protect both driver and passenger from mud thrown up by the wheels of passing vehicles.

Over and around the rear wheel is built a car shaped tail which provides approximately 7 cubic feet of enclosed lockable luggage space and, in addition, there is approximately another 2 cubic feet of covered luggage space in front of the dashboard. The whole tail, when necessary, can be hinged up and over the back by releasing one catch thereby giving complete accessibility to the rear wheel, transmission, rear suspension and gearbox. Similarly, an opening front door in the forward coachwork gives immediate access for the removal of the front wheel and, by undoing three nuts and disconnecting the front brake cable, the entire front suspension, its hydraulic shock absorber and the steering mechanism can be removed for service. The same door gives access to the spare wheel and the petrol tank which are carried above the front wheel and also access to the wiring of the front lamps and horns.

A large perspex screen is provided with an adequate square of safety glass in the normal direct line of vision which can be cleaned by a wiper, so that unlike a scooter screen or motor cycle screen, the driver can see through it in wet weather, and thereby benefit from this protection when he most needs it. Thanks to the much lower seating position this screen, although giving full protection, will be considerably lower than a normal motor cycle or scooter screen. If required, a light collapsible frame can be erected between the top of the screen and the tail and a Vynide or similar hood clipped into place to protect both driver and passenger from the rain. Bearing in mind that the side opening between such a hood, the windscreen and the top of the body will be but little larger in area than the combined area of the driver's and passengers' bodies, we are quite confident that it will be found to be feasible to use transparent plastic side curtains to keep out the rain, as used on two-seater sports cars.

The engine, as stated, lies under the driver's seat with the cylinder or cylinders facing forward. It drives by a chain running in an oil bath to a standard proprietary make of four-speed gearbox and provision is made for starting by means of a Lucas 12 v. electric starter. There is space under the engine for a really large and efficient silencer. The power unit is so mounted in the frame that the engine, gearbox and final transmission can be removed complete in a very short space of time, thus making the fitment of interchange service units both speedy and cheap.

The all-up weight of the Vincent "Monocar" should be approximately the same as that of any modern scooter or motor cycle of similar power, general specification and strength of construction but its smooth streamlined bodywork and its considerably lower overall height will offer greatly reduced resistance to the wind pressure caused by motion and we confidently anticipate approximately 15% increase in speed for a given power at speeds around 60 m.p.h., and about 33 1/3 % improvement in fuel consumption in that speed range. We propose, as this is a vehicle for the masses, that advantage should be taken of this valuable feature to provide an engine that is tuned more in accordance with the ideas of the makers of the Volkswagen, i.e. an engine that peaks at modest r.p.m. and develops a moderate power output so as to obtain very long life with great reliability.

It will, therefore, be seen that the proposed Vincent Monocar" provides comfortable transport for two people on large car-type seats with the same protection from the weather as they can obtain in a modern car. A heater is provided as standard so that they will be warm in even the coldest weather and, bearing in mind the small size and light weight of the vehicle, an extraordinary amount of luggage space is available. This space is lockable. Even electric starting has been provided.

All this has been achieved with a design of weight, cost of manufacture, general road performance and ease of accessibility to all working parts that is in every way comparable with the best of modern motor cycle or scooter designs yet, at the same time, the Vincent "Monocar" is the first two-wheeled vehicle that catches up to a modern car in the absolutely vital respects which have to be met if motor cycles are ever to enjoy substantial sales.

We are certain that the Vincent "Monocar" is the first two-wheeled vehicle to bridge the hitherto very wide gulf between the machines provided by the manufacturers and the machine desired by the average members of the general public. The tremendous numbers of pedal bicycles that have been sold prove that the basic idea of a single track vehicle is in itself no deterrent to very substantial sales indeed. We possess the design for a powered two wheeler that for the first time fully meets the general public's requirements, and we also have an unequalled reputation as motor cycle manufacturers renowned for thirty years for machines of advanced design, very high quality, great reliability and long life, and what is even more valuable the public's confidence that any motor cycle product of our company would be right.

We have already gained experience in introducing a new type of vehicle to the market. We introduced the first successful moped, the German N.S.U., to Britain in its first year of production at a time when mopeds were unknown in Britain. In spite of severe restrictions in supplies we sold and delivered about 20,000 in **6 months**. We achieved such success that the concessionaries formed their own company to handle the business.

We are convinced that the time is ripe for the "Monocar" with suitable backing to achieve even greater success.  
VINCENT ENGINEERS (STEVENAGE) LIMITED, 13th September, 1958.

*Most interesting - unfortunately there is no accompanying illustration. The motor was to be optional, varying between a 125 c.c. two-stroke single and a 250 c.c. two-stroke twin, prices between £150 and £220 (?), and the maximum speed 60-65 m.p.h.*

*Quite coincidentally I happened to pick up in the local railway station an old copy of The Motor Cycle in which appeared a brief description and photograph of the Whitwood Monocar, a vehicle very similar in conception to the Vincent Monocar described above. This was a between-wars vehicle with two major wheels and a retractable side-wheel undercarriage for use at rest. There was some discussion of "a modern, practical version," so perhaps it was not just coincidence that this old copy of The Motor Cycle was dated 25 Dec. 58. Personally I rather like the idea of the retractable undercarriage - leave it down at low speeds or on difficult surfaces, pull it up when the speed rises - A.M.*