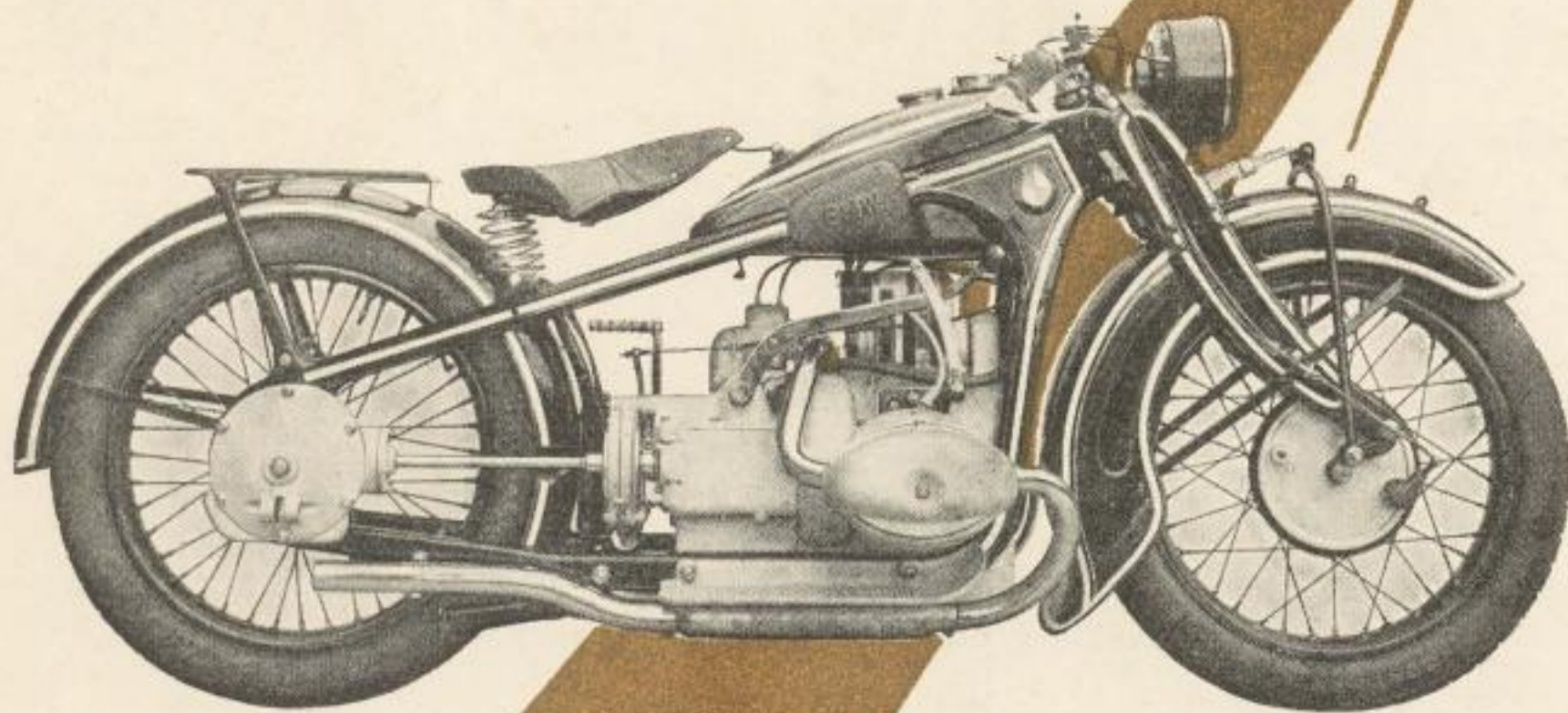


THE GOLDEN ARROW



BMW AG

angeltrick



**BMW
MOTOR
CYCLES**

BMW MOTOR CYCLE

FLAT TWIN CYLINDERS, set across
frame, excellent cooling

UNIT BLOCK

SHAFT DRIVE, crown wheel and pinion
in oil bath

**TUBULAR DUPLEX CRADLE-TYPE
FRAME** or **SHEET-STEEL CHASSIS**

ALL PARTS totally enclosed

HIGHEST ACCURACY in Manufacture



Bayerische Motoren Werke Aktiengesellschaft, Munich 13

Accuracy, the premise of motor cycle manufacture

The BMW motor cycle rapidly became world famous and enjoys its present general popularity owing to the sterling quality of the material and the progressive engineering principles embodied in its design, not to mention the outstanding constructional details and particularly good riding qualities to which we shall refer later on. The premise for all these particular BMW features is the very high degree of accuracy employed in the manufacture of every part of the machine, and the extremely precise and exact gauging methods used to control all machining and assembly operations. It was natural for the BMW-Works, originally founded as a firm of Aero Engine Builders, to apply their system of high accuracy in production and inspection to the motor cycle department.

Of course, this does not make the final product any cheaper and, though turned out in large series, the BMW will never be anything like a machine for the masses. On the other hand, the quality and distinction of this motor cycle have reached a point of perfection not easily attained by any other product of Motor Cycle Engineering.

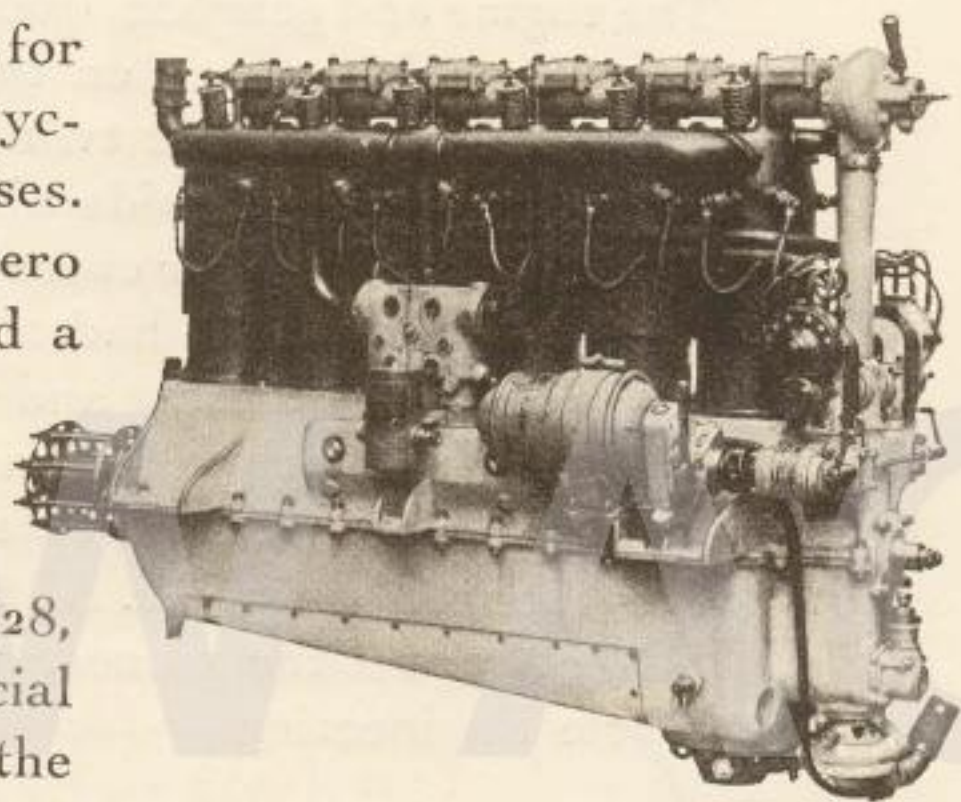


The "GOLDEN ARROW",
the latest BMW creation.

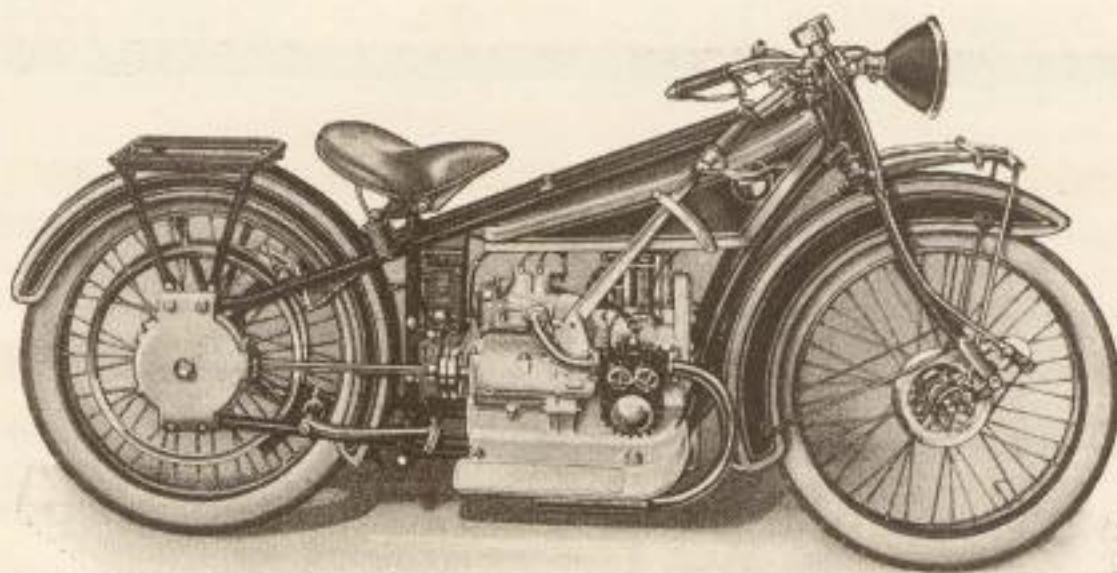
History

The Bayerische Motoren Werke Aktiengesellschaft were founded in 1916 with the object of producing aero engines. Their first achievement was the BMW IIIa model which was a high-compression, oversized engine, capable of retaining its high power up to great altitudes. Although political events enforced a certain pause in the manufacture of aero engines, the Firm soon took up their production again, also making internal combustion engines for automobiles, motor cycles, and marine purposes. Since then, BMW aero engines have obtained a total of 42 world records of which 12 were still held on the 30th of June 1928, according to the official statistics published by the F. A. I. on that date. BMW airplane engines are also being built by licencees in Czeco-Slovakia, Japan, and Russia, and of all the aeroplanes for private and civil aviation registered in Germany, 35% are fitted with BMW engines.

In 1923, just before the revival of their aero engine business, the BMW placed a motor cycle of their own design on the market. This first model, the „R 32“, was an absolutely new departure in motor cycle engineering. The old, simple form of steel frame, taken over from the bicycle, was discarded in favour of the double steel-tube frame which is much more suitable for the purpose.



The first BMW aero engine



The first BMW
motor cycle

The engine and gearbox, usually separate units in the majority of machines then on the market, were combined into one unit block, the flat twin cylinders were set across the frame, providing considerably better cooling by their position in the direct air current. A further development was the shaft drive which had already become indispensable in automobile engineering and was now adapted to the motor cycle, replacing the old chain and belt drive systems that had so far been the accepted form of transmission and a great source of trouble. All these features made the BMW „R 32“ model the pioneer product of progressive Motor Cycle Engineering.



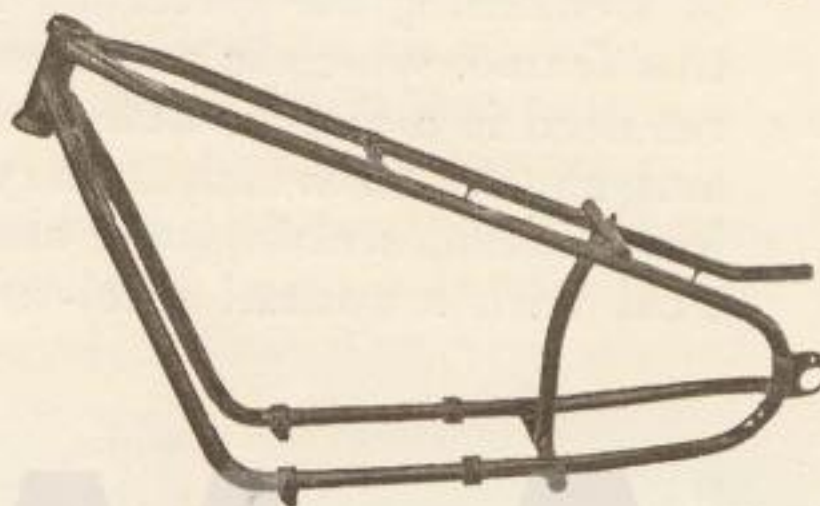
Airplane view of Works
Main Entrance
Tool Shoop No 17
Assembly Line for
Motor Cycles



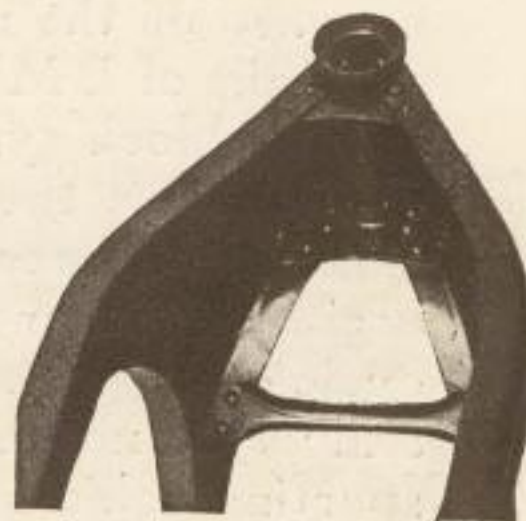
On the road of progress from duplex frame to sheet steel chassis

It is no secret that the motor cycle was originally developed from the ordinary bicycle which someone had the bright idea to fit with an engine. This fact is, unfortunately, very apparent still when looking at some machines yet on the market.

It is true that many important parts have been redesigned and modified to meet the new exigences but, curiously enough, the greater part of motor cycle engineers just stuck to the old bicycle frame. This simple, two-dimensional frame was, of course, quite unable to withstand the extra stress it was put to by higher powered engines, and it had to be re-enforced accordingly. The consequent increase of weight soon reached a limit which it was difficult to justify, and the BMW were among the very first works to produce a complete duplex steel-tube frame which did away with most of the extreme disadvantages of the simple frame. Combined with the other new departures of BMW designs, this frame was one of the chief factors that gave BMW motor cycles such an advance on the road of progress in motor cycle engineering. It soon, however, became evident that the steel-tube frame could not cope with the ever increasing strain it had to resist. Ways and means were sought and

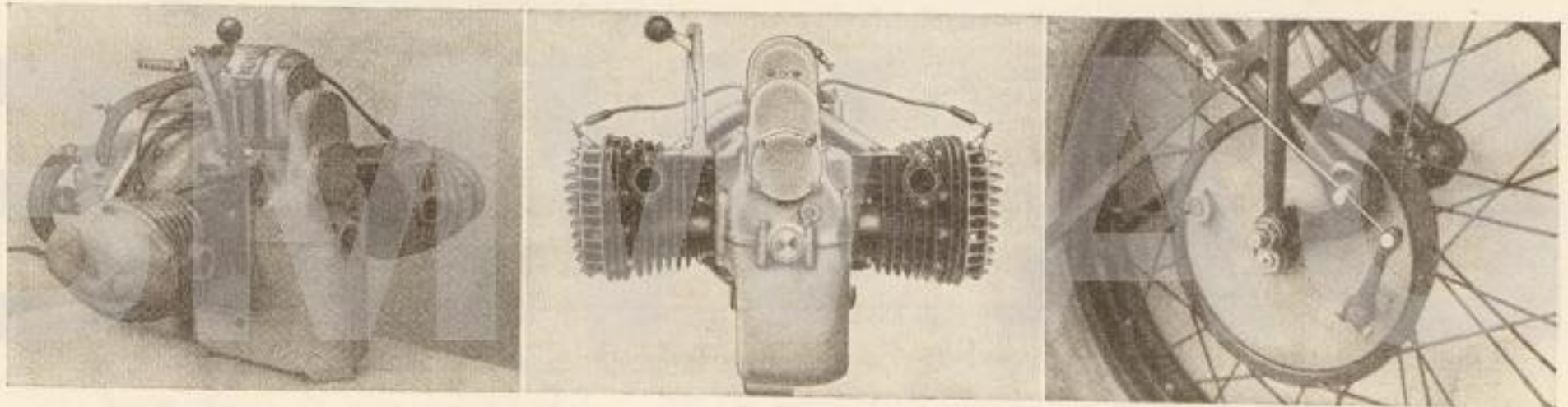


BMW tubular duplex cradle-type frame



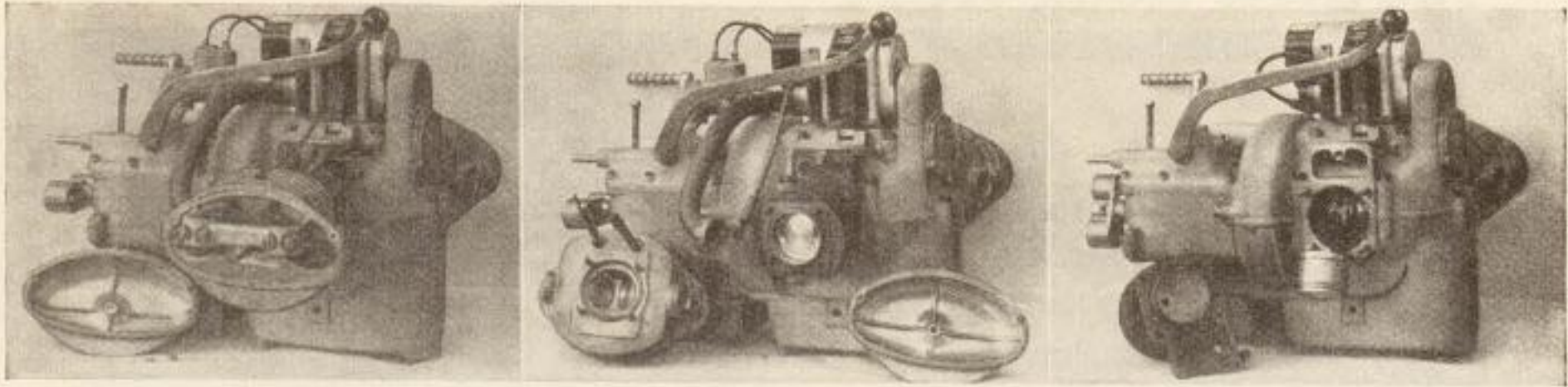
Frame and fork of the sheet-steel chassis

found in the sheet steel chassis which being stronger, though only slightly heavier, could meet all requirements. It took a number of years of thorough experimental work before the Firm decided to adopt this particular form of frame for their 750 cc model. This frame is quite a steel chassis comparable to those used in car manufacture. The design is really somewhat similar as there are two side members of pressed channel-section steel, joined by corresponding cross members. The assembly of this frame is very simple and effective, rivets being used throughout to avoid all possibilities of weakening the material. The particular construction of this frame, which is provided with strengthening ribs, has resulted in a chassis able to withstand fully all the strains and shocks to which it may be subjected. In weight and longitudinal stability the sheet-steel frame is almost identical with a normal steel-tube one, but severe trials and



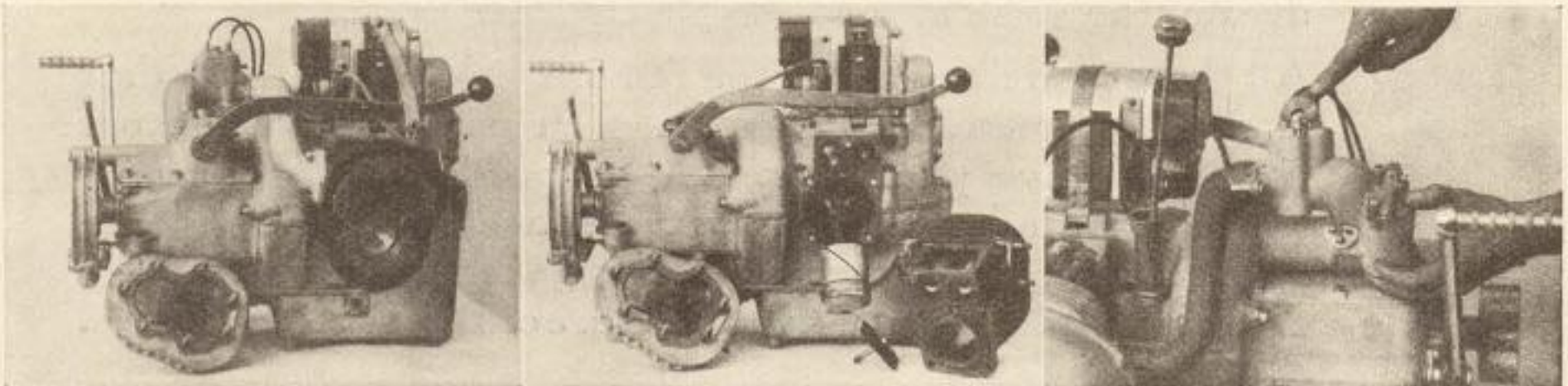
extensive runs have proved that it provides the machine with a decidedly better hold on the road. The fork and luggage carrier are also made of pressed sheet-steel.

The adoption of this particular frame is yet another step forward on the road of motor cycle progress, always the chief aim of BMW engineers. In taking over such features as unit block system, shaft drive and pressed sheet-steel chassis from the automobile, we do not copy but simply make use of the enormous experience of this older and greater engineering branch for the sole benefit and comfort of motor cycle enthusiasts. A motor cycle will never be a motor car, and we do not intend it to become one. A motor cycle is a sporting vehicle in the first place, and the BMW is the sporting machine "par excellence". On the other hand, we want to get as far away as we can from the good old "push



bike" design, that is why we are keeping an eye on progressive automobile construction which our engineers, with all their love and enthusiasm for the motor cycle, merely adapt and modify in the interest of the BMW machine and its riders.

At the time the "R 32" was born, the condition of the roads in Germany was extremely bad, positively disastrous in fact, and BMW motor cycles, from the very beginning, were designed to be able to withstand them. For roughest handling on the roughest of roads we have produced the **sturdiest** machine on the world market, the ideal mount for Colonial and Oversea Countries where its particular construction and perfect cooling will meet with due appreciation. **"Built in the hills for the hills"** is the slogan that may apply to this machine, but its fine cooling qualities, unrivalled by any other make, should also render it suitable for all tropical and subtropical districts where roads will certainly not be worse than what they used to be, and sometimes still are, in Central and Eastern Europe. We have, therefore, every confidence, in recommending these sturdy Touring and Sports BMW Models to Colonial and Oversea riders, that they represent the Acme of Perfection for their particular purposes.

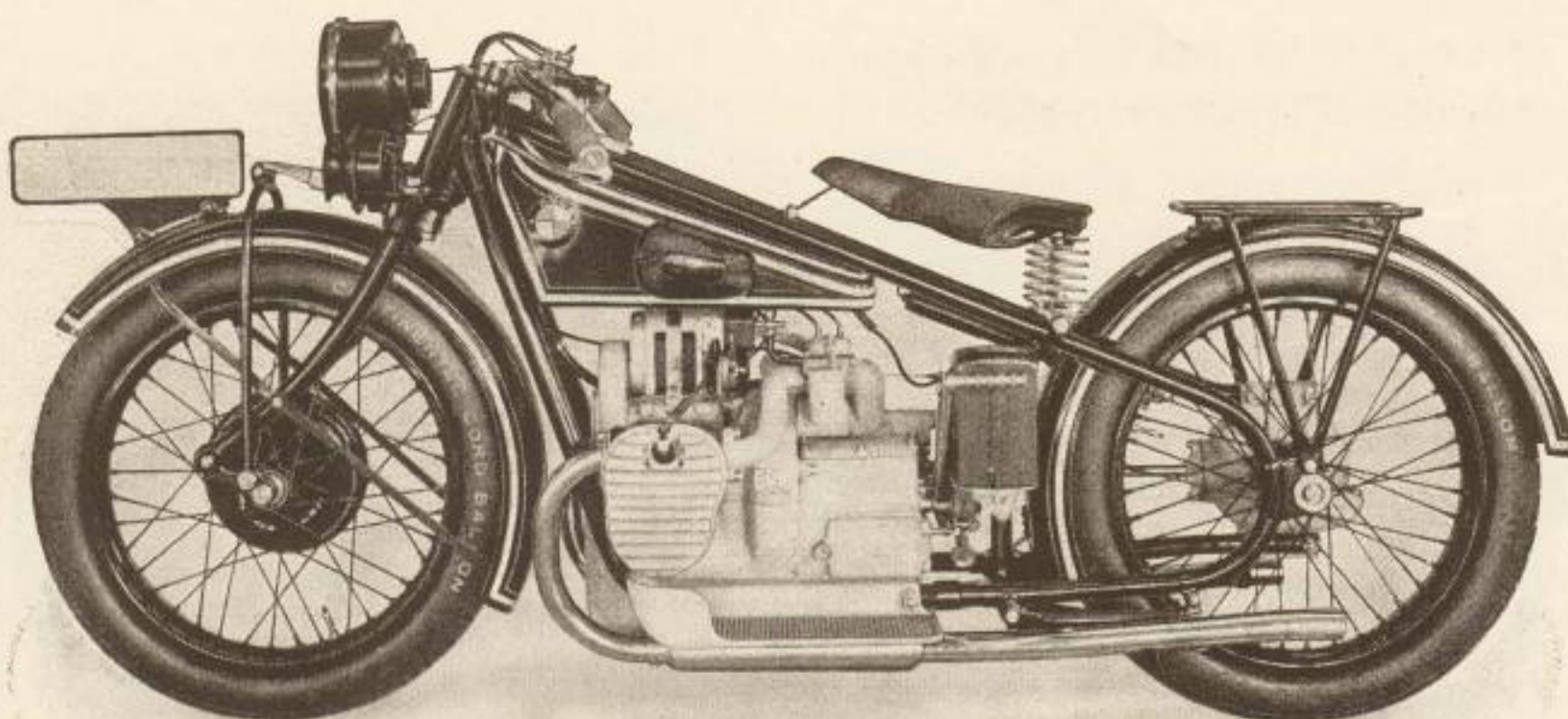


The BMW Motor Cycles

ELEGANCE - SPEED - RELIABILITY, are the main characteristics looked for in a modern motor cycle, not forgetting **Safety, Comfort and Economy**. The range of BMW machines offers all these particular characteristics to the world of motor cyclists who have justly become very fastidious in their selection. However, we have the greatest confidence that there is a BMW model to suit every purpose. The R 52 — 500 cc — side valve model is a general utility machine which should be the correct mount for the lady or the middle aged man. It is very easy to handle, extremely economical, perfectly safe and has a good average road performance. The R 57 o.h.v. — 500 cc — Sports model, on the other hand, is the machine that laid the foundation to BMW fame by its Speed and Reliability. The road performance is particularly good and will certainly satisfy young sportsmen motor cyclists and touring riders who find fascination in greater speed. The R 11, a 750 cc side valve machine, fitted with a special sheet-steel frame, is a wonderful heavy-duty motor cycle eminently suitable for solo or passenger work. It is a great hill climber with **splendid acceleration** and powerful brakes ensuring a high average touring speed. Its extraordinary reserve of power will carry it through any kind of difficult territory in any country of the world.

Last not least, there is the "**Golden Arrow**", the latest product of the BMW factory, which is a 750 o.h.v. sheet-steel frame Super Sports model. The speed it is capable of, is obviously indicated in its outline. It has a truly magnificent hold on the road and enables experienced riders to take curves in brilliant style. It is a realisation of a motor-cyclist's dream, the **acme of motor cycle engineering**.

All these models embody the famous BMW features that have gained universal fame in such comparatively short time, and have placed the BMW product in the foremost ranks of the industry. Our successes are a brilliant evidence of the superiority of our unique design and the quality of the material employed in the manufacture of BMW motor cycles.



R 52, 500 cc, 12 BHP, Touring

Engine

Cylinders and arrangement: flat twin, set across frame / valves: side valves / bore: 63 mm / stroke: 78 mm / cubic capacity: 487 cc / brake H. P. (guar. normal output): 12 B. H. P. / carburettor: BMW double lever type / Ignition: Bosch system / starter: kick-starter / lubrication: automatic high pressure lubrication / oil supply: about 4 $\frac{1}{4}$ pints in crankcase / bearings: crankshaft: plain bearings; piston rods: plain bearings; camshaft: plain bearings / driving pinions for magnetos etc.: special silent gear material / silencer: effective noise reducer, little back pressure.

Transmission

Clutch: type: single dry plate; control: lever on left handle-bar / gear box: three speed, incorporated in one unit with engine / ratios for solo machine: 4,8—6,8—12,4 / ratios for combination machine: 6,2—8,9—16,1 / gear change: lever fitted on right side of unit block / transmission: shaft drive; spiral bevel gear in oil bath.

Chassis

Frame: tubular duplex cradle type with great stability and resistance to torsion / petrol tank: inside frame, attached to upper tubes, capacity abt. 2 $\frac{3}{4}$ gallons / front fork suspension: leaf springs on front wheel, with recoil leaf; excellent shock-absorbing qualities / wheels: easily detachable / front wheel bearings: adjustable taper roller bearings / rear wheel bearings: 3 ball bearings / tyres: 26:3,5" low pressure / front wheel brake: type: internal expanding; control: lever on right handle-bar / gear brake: type: external contracting; control: pedal on right side of unit block / footrests: broad aluminium type / mudguards: of sufficient width to offer good protection / stands: rear wheel stand, spring-up type, front wheel stand on request / saddle: well sprung, broad seat "Wittkopp-Elastic" / carrier: above rear wheel, suitable for fitting pillion seat.

Equipment

Lighting: Bosch system, with rear light on request / horn: Bosch type, on request / pillion seat: on request / speedometer: built into tank, driven from gear box / steering damper: on request / leg shields: on request / knee grips: fitted to tank.

Dimensions

Length: 6' 10 $\frac{1}{2}$ " / breadth: 2' 7 $\frac{1}{2}$ " / height: 3' 1 $\frac{1}{2}$ " / wheel base: 4' 7" / height of saddle: 2' 3 $\frac{1}{2}$ ".

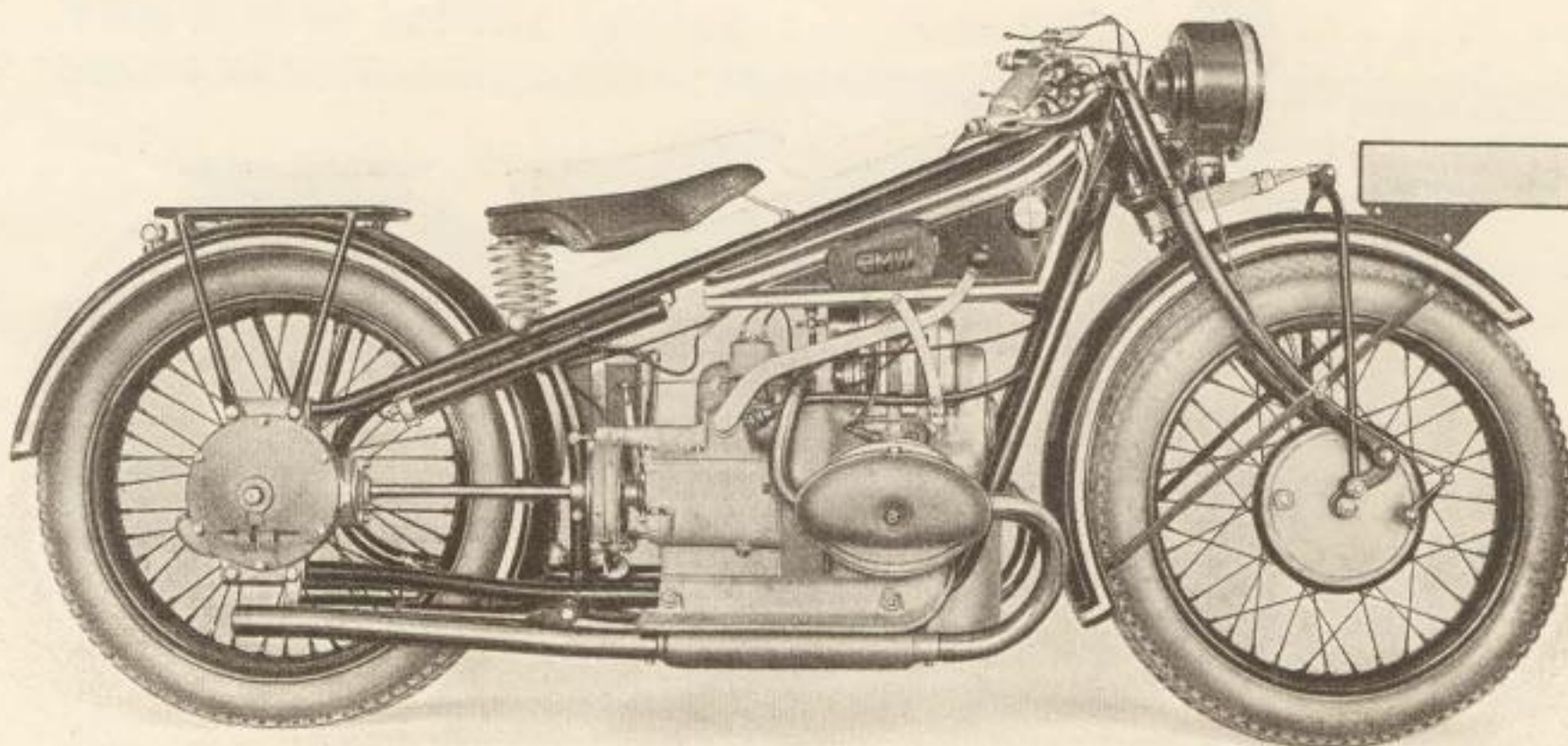
Consumption

Petrol: 80 miles per gallon / oil: 175—350 miles per pint,

Weight

Machine in running order, without fuel and oil: 298 lbs. / machine in crate: 465 lbs. / machine in sea-packing: 639 lbs.

Prices from our Agents on request.



R 57, 500 cc, 18 BHP, Sports

Engine

Cylinders and arrangement: flat twin, set across frame / valves: overhead valves, enclosed bore: 68 mm / stroke: 68 mm / cubic capacity: 493 cc / brake H. P. (guar. normal output): 18 B. H. P. carburettor: BMW double lever type / ignition: Bosch system / lubrication: automatic high pressure lubrication / oil supply: about 4 1/4 pints in crankcase / bearings: crankshaft: roller bearings; piston rods: plain bearings; camshaft: plain bearings / driving pinions for magnetos etc.: special silent gear material / silencer: effective noise reducer, little back pressure.

Transmission

Clutch: type: single dry plate; control: lever on left handle-bar / gear box: three speed, incorporated in one unit with engine / ratios for solo machine: 4,8 — 6,8 — 12,4 / ratios for combination machine, 6,2 — 8,9 — 16,1 / gear change: lever fitted on right side of unit block / transmission: shaft drive; spiral bevel gear in oil bath.

Chassis

Frame: tubular duplex cradle type with great stability and resistance to torsion / petrol tank: inside frame, attached to upper tubes, capacity abt. 2 3/4 gallons / front fork suspension: leaf springs on front wheel, with recoil leaf; excellent shock-absorbing qualities / wheels: easily detachable / front wheel bearings: adjustable taper roller bearings / rear wheel bearings: 3 ball bearings / tyres: 26:3,5" low pressure or 27:2,75" high pressure / front wheel brake: type: internal expanding; control: lever on right handle-bar / gear brake: type: external contracting; control: pedal on right side of unit block / footrests: broad aluminium type / mudguards: of sufficient width to offer good protection / saddle: well sprung, broad seat "Wittkopp-Elastic" carrier: above rear wheel, suitable for fitting pillion seat.

Equipment

Lighting: Bosch system, with rear light on request / horn: Bosch type, on request / pillion seat: on request / speedometer: built into tank, driven from gear box / steering damper: on request / leg shields: on request / knee grips: fitted to tank.

Dimensions

Length: 6' 10 1/2" / breadth: 2' 7 1/2" / height: 3' 11 1/2" / wheel base: 4' 7" / height of saddle: 2' 3 1/2".

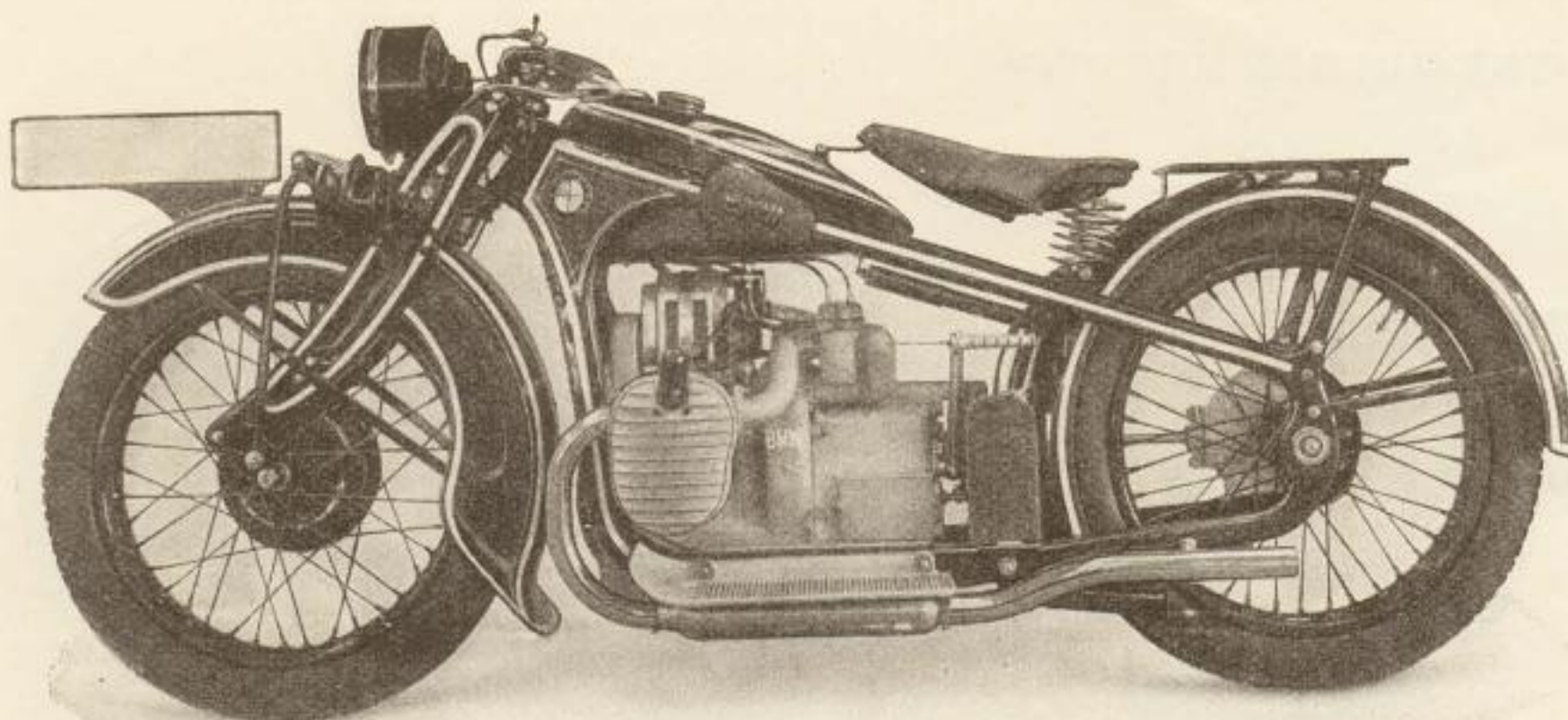
Consumption

Petrol: 80 miles per gallon / oil: 175—350 miles per pint.

Weight

Machine in running order, without fuel and oil: 298 lbs. / machine in crate: 465 lbs. / machine in sea-packing: 639 lbs.

Prices from our Agents on request.



R 11, 750 cc, 18 BHP, Touring

Engine

Cylinders and arrangement: flat twin, set across frame / valves: side valves, enclosed / bore: 78 mm / stroke: 78 mm / cubic capacity: 745 cc / brake H. P. (guar. normal output): 18 B. H. P. carburettor: BMW double lever type / ignition: Bosch system / lubrication: automatic high pressure lubrication / oil supply: about 4 $\frac{1}{4}$ pints in crankcase / bearings: crankshaft: roller bearings; piston rods: roller bearings; camshaft: plain bearings / driving pinions for magnetos etc.: special silent gear material / silencer: effective noise reducer, little back pressure.

Transmission

Clutch: type: single dry plate; control: lever on left handle-bar / gear box: three speed, incorporated in one unit with engine / ratios for solo machine: 4,4 — 6,3 — 11,5 / ratios for combination machine: 5,2 — 7,4 — 13,4 / gear change: lever fitted on right side of unit block transmission: shaft drive; spiral bevel gear in oil bath.

Chassis

Frame: sheet steel frame with great stability and resistance to torsion / petrol tank: fixed to 3 points inside frame, capacity abt. 3.1 gal. / front fork suspension: leaf springs on front wheel, with recoil leaf; excellent shock-absorbing qualities / wheels: easily detachable / front wheel bearings: adjustable taper roller bearings / rear wheel bearings: 3 ball bearings / tyres: 26:3,5" low pressure / front wheel brake: type: internal expanding; control: lever on right handle-bar / gear brake: type: external contracting; control: pedal on right side of unit block / foot-rests: broad aluminium type / mudguards: of sufficient width to offer good protection / stands: front and rear wheel stands / saddle: well sprung, broad seat "Wittkopp-Elastic" / carrier: above rear wheel, suitable for fitting pillion seat.

Equipment

Lighting: Bosch system, with rear light on request / horn: Bosch type, on request / pillion seat: on request / speedometer: built into tank, driven from gear box / steering damper: on request / leg shields: on request / knee grips: fitted to tank.

Dimensions

Length: 6' 10 $\frac{1}{2}$ " / breadth: 2' 7 $\frac{1}{2}$ " / height: 2' 7 $\frac{1}{2}$ " / wheel base: 4' 6" / height of saddle: 2' 3 $\frac{1}{2}$ ".

Consumption

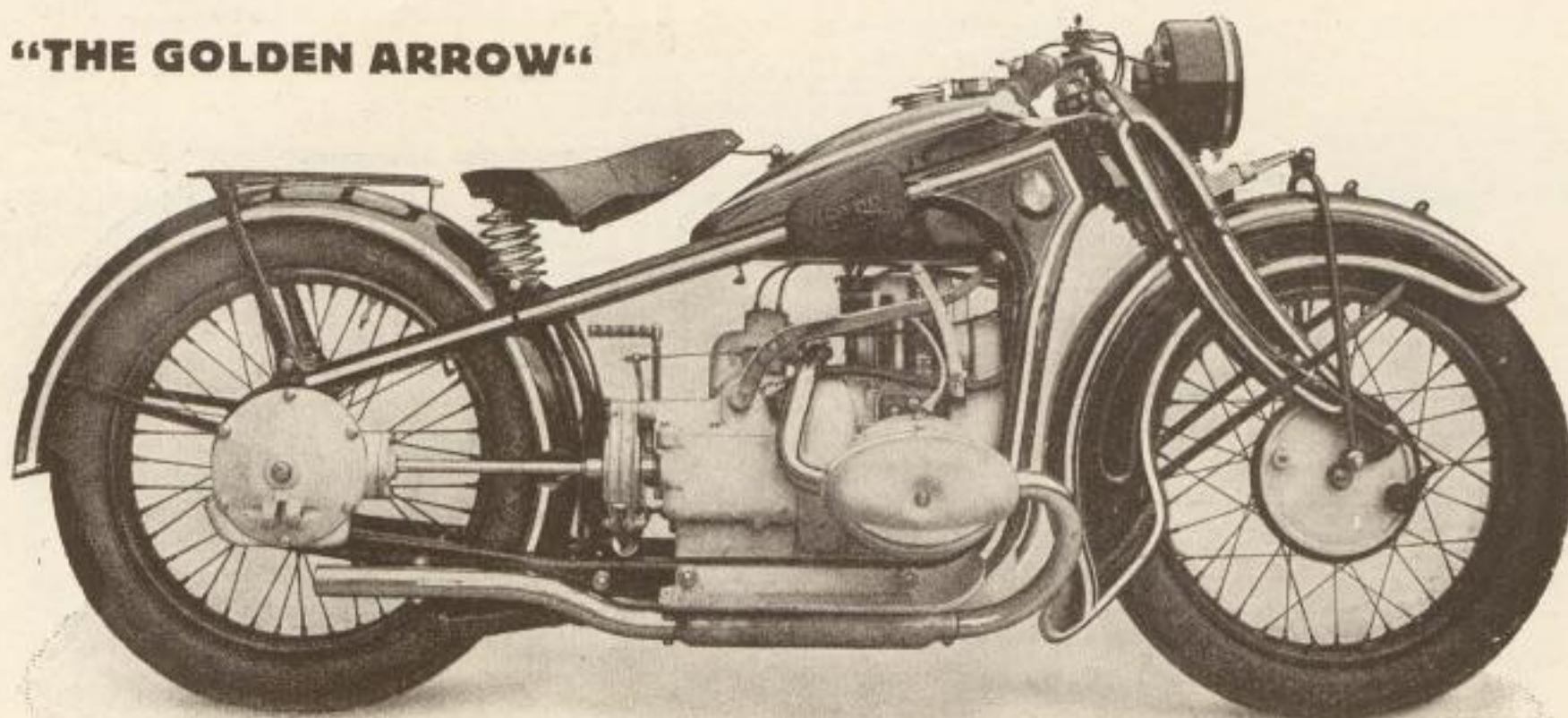
petrol: abt. 62,2 miles per gallon / oil: abt. 175 miles per pint.

Weight

Machine in running order without fuel and oil: 313 lbs. / machine in crate: 474 lbs. / machine in sea packing: 648 lbs.

Prices from our Agents on request.
This machine can also be supplied with a tubular duplex frame.

"THE GOLDEN ARROW"



R 16, 750 cc, 26 BHP, Sports

Engine

Cylinders and arrangement: flat twin, set across frame / valves: overhead valves, enclosed bore: 83 mm / stroke: 68 mm / cubic capacity: 734 cc / brake H. P. (guar. normal output): 26 B.H.P. carburettor: BMW double lever type / ignition: Bosch system / starter: kick-starter / lubrication: automatic high pressure lubrication / oil supply: about 4 $\frac{1}{4}$ pints in crankcase / bearings: crankshaft: roller bearings; piston rods: roller bearings; camshaft: plain bearings / driving pinions for magnetos etc.: special silent gear material / silencer: effective noise reducer, little back pressure.

Transmission

Clutch: type: single dry plate; control: lever on left handle-bar / gear box: three speed, incorporated in one unit with engine / ratios for solo machine: 4,4 — 6,3 — 11,5 / ratios for combination machine: 5,2 — 7,4 — 13,4 / gear change: lever fitted on right side of unit block / transmission: shaft drive; spiral bevel gear in oil bath.

Chassis

Frame: sheet steel frame with great stability and resistance to torsion / petrol tank: fixed to 3 points inside frame, capacity abt. 3.1 gallons / front fork suspension: leaf springs on front wheel, with recoil leaf; excellent shock-absorbing qualities / wheels: easily detachable / front wheel bearings: adjustable taper roller bearings / rear wheel bearings: 3 ball bearings / tyres: 26:3,5" low pressure or 27:2,75" high pressure / front wheel brake: internal expanding / gear brake: external contracting / footrests: broad aluminium type / mudguards: of sufficient width to offer good protection / saddle: well sprung, broad "Wittkopp-Elastic" / carrier: above rear wheel, suitable for fitting pillion seat.

Equipment

Lighting: Bosch system, with rear light on request / horn: Bosch type, on request / pillion seat: on request / speedometer: built into tank, driven from gear box / steering damper: on request / leg shields: on request / knee grips: fitted to tank.

Dimensions

Length: 6' 10 $\frac{1}{2}$ " / breadth: 2' 7 $\frac{1}{2}$ " / height: 3' 1 $\frac{1}{2}$ " / wheel base: 4' 6" / height of saddle: 2' 3,2.

Consumption

Petrol: abt. 62,2 miles per gallon / oil: abt. 175 miles per pint.

Weight

Machine in running order, without fuel and oil: 313 lbs. / machine in crate: 474 lbs. / machine in sea-packing: 648 lbs.

Prices from our Agents on request.
This machine can also be supplied with a tubular duplex frame.



The BMW in the Wide World

BMW SUCCESSES, PAST AND PRESENT

1924	47 FIRST PRIZES
1925	91 FIRST PRIZES
1926	105 FIRST PRIZES
1927	171 FIRST PRIZES
1928	159 FIRST PRIZES

It would lead too far to recall them all, suffice it to say that they are a brilliant evidence of the high merit of BMW design and the wonderful performance this machine is capable of. We merely wish to quote a few of the outstanding successes achieved in some races and trials of international repute, famous for their gruelling conditions.

German Grand Prix (Avus): First in 1925 and 1926, fastest time of day in each case.

Austrian Grand Prix: First in 1927 and 1928, fastest time of day. New Record every time.

Kolberg Race: First in 1925, 1926, and 1927, fastest time of day every time.

International Six Day's Trial, England: Gold Medal in 1926.

German Six Days' Trial 1928: Gold Medal.

All-Russian Reliability Trial 1925: Silver Cup.

Targa Florio (Italy): First in 1927 and 1928, fastest time of day and fastest lap each year.

Austrian T. T. 1928: First Place and fastest Time.

Czecho - Slovakian T. T.: First Prize and fastest time in 1926 and 1927.

Moravian T. T. 1928: First Place and fastest time.

International Race at Solitude Castle: First in 1924 - 1925 - 1926 - 1927 - 1928, fastest time in each case.

Paris - Nice Trial 1928: Two Gold Medals, Two Cups.

German Road Championship in 1926 - 1927 - 1928.

German Club Championship on Avus Track in 1927 and 1928.



A few striking race snap shots

Guarantee

The following guarantee is given in place of and excludes all conditions, warranties and liabilities whatsoever, statutory or otherwise.

We guarantee that all usual and reasonable precautions have been taken by us to secure excellence of material and workmanship, but this guarantee is limited to a period of six months only from the date of purchase of a motorcycle from us or our duly authorised dealers. Within such period, we undertake to repair free of charge any part alleged to be defective owing to poor material or inferior workmanship, or to supply a new part in place thereof. Parts alleged to be defective must be sent to us for examination — carriage paid — and indicating the number of the machine and engine, date of purchase, and name of dealer or agent. Repaired or new parts will be returned carriage forward. We do not undertake to bear the expenses incurred by replacing or refitting the repaired or new parts in the motor cycle.

This guarantee does not apply to specialities of other firms such as magnetos, speedometers, tyres, etc. . . and does not extend to derangements caused by racing, wear and tear, misuse or neglect, dirt, and accidents.

BMW AG